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General Information

1987-88 University and Academic Officers
Warren B. Armstrong, President of the University
Joyce A. Scott, Executive Vice President for Academic Affairs and Dean of Faculties
Martin H. Bush, Vice President for Academic Resource Development
Roger D. Lowe, Vice President for Administration and Finance
Robert F. Hartsuck, Vice President for Development, Alumni and University Relations and Executive Vice President of the Board of Trustees
Averett S. Tombes, Vice President for Research and Dean of Graduate Studies
James J. Rathigan, Vice President for Student Affairs and Dean of Students
Douglas Sharp, Dean of the College of Business Administration
Leonard M. Chatfee, Dean of the College of Education
William J. Wilhelm, Dean of the College of Engineering
Rhoda-Gale Pollack, Dean of the College of Fine Arts
M. Diane Roberts, Dean of the College of Health Professions
Phillip D. Thomas, Dean of Fairmount College of Liberal Arts and Sciences
Jacqueline J. Snyder, Dean of Continuing Education
Jasper G. Schad, Dean of Libraries
William W. Harmon, Dean of University College
Frederick Sudermann, Executive Assistant and Director of Governmental Relations
Lew Perkins, Director of Intercolligate Athletics

Mission Statement
In December 1986, the Kansas Board of Regents approved the following mission statement for The Wichita State University:

The Wichita State University is an urban university with a focused mission intended to meet the industrial, business, educational, social and cultural needs of the greater Wichita area. The University’s primary goal is to serve citizens in the thirteen-county area surrounding Wichita and Sedgwick County, with special sensitivity to the large number of minority citizens residing in the urban area. Its urban student body is predominantly part-time and beyond the traditional college age, thus requiring special support services.

Programs of study in the liberal arts and sciences, fine arts, business, engineering, education and health and human services lead to the associate through the doctoral degree, but primary emphasis is on the baccalaureate and master’s level. Building on a foundation in the liberal arts and sciences, the institution’s unique role resides in the delivery of programs in the visual and performing arts, engineering, business and education.

Terminal degrees are limited to those currently approved (doctorates in communicative disorders and sciences and engineering and the Master of Fine Arts [M.F.A.] in art and creative writing) and doctoral programs authorized for development in chemistry and applied mathematics. At an appropriate time, the institution will pursue development of a joint doctoral degree with The University of Kansas and Kansas State University in computer science and freestanding doctoral degrees in educational administration and psychology.

Research activity will occur principally in those areas with existing terminal degrees and those identified for terminal degrees. Applied research related to industry in the service area is the major thrust of these activities.

Service activities such as those conducted at the Center for Business and Economic Research, the Center for Entrepreneurship, the Small Business Development Center, the Institute for Aviation Research and the Hugo Wall Center for Urban Studies are especially tailored to meet the needs of the institution’s service area.

Profile of The Wichita State University
The 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 nearly 17,000, Wichita State prides itself on specialized attention to each student. Although the University’s students come from almost every state in the Union and 70 foreign countries, more than 90 percent are from Kansas, representing every county in the state.

Because of its urban setting, The Wichita State University has two side-by-side student bodies—traditional and nontraditional. The average student age is 27; more than one-third are married and more than 84 percent work full-time. Although the nontraditional students are in the majority, there are 6,700 traditional students, ages 18 to 23, who devote themselves full-time to school and campus activities.

The Wichita State University offers 185 academic majors in six undergraduate degree-granting colleges: College of Business Administration, 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 programs leading to the specialist in education degree and to the PhD in communicative disorders and sciences and engineering. In addition, Wichita State offers PhD programs in applied mathematics and chemistry in cooperation with The University of Kansas and Kansas State University. Master’s degrees are offered in almost 40 areas. University College and the Division of Continuing Education meet the needs of students not yet admitted to a degree-granting college.

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 three-week presession and two four-week sessions held concurrently with the regular eight-week session.

Board of Regents, State of Kansas
Frank J. Becker, Chairman, El Dorado
Norman W. Brandeberry, Russell
Richard W. Dodderidge, Mission Woods
Norman W. Jeter, Hays
Shirley Palmer, Fort Scott
Richard R. Reinhardt, Erie
Richard P. Senecal, Atchison
Linwood Sexton, Sedgwick
Donald C. Slawson, Wichita
Stanley Z. Koplik, Executive Director, Topeka
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 Studies supports local and state government activities.

The 320-acre campus is modern and accessible and at the same time retains the flavor of the University's 90-year heritage. Fifty-one pieces of sculpture by internationally known artists adorn the campus. Personnages 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 15 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.

One of the newest additions, completed in 1986, makes Media Resources Center the largest telecommunications facility in the state. Another part of this three-stage construction project is the expansion and renovation of Abih Library scheduled for completion late in 1988. Construction was to begin in 1987 on a new Institute for Aviation Research which will enhance further the University's research association with Wichita's aircraft industry. Architectural planning has begun on a new $12 million building for mathematics, physics, computer science and psychology, as well as the Computing Center.

Wiedemann Hall, dedicated in 1986, houses a world-famous Marcussen organ. The original Pizza Hut is located on campus and is national headquarters for ACE (Association for Collegiate Entrepreneurs). A new stadium was completed in 1985 for the nationally ranked WSU baseball team. The Heskett Center, a $10.6 million physical education facility, was completed in 1983.

More than 150 social and special interest clubs provide opportunities for students to meet and work with others who share their interests. Seven national sororities and 12 national fraternities are active on campus.

There are sports opportunities in tennis, cross-country, basketball, track, golf, crew, soccer and bowling for all students. Teams also are fielded in baseball for men and volleyball and softball for women.

History
Wichita State began as Fairmount College and was operated by the Congregational Church from 1895 until 1926 when by a vote of the citizens of Wichita, it became 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, the Wichita State University is one of six state universities governed by the Kansas Board of Regents.


Accreditation and Associations
The Wichita State University holds membership in or is accredited by the following agencies:

- North Central Association of Colleges and Schools
- National Council for Accreditation of Teacher Education
- Kansas State Department of Education Accreditation Board for Engineering and Technology
- American Speech-Language and Hearing Association
- American Dental Association
- Committee of Allied Health Education and Accreditation
- American Physical Therapy Association
- National League for Nursing
- Kansas State Board of Nursing
- Association of University Programs in Health Administration
- Kansas Bureau of Emergency Medical Services-The University of Kansas Medical Center
- American Bar Association
- American Chemical Society
- Council on Social Work Education
- National Association of Schools of Music
- National Association of Schools of Dance.

Policies

Human Relations

It is the policy of The Wichita State University not to discriminate on the basis of race, color, religion, national origin, sex, age, disability or political affiliation in its education programs, activities or employment policies as required by the Civil Rights Act of 1964 and subsequent amendments (including Title IX of the Education Amendments of 1972), federal executive orders, federal regulations and guidelines and the State's Executive Order No. 75-9. The University is further committed to take affirmative action to assure that equality of opportunity shall exist. Questions concerning discrimination should be directed to James J. Phatigan, vice president for student affairs and dean of students, Grace Wilkie Hall.

Student Responsibility

Students at The Wichita State University have the following responsibilities:

1. To consult their advisers on all matters pertaining to their academic careers, including changes in their programs
2. To observe all regulations of their 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 advisers, 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. Failure to comply with this procedure may result in administrative withdrawal.

Students should also 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:

The Wichita State University reaffirms the principle of intellectual freedom in scholarly activity for University students, and it recognizes the full citizenship...
THE WICHITA STATE UNIVERSITY/ADMISSION

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 these 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 The 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 persons. Serious cases may result in discipline at the college or university level and may result in suspension or dismissal. 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 less time is required.

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 may also receive the names of persons from outside the University who request access to their records and the reason for such requests. Similarly, students may also be informed of requests for records from individuals within the University who normally do not review students' 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, Grace Wilkie Hall.

Accident or Injury

The State of Kansas and The 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 are also 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 The Wichita State University.

All students entering Wichita State for the first time must file an application for admission with the Admissions Center, 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.

Both the application and official transcripts of previous work should be received by 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 and should be submitted during the first semester of their senior year.

Transcripts sent to the Admissions Center must be mailed directly from the school and/or college work sent to Wichita State. According to law, the University is allowed 45 days to respond to the requests, but typically less time is required.

Prospective students are encouraged 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 these 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.
ACT scores, the WSU admissions staff completes a copy of the application and sends the form to the students. The students must then verify the data on the application, sign it and give it to their high school counselor, who should attach a six-semester high school transcript and return the forms to Wichita State. A Certificate of Admission will then be mailed to the students.

2. Students may also apply by completing a regular University application for admission and having a six-semester transcript and ACT scores sent to the University.

Students who have already graduated from accredited Kansas high schools and have not attended another college will also be admitted to the University after submitting an application and having their high school send an official transcript to Wichita State’s admissions center. ACT scores must also be submitted before enrollment. Graduates of nonaccredited Kansas high schools must submit acceptable ACT scores 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, 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) present acceptable ACT or SAT test scores or (3) have high school grades of 2.000 or better on a 4.000 system. Exceptions may be made under special circumstances when valid reasons prevail. Priority of admission among out-of-state students is given to sons and daughters of Wichita State alumni.

Students who have not graduated from high school but have an equivalency certificate may apply by submitting an application for admission, a transcript showing any high school work completed and official scores from the General Educational Development (GED) test. ACT scores are also required if the student is admitted. Admission is based on the GED scores.

All entering freshmen are enrolled in University College. The orientation program will send all freshmen complete information about orientation and enrollment. See the University College section of this Catalog for more information.

Students in University College must meet the admissions standards of the degree-granting colleges before transferring into them. The individual college admissions requirements are given at the beginning of each college’s section in the Catalog.

Transfers
Students who have been enrolled in another college or university may be admitted to undergraduate study at The Wichita State University if they are eligible to return to the college or university they last attended and are able to meet the required scholastic standards of Wichita State. Specific standards are given in each college’s section of the Catalog.

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 aid 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 and (2) those with declared majors and 24 or more college semester hours of credit.

1. Transfer students with fewer than 24 college semester hours of credit or an undeclared major will be considered for admission to University College. Students must submit to Wichita State’s Admissions Center an application and an official transcript from their last high school and each college attended. Before enrollment, students must also submit scores from the American College Test (ACT). Further details on transferring to a degree-granting college are given in the University College section of this Catalog.

2. Transfer students who have declared a major and have 24 or more college semester hours of credit are eligible to apply for admission to one of the six undergraduate degree-granting colleges. They must submit an application and official transcript from each college or university attended to Wichita State’s Admissions Center.

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 under 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 baccalaureate oriented sequence at a state and regionally accredited Kansas public community college and whose program of studies has met the requirements of the Kansas Public Community College and State College and University Transfer and Articulation Agreement will be accepted with junior standing and will have satisfied the lower-division general education requirements of all Regents’ institutions of the state (subject to points of clarification agreed to by community colleges and state schools).

In accepting college-level courses from other recognized colleges and universities for transfer credit, Wichita State relies on practices outlined in Transfer Credit Practices of Selected Educational Institutions, published by the American Association of Collegiate Registrars and Admissions Officers. While the credit practices publication does not constitute accreditation, it does provide helpful information for credit acceptance. Course equivalencies for selected institutions and other credit transfer information may be obtained from Wichita State’s Admissions Center.

Courses completed at other institutions but not acceptable for credit toward a degree at Wichita State are excluded from credit and grade point average evaluation.

Credit hours and credit points accepted toward a Wichita State degree are computed with credit hours and credit points earned at Wichita State in calculating the student’s total grade point average.

The distribution of transfer courses that may fulfill either a major or minor requirement must be approved by the chairperson of the department concerned. Department chairpersons may require additional work for a major, regardless of the credit granted to the student.

International Students
Recognizing the benefits—cultural, economic, intellectual and social—that may arise from the interaction of American and foreign students and scholars, The Wichita State University demonstrates a commitment to international education through an admissions procedure designed for overseas applicants, the provision of a foreign-U.S. student advisory office, the expansion of cross-cultural exchanges, the availability of intensive English, special courses within departments and international community services such as host family programs.

International students applying as undergraduates may be admitted to Wichita State according to the following guidelines.

1. They must be graduated from an
accredited secondary school or have attended college with an acceptable record.

2. They must submit an international student application form and a non-refundable $25 international student application processing fee.

3. They must present proof of proficiency in English. If the student has not taken the Test of English as a Foreign Language (TOEFL) or if the score is below 530, the student must take a proficiency examination upon arrival on campus. Students who do not meet the required proficiency level will be required to enroll in the Intensive English program before enrolling in any academic classes. Instruction in Intensive English does not carry academic credit. After one semester of Intensive English, students may take another proficiency test. Those who pass may enroll in their academic program. Those who do not pass will continue enrollment in Intensive English.

4. They must have a statement of financial responsibility in an amount of $9,900 or more to cover expenses for 12 months, including Summer Session tuition. All international students are considered nonresidents for tuition and fee purposes.

5. They must enroll in at least 12 credit hours at the undergraduate level or in at least nine credit hours at the graduate level.

Admission decisions for students with international secondary school or college records are made with reliance upon the resource materials available through the American Association of Collegiate Registrars and Admissions Officers and the National Association for Foreign Student Affairs. International students with transfer work from American colleges must present at least 12 hours with at least a 2.250 grade point average (4.000 scale).

The University is committed to the maintenance of balance in the admission of international students and will seek an international student body which reflects the broad range of cultures and national backgrounds in the international community.

The University will not assume financial responsibility or guarantee monetary assistance for any student, including international students. It is the University's expectation that prospective and enrolled students have sufficient financial support immediately available to meet adequately the expenses of tuition, fees, books, room and board, etc.

The maintenance of adequate financial support is a condition for admission and continued enrollment of international students. Students who do not have financial support as specified on the I-20 form shall be subject to loss of student status.

No scholarships or grants are available to newly entering undergraduate international students, and it is imperative that they have sufficient funds to cover expenses while in the United States. International students who qualify for admission to the Graduate School may apply to their department chairperson or the dean of their college for information on graduate fellowships and assistantships.

International undergraduate students applying from outside the country must submit all credentials by November 1 for the spring semester, April 1 for Summer Session, and June 1 for the fall semester. Students already in the United States must submit all credentials by December 1 for the spring semester, May 1 for Summer Session and July 1 for the fall semester.

For further information or to obtain an application form, write:
Admissions Center
111 Jardine Hall
The Wichita State University
Wichita, Kansas 67208-1596

Graduate Students
Several categories of admission to The Wichita State University Graduate School are available. Students seeking a graduate degree must have at least a baccalaureate 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 School 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 The Wichita State University, in which case the Graduate School personnel will obtain transcripts of the student's work completed at Wichita State.

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.

Complete information about graduate programs and requirements is available in the Graduate School office, 107 Jardine Hall.

Double-lining
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 college program for at least four years and must demonstrate attendance in an academic program. Unique circumstances for each student will be evaluated, and students who demonstrate potential for success will be considered for admission.

For further information, contact the Graduate School.

Nondegree-bound Students
The Wichita State University encourages students to pursue their educational goals. Persons 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 Admissions Center. Students seeking graduate credit should write or call the Graduate School.
Open Admission Students
To expedite admission for adult students who have not participated in formal education for some time, the Admissions Center provides a simplified admissions 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 baccalaureate 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 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 submit transcripts and/or test scores to be accepted as degree-bound students in University College or in one of the degree-granting colleges of the University. Students may also elect to continue as regular nondegree students in University College.

All students admitted through open admission shall be limited to a maximum of five (5) credit hours. Exceptions to the five-credit-hour rule may be waived by the dean of the college in which the student is enrolled.

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 to the Admissions Center. Students applying for guest admission in the fall or spring semester must also submit an official transcript showing a 2.0 grade point average from their home institution. Guest admission is granted for a total of 15 semester hours and 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 student, students who have completed their junior year should submit an application and an official high school transcript and obtain their principal'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. The school principal's strong recommendation and a carefully prepared justification for enrollment is required before consideration is given.

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 under the International Students section.

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/re-enrollment and who has demonstrated, during those 12 months, the intent to make Kansas their permanent home. Intent is evaluated in light of: 1) the person's statement about why they came to Kansas in the first place and 2) what the person has done since coming to Kansas (objective, verifiable facts). Many factors are considered when evaluating intent. The Kansas Board of Regents guidelines list nonconclusive factors or circumstances that could help support a claim for resident classification. The guidelines also specify a qualifier: "Any such factor, to be given weight, must be of at least one year's duration prior to enrollment/re-enrollment."

A person who comes to Kansas to go to school, and who enrolls full-time every semester after arriving, may not be able to demonstrate the intent to remain in Kansas permanently, as long as that pattern continues. In contrast, certain exceptions are authorized by state law to pay the equivalent of resident fees: (a) employees of the University and their dependents, (b) persons on full-time active military duty, stationed in Kansas, and their dependents and (c) persons who have lost their Kansas resident status within six months of their enrollment.

Residency of new students enrolling for the first time at Wichita State is determined by the admissions center according to the above law/regulations. Such students should address questions concerning residency to the admissions center. 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 in writing 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
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 second 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: under 30 semester hours earned
- Sophomores: 30 to 59 semester hours earned
Students are

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 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.)

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 baccalaureate 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 may also be admitted if they satisfy the course prerequisites 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 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.)

The 11-digit number following each course description in the Catalog is for administrative use only.

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 its 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 (or the fifth week of the eight-week Summer Session), 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), 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.

A/Pass/Fail Option
Students in good standing with at least 12 hours of completed course credit and an overall grade point average of at least 2.500 as verified by a transcript of their college work may elect to enroll under the A/Pass/Fail (A/P/F) option in a total of three regularly graded courses outside their major or supporting minor area.

Under the A/P/F system, an A is awarded for A work, P (pass) is awarded for letter grades B, C, and D, and F is assigned for failing work. There is no distinction between an A assigned to an A/P/F course and an F assigned to a regularly graded course. No credit points are assigned for the grade of P; the grade point average is based only on the grades A, B, C, D, and F.

Students desiring the A/P/F option for a course must declare the option and obtain approval from their dean on or before the end of the second week of classes of the semester (first week of classes of the eight-week Summer Session). Students withdrawing from an A/P/F course before the end of the tenth week of the semester (or the fifth week of the eight-week Summer Session) receive a grade of W. Students withdrawing from such a course after the end of the tenth week (fifth week of the eight-week Summer Session) receive a grade of F, subject to the right of petition to the University's Committee on Admissions and Exceptions. If students withdraw from an A/P/F course, the course will still count as one of the three allowable A/P/F option courses.

A course being repeated may not be taken under the A/P/F option and must be taken for a letter grade.

Transfer of Credits
Within the University
From University College. Students are normally expected to transfer from University College to one of the six undergraduate degree-granting colleges at the end of the semester in which they earn their 24th credit hour. For a complete explanation of the transfer process, see the University College section of the Catalog.

Other Transfers Within the University. Students may transfer from any undergraduate degree-granting college to another provided they meet, as a minimum, the probation standards of the second college. Since 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 miss an assigned examination should arrange with their instructor to take a make-up examination. Dean's 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 of 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, P, F, W, Au, Cr, NCr, S, U, 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.

P Passing work (with a B, C or D). Credit given; no credit points assigned.

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 but counts as an attempt in repeat policy. 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.

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. 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 that 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.

Credit Points. Credit hours earned during 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 regular letter grades (A, B, C, D and F) are assigned. The grades Au, W, P, 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, P, 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, P, F, Cr, NCr, S or U has been assigned.

Credit Hours Earned. Credit hours earned means that credit is given (A, B, C, D, P, 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 grad-
ing or reporting may be initiated by an instructor at any time during one calendar year following the assignment of the original grade. A grade change may also be initiated by the chairperson of the department that offered the course, 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 change of grades procedure.

If a student requests a change more than a year after the original grades were posted, the student's petition must also 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 the Wichita State University courses. It 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 been a 2.000 GPA, they may file a request with the dean of University College that all work in the transition semester be translated into Credit/No Credit (CR/NC) on their official records, with CR applying to letter grades A, B and C, and NC applying to letter grades D and F.

To have letter grades translated into CR/NC, the Transition Semester Request Form must be filed by the student with the dean of University 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 academic 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, Pass 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. 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 Center.

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 Center. Information about the dates and times at which CLEP examinations are given is available from the Counseling Center.

3. Credit for certain specified general education courses may be earned through examinations administered by the Wichita State Counseling Center. Information concerning the specific courses for which these tests are available and the standards applied in granting credit are available from the Counseling 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 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 C/R and it is recorded on their official records, with C applying to the grade recorded for credit earned 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. There are four means by which such credit may be earned:

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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 Center.

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 may also be exempt from college regulations, if any, governing the maximum number of hours students may take during a semester in one department.
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 The Wichita State University or neighboring baccalaureate 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 10 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 must also 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 helps outstanding students enrich and stimulate their college lives. The program offers honors sections of regular classes and specially designed courses, each limited to 25 students. It offers seminars, independent study and undergraduate research fellowships, and an honors option allows honors students to enroll in certain nonhonors upper-division courses and receive honors credit. The philosophical intent of the honors program is to foster excellence in students by providing opportunities for them to develop and achieve their greatest potential, whether in general education or in an advanced specialized education leading to life's goals.

General program policies are established by the honors director with consultation and advice from the Senate Honors Committee and the Honors Executive Committee. The honors director, chief administrative officer for the program, is accountable to the Executive Vice President for Academic Affairs.

Entering freshman students must have a 3.500 grade point average, as certified by Wichita State, to enter the honors program. Other students may enter the program at any time they and the honors director decide they may profit from such work. Prospective Wichita State students or those already enrolled should contact the honors director for program information. Students without honors designation who have completed 30 semester hours at Wichita State with a grade point average of 3.250 may enroll in any honors course or section if they desire and seek admission to the program.

In order to remain in the program, students must enroll in a minimum of five honors courses in at least two disciplines before graduating for a total of at least 15 credit hours and must maintain an overall cumulative grade point average of 3.250 or higher.

Students whose average falls below the 3.250 level can expect to be dropped from the program. In special circumstances, exceptions may be made. No student will be dropped without being given an opportunity to consult with the honors director.

Graduating seniors who have completed the aforementioned 15 hours of honors courses and are members in good standing of the honors program will have the words "Honors Program Graduate" placed on their transcripts. The following courses are designed for use by students in the Emory Lindquist Honors Program. Content of each of these courses is approved by the Honors Committee and a student may not take a course more than twice and receive academic credit for it.

Lower-Division Courses

101. Special Studies in Humanities and the Fine Arts. (1-4) P 11 101 0 4905
102. Special Studies in Social and Behavioral Sciences. (1-4) P 11 102 0 0601
103. Special Studies in Natural Sciences and Mathematics. (1-4). P 11 103 0 1599
104. Special Studies in Professional Studies. (1-4). P 11 104 0 2201
201. Proseminar in Humanities and the Fine Arts. (1-4). P 11 201 5 4905
203. Proseminar in Natural Sciences and Mathematics. (1-4). P 11 203 5 1599
204. Proseminar in Professional Studies. (1-4). P 11 204 5 2201

Upper-Division Courses
301. Colloquium in Humanities and the Fine Arts. (1-4). P 11 301 5 4905
303. Colloquium in Natural Sciences and Mathematics. (1-4). P 11 303 5 1599
304. Colloquium in Professional Studies. (1-4). P 11 304 5 2201
400. Honors Seminar. (1-4). P 11 400 5 4906
410. Independent Study. (1-4). Repeatable to a maximum of six hours of credit. P 11 410 4 4906

Independent Study Leading to a Degree with Departmental Honors
Outstanding students may enroll in their 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 or higher are eligible to conduct a project in their major area of study. Students considering such projects are encouraged to begin planning their work in advance of the semester during which the work is to be done. In order to enroll, students must consult with the honors director and obtain the approval of the instructor in their major department who will be their adviser. Applications must then be approved by the chairperson of the student’s major department and by the dean of the student’s college. The completed application must be filed with the honors director no later than the close of the preregistration period for the student’s last semester at Wichita State or the semester during which the student desires credit for the work, whichever comes earlier.

An independent study project should consist of original research or creative work. To be graduated with departmental honors, students must complete their independent study project and write the results according to specifications established by the honors director. Students must be examined on their project and other aspects of their major field of study. A three-member faculty committee, appointed by the honors director in consultation with a student’s instructor, 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.

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.

Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduating summa cum laude is both an overall grade point average of 3.900 and a grade point average of 3.900 on Wichita State course work. The minimum standard for graduating magna cum laude is both an overall grade point average of 3.500 and a grade point average of 3.500 on Wichita State course work. The minimum standard for graduating cum laude is both an overall grade point average of 3.250 and a grade point average of 3.250 on Wichita State course work.

Withdrawal
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 adviser, obtain drop slip(s) for every course (line number), and have their adviser 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) and certificate of registration to the office of the dean of the appropriate college for the dean’s signature and final approval. The completed drop slip(s) and certificate of registration must then be taken to the admissions and records 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 baccalaureate college by the time of completion of 60 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 if the student returns to the administration the student’s signature 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 Down Reports.** At midsemester, a Down Report may be sent to students doing below average work and to their academic Adviser as an indication that their grades need to be improved. Students should meet with their Instructor and/or college Adviser 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 2.00 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 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 overall 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 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, P, 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. In addition, for transfer students, the Wichita State probation standards apply to both their Wichita State grade point average and their overall semester grade point average.

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 overall 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 overall 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 overall 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.

**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.

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.

**Requirements for Graduation**

The University's minimum graduation requirements 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.

Seniors 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. This should include no more than three courses taken under the A/Pass/Fail option. Hours of credit earned toward a degree do not include courses with grades of F, W, Au, NCr or I.

Students must maintain an overall grade point average of 2.000 (transfer work included) and a grade point average of 2.000 on all work taken toward a degree at Wichita State. Furthermore, students must maintain a 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.

At least 30 semester hours of course credit (A, B, C, D, P 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 baccalaureate degree and no more than six hours of such credit may be among the last 30 semester hours.

**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 man or woman. To achieve these purposes, the program combines required courses in composition, speech and mathematics with distribution courses in the various major areas of knowledge. These distribution courses are identified in the course catalog and schedule of courses as "Q" courses. There are also some special distribution courses designed specifically for students who might have no further encounters with a certain field of study. These General
Studies courses are designated in the catalog as "G" courses and students are required to take a minimum of nine hours of "G" courses. To assure the breadth of studies that is characteristic of an educated human being, the faculty requires students to select their distribution courses according to certain rules, which are stated below. The General Education Program is an opportunity for all students to grow in their knowledge of and appreciation for the rich variety of human achievements in the arts, sciences and humanities.

The program consists of 42 hours—12 hours of basic skills courses and 30 hours of distribution courses.

Students entering The Wichita State University during or after the fall semester of 1983 must fulfill the General Education Program requirements in partial fulfillment of the requirements for the bachelor's degree. Students entering the University prior to the fall semester of 1983 who receive a bachelor's degree from The Wichita State University under the catalog requirements of 1983 or later must fulfill the General Education Program requirements. (See Date of Catalog Requirements.)

Students transferring to The 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 The Wichita State University General Education Program. Community college graduates and transfer students not covered by the agreement are required to enroll in the prorated number of hours necessary to complete The Wichita State University General Education Program as determined by transcript evaluation. Included in these hours are a number of General Studies courses prorated on the proportion of the 30-hour distribution requirement yet to be fulfilled, as shown in column three of the table below.

This table refers only to students with previous college credit and is not applicable to entering freshmen.

<table>
<thead>
<tr>
<th>No. of transfer hours accepted for distribution</th>
<th>Minimum No. of &quot;G&quot; hours to be included in column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6</td>
<td>9</td>
</tr>
<tr>
<td>7-15</td>
<td>6</td>
</tr>
<tr>
<td>16-21</td>
<td>9</td>
</tr>
<tr>
<td>22-29</td>
<td>0</td>
</tr>
</tbody>
</table>

To complete the General Education Program each student must take:

1. Basic Skills (12 hours)
   A. English 101 and 102
   B. Speech 111 or 112

C. Math. 109, 110, 111, 112 or 211; or another math course for which one of these courses is a prerequisite.

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

II. Distribution Courses (30 hours)

A. Distribution requirements may be satisfied only by courses designated by the letters "G" or "Q" following the course number in the Schedule of Courses. For a course to be considered a distribution course, it must have been designated by a "G" or "Q" during the semester in which the student was enrolled.

B. Rules for Distribution Courses

1. At least nine hours must be completed in three different departments in Division A. This excludes performance and studio courses, as well as basic language courses.

2. At least six hours must be completed in two different departments in Division B.

3. At least six hours must be completed in two different departments in Division C.

4. No more than six hours of work taken in any one department may be used to satisfy the distribution requirement.

5. The remaining nine hours may be taken in any division, if the course has a "Q" or "G" designation during the semester in which the course is taken. Performance and studio courses with the "Q" or "G" designation may be taken to complete this portion of the distribution requirement.

6. At least nine of the 30-hour distribution requirement must be taken in General Studies courses. These courses are offered only at The Wichita State University and are designated by the letter "G" following the course number. These courses are explained in the section titled General Studies Courses.

7. No course with either a "Q" or "G" designation may be used to fulfill both the requirements of the General Education Program and requirements in the department(s) of the student's declared major(s).

All distribution courses are assigned to one of three divisions—Humanities and Fine Arts, Social and Behavioral Sciences and Mathematics and Natural Sciences. These courses are listed in a special section of the Schedule of Courses each semester. In most cases, courses from a given department will satisfy distribution requirements for the division in which the department is listed below. However, the divisional assignment of specific distribution courses should always be verified in the Schedule of Courses for the semester in which the course is taken.

1. Division A—Humanities and Fine Arts (excluding performance and studio arts courses): American studies; art education; art history; dance; English; graphic design; history; interdisciplinary liberal arts and science program; linguistics; music education; music performance; musicology; composition; philosophy; religion; Modern and Classical Languages and Literatures (excluding basic first-year language courses); speech communication; studio arts; and women's studies.

2. Division B—Social and Behavioral Sciences: accounting; administration of justice; anthropology; business education; economics; finance/real estate/decision sciences; geography; gerontology; health administration and education; instructional services; journalism; management; marketing and small business; military science; minority studies; personnel services; physical education; political science; psychology; social work; sociology; and urban studies.

3. Division C—Mathematics and Natural Sciences: aeronautical engineering; emergency medical training; biological sciences; chemistry; communications disorders and sciences; computer science; dental hygiene; electrical engineering; engineering; engineering technology; geology; health sciences; industrial education; industrial engineering; mathematics; mechanical engineering; medical technology; nursing; physical therapy; physician assistant; physics; and respiratory therapy.

General Studies Courses

General Studies courses are designated by the letter "G" following the course number. They have been designed to provide students the knowledge necessary to develop informed understanding of areas outside of their own fields of specialization. The courses attempt to provide students information and concepts that promote awareness of both the achievement and the limits of knowledge in a given area.

Students transferring to The Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities should consult the catalog as "G" courses and students are expected to complete The Wichita State University General Education Program each student must take:

1. Basic Skills (12 hours)
   A. English 101 and 102
   B. Speech 111 or 112

C. Math. 109, 110, 111, 112 or 211; or another math course for which one of these courses is a prerequisite.

Students with deficiencies in the Basic Skills may be required to take background work or refresher courses.
Education Program, also count as distribution courses. No course with a "G" designation may be used to fulfill both the requirements of the General Education Program and the student's declared major(s).

The following courses have been approved as General Studies courses. A complete list of General Studies and "Q" courses are listed in each semester's publication of the Schedule of Courses. Course descriptions may be found in the appropriate departmental listings in the Catalog.

**Division A, Humanities and Fine Arts**
- Art Hist. 121G, Survey of Western Art: Paleolithic through Early Christian
- Art Hist. 122G, Survey of Western Art: Renaissance and Baroque
- Eng. 230G, Exploring Literature
- Eng. 232G, Themes in American Literature
- Eng. 307G, Narrative in Literature and Film
- Eng. 400G, The Literary Imagination: Epic, Romance, Tragedy, Comedy

**Division B, Social and Behavioral Sciences**
- Hist. 101G, History of Western Civilization
- Hist. 102G, History of Western Civilization
- Hist. 108G, A History of Lost Civilizations
- Ling. 110G, Learning Another Language
- Ling. 151G, The Nature of Language
- Mus.-Comp. 160G, The Heritage of Western Music
- Mus.-Comp. 493G, American Music
- Phil. 100G, The Meaning of Philosophy
- Phil. 300G, Science and the Modern World
- Rel. 120G, The Biblical Heritage
- Rel. 131G, Traditional Religion and the Modern World
- Thea. 143G, The Art of the Theater
- Spch. 190G, Crises in Communication
- WS 190G, The American Woman

**Division C, Mathematics and Natural Sciences**
- Biol. 105G, The Human Organism
- Biol. 509G, Foundations of Human Heredity
- Engr. 300G, Technology and Society
- Geol. 300G, Energy, Resources and Environment
- Phys. 195G, Introduction to Modern Astronomy

**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 may also graduate under the requirements of any subsequent Wichita State University Catalog.

If 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.

**A Second Bachelor's Degree from Wichita State**

Students with a bachelor's degree from another institution may receive a second bachelor's degree from The 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 The Wichita State University college and department graduation requirements are met.

Students who have received one bachelor's degree from The 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.

**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 employment by being placed in paid internships closely related to their academic majors. Cooperative Education places students both locally and nationally.

By utilizing off-campus resources and expertise, cooperative education places students in business, government, industry, health 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 placed in cooperative programs must enroll in specially designated co-op courses and work with a faculty adviser from within the appropriate departments. Each placement is assessed by the faculty adviser 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 adviser. During the work period, students are expected to meet project requirements assigned by their adviser. Academic credit generally counts toward University degree requirements.

Cooperative Education offers both full-time and part-time placements. Students who select the full-time option must alternate a semester of full-time enrollment in course work before entering a second full-time position. Full-time internships also carry the status of full-time students and enjoy the accompanying privileges.

Students selecting the part-time option are required to carry a minimum of six hours of course work in addition to their co-op course. Students may enroll in part-time co-op positions during consecutive semesters so 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 107 Morrison Hall or phone (316) 689-3688. Students are required to complete an application for admission and schedule an interview with the appropriate co-op coordinator.
Division of Continuing Education

One of the four basic objectives of Wichita State is to provide continuing education opportunities for adults. The Division of Continuing Education's programs and activities are directed toward meeting the higher education needs of adults throughout the Wichita area and the state. The primary functions of the division are to:

1. Provide, in cooperation with degree-granting colleges, courses, programs and support services for faculty and students in off-campus locations
2. Develop and provide alternative information sources, registration procedures and orientation programs for adult part-time students
3. Cooperate with business, industry and the professions in providing specialized credit and noncredit classes
4. Provide planning and support services to the continuing education centers within the individual academic colleges
5. Organize and administer courses for nontraditional students designed to meet their unique time and location needs. The instructional services of the University are extended through courses presented over WSU Cable 13, KMUW Radio and commercial television stations; in outreach locations; and through Weekend University
6. Assist in the development of original presentations and coordinate the reception of teleconferences provided by the National University Teleconference Network and other educational teleconference producers
7. Coordinate adult scholarships and senior citizen services
8. Provide centralization of the records and reporting functions to the Kansas Board of Regents for University-wide, off-campus credit activities and all noncredit programs.

Graduate School

More than 3,500 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 administration of justice, accounting, aeronautical engineering, anthropology, art, art education, biological sciences, business administration, chemistry, communications, computer science, communicative disorders and sciences, counseling and school psychology, creative writing, economics, educational administration and supervision, educational psychology, electrical engineering, elementary education, engineering management science, English, geology, gerontology, health science, history, liberal studies, mathematics, mechanical engineering, music, music education, nursing, physical education, physics, political science, psychology, public administration, secondary education, sociology and Spanish. The Specialist in Education, a degree beyond the master's level, is awarded in counseling and school psychology and in educational administration. PhD programs are offered in communicative disorders and sciences and in engineering with emphases in either aeronautical, electrical, industrial or mechanical. Two additional PhD programs, in applied mathematics and in chemistry, are offered in cooperation with The University of Kansas and Kansas State University. A transfer arrangement with the University of Kansas allows substantial parts of doctoral programs in educational administration to be completed at Wichita State.

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

Summer Session

Wichita State's Summer Session features a flexible time format. A three-week preession precedes two four-week sessions which are concurrent with the regular eight-week session. Evening classes are offered during the regular session. Dates for the various sessions are announced in the Summer Session Schedule of Courses, available by April 1.

All colleges and divisions of the University function during the Summer Session and credit toward both undergraduate and graduate degrees may be earned. More than 200 faculty teach more than 650 regular and short courses and 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.

For information regarding dates of enrollment, fees, course offerings and the availability of cultural and recreational opportunities, write to:

Director of the Summer Session
The Wichita State University
Wichita, Kansas 67208-1595

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 are also held for each of the short sessions. Detailed information on registration is available in the Summer Session 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 are offered throughout the summer. These courses, which are devoted to current topics, carry the course number 150 or 750. Specific topics are not given in the Catalog, but a list of the workshops being offered each summer is included in the Summer Session 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.

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. Students live in the Hotel Colonial in Puebla for three weeks and in private homes for three weeks.

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.

Financial Information

Tuition and fees cover only about one-fourth of the cost of a university education. The remaining expenses are paid out of donations made to The Wichita State University Endowment Association.
and from appropriations of the State of Kansas.

**Comprehensive Fee Schedule**

Fees given in this Catalog were proposed for 1987-88 and may be changed by the Kansas Board of Regents or the Kansas Legislature.

**Basic Fees**

Basic fees for on-campus (City of Wichita and the immediate contiguous industrial and military facilities) regular enrollment and continuing education credit courses are:

<table>
<thead>
<tr>
<th></th>
<th>Non-Resident</th>
<th>Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate tuition fee—regular semester and Summer Session:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 through 14 hours—per credit hour</td>
<td>$35.65</td>
<td>$108.00</td>
</tr>
<tr>
<td>15 hours and above—flat fee</td>
<td>535.00</td>
<td>1,620.00</td>
</tr>
<tr>
<td>Graduate tuition fee—regular semester and Summer Session:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 through 14 hours—per credit hour</td>
<td>$10.35</td>
<td>$35.65</td>
</tr>
<tr>
<td>15 hours and above—flat fee</td>
<td>155.25</td>
<td>535.00</td>
</tr>
<tr>
<td>Student fee—regular semester and Summer Session:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 through 14 hours—per credit hour</td>
<td>$39.65</td>
<td>$112.00</td>
</tr>
<tr>
<td>15 hours and above—flat fee</td>
<td>595.00</td>
<td>1,680.00</td>
</tr>
<tr>
<td>Student Service fee—per semester</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

Total undergraduate required fees, based on 15 credit hours for regular semester...

$695.25 $1,780.25

The student fee, required of all students enrolled on the Wichita State campus, supports parking, student union, student union, student health services, athletic admissions, forensics, Student Government Association, University Forum Board, student publications, concerts, drama, opera productions, and similar items.

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

A specific course fee of $43 (undergraduate) or $62 (graduate) per credit hour is assessed for off-campus courses and workshops. Fees for noncredit courses are based on actual operating costs.

**Workshop Fees—On Campus**

A workshop fee of $52.85 per credit hour, including $42 for tuition and $10.35 for student fee, is assessed. Fees for noncredit workshops are based on actual operating costs.

**Auditing Course Fees**

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

**Departmental 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 to complete a course.
2. Geology Field School—actual costs per course.
3. Military science—$6 per semester.
4. Physical education (bowling)—$25 per semester.
5. Physical education (bowling), PE 201B—$7 per course.
6. Physical education (horsemanship)—$5 per semester.
7. Physical education (motorcycle)—$35 per semester.

**Free Music Courses**

During the academic school year, undergraduates enrolled in six or more hours will not be charged tuition and fees for the following ensembles:

- Wind Ensemble, Mus. Perf. 210B, 410B and 710B
- Orchestra, Mus. Perf. 211A, 411A and 711A
- Band (Symphony), Mus. Perf. 211B, 411B and 711B
- Band (Concert), Mus. Perf. 212B, 412B and 712B
- Band (Marching), Mus. Perf. 213B, 413B and 713B
- University Singers, Mus. Perf. 211F, 411F and 711F
- Jazz Arts Ensemble, Mus. Perf. 211T and 212T, 411T and 412T and 711T and 712T
- A Capella Choir, Mus. Perf. 212F, 412F and 712F
- Concert Chorale, Mus. Perf. 213F, 413F and 713F

Students enrolled in fewer than six hours will be charged regular tuition and student fees. Tuition and fees will not be charged to graduate students enrolled in the above courses. During Summer Session, tuition and fees for the above ensembles will not be charged to undergraduate or graduate students enrolled for two or more credit hours in courses other than the above.

**Hesket Center Program Fees**

- Spouse of student—$40 per fiscal year
- Family of student—$50 per fiscal year
- Faculty or staff—$50 per fiscal year
- Faculty/staff and spouse—$80 per fiscal year
- Faculty/staff and family—$100 per fiscal year

*Fees are $10 less if paid in a lump sum at the beginning of the year.

Partial year program fees will be prorated and therefore differ from those above.

Payment of the fee entitles the individual or family to use the facility and services during those hours specifically scheduled for each membership category and/or activity of interest. Hours will vary.

**Special Fees, Deposits and Waivers**

Certain other fees are assessed as indicated below:

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<tbody>
<tr>
<td>English composition placement fee</td>
<td>$4.00</td>
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<tr>
<td>Diploma replacement fee</td>
<td>10.00</td>
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<tr>
<td>Identification card fee</td>
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<tr>
<td>International student application processing fee</td>
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<tr>
<td>Orientation fee</td>
<td>15.00</td>
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<tr>
<td>Transfer</td>
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<tr>
<td>Transcript and certification fee</td>
<td>2.00</td>
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<tr>
<td>Public documents per copy charge</td>
<td>.10</td>
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<tr>
<td>Late registration fee</td>
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<tr>
<td>Through 20th day</td>
<td>15.00</td>
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<tr>
<td>After 20th day</td>
<td>25.00</td>
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<tr>
<td>Library fines and lost materials—cost per fine schedule or cost of replacement of material plus a processing fee</td>
<td>20.00</td>
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<tr>
<td>Reserving of class fee</td>
<td>10.00</td>
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<tr>
<td>Return check fee</td>
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<tr>
<td>Instrument use fee, per semester</td>
<td>2.00</td>
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<tr>
<td>Teacher placement fee</td>
<td>2.00</td>
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<tr>
<td>Students</td>
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<tr>
<td>Alumni</td>
<td>5.00</td>
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<tr>
<td>Career Placement Fee</td>
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<tr>
<td>Seniors</td>
<td>15.00</td>
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<tr>
<td>Alumni and graduate students</td>
<td>15.00</td>
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<tr>
<td>College of Health Professions Equivalency examination fee, per credit hour</td>
<td>8.00</td>
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<tr>
<td>Physician assistant application fee</td>
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<tr>
<td>Acceptance fees</td>
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<tr>
<td>Emergency medical techni-</td>
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<tr>
<td>Mental hygiene*</td>
<td>100.00</td>
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<tr>
<td>Medical technology*</td>
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<td>Nursing*</td>
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<tr>
<td>Physical therapy*</td>
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<tr>
<td>Physician assistant*</td>
<td>100.00</td>
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<tr>
<td>Respiratory therapy*</td>
<td>100.00</td>
</tr>
<tr>
<td>Nonimmigrant student fee</td>
<td>26.00</td>
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</tbody>
</table>

* Acceptance fees are due no later than 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.
**Testing and Credit by Examination Fees**

- Experiential learning assessment fee: $25.00
- Departmental examination fee, per credit hour: 8.00

**Contracts and Compensatory Charges**

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

**Drop Fee**

Preregistered students may drop courses during registration without charge. When an approved change of schedule involves both the dropping and adding of courses the tuition and student fees already paid for the dropped courses will apply to the tuition and student fees for the courses being added. A $10 drop fee will be assessed during the first five weeks of a semester (two weeks of summer school) for all drop/add transactions submitted at the same time. No fee will be assessed for adding courses.

**Refund Policy—Complete and Partial Withdrawal**

Students making a complete or partial withdrawal during the first two weeks of a semester (first week 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 third, fourth and fifth weeks of a semester (second week 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 (second week in the eight-week Summer Session).

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, 40 percent during the next 20 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.

**Fee Waiver Policy**

The dean of a student's college, or his or her designee, or the Registrar may authorize a waiver of special fees and/or nonrefundable tuition fees in cases where the schedule change or withdrawal is required because of University regulations, clerical errors, misleading, class schedules changed by the University or other exceptional circumstances beyond the control of the student, and determined valid by the college dean or his or her designee. The waiver petitioning procedure is as follows:

1. Students request a petition form from the dean's office of their college and provide the information requested on the form.
2. Students present the petition to their college dean's office for consideration. Graduate students petition the Graduate School dean's office.
3. Students are notified of the action taken on the petition.
4. Students submit approved petition to the Controller's Office with their enrollment, schedule change or withdrawal forms.
5. When students wish to appeal a negative decision on a petition, they call their college dean's office for information on how to file an appeal.

**Senior Citizen Fee Waiver**

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

**Period of Payment**

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

**Unpaid Fees**

Students who leave The 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 assesses and collects the fees. The controller, the dean of the College of Fine Arts and a faculty member from the College of Business Administration 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 the process are available at the Registrar's office.

**Student Housing Fees**

Three rates are available for student housing at The Wichita State University, depending on the number of meals the student chooses to eat in the residence hall.

- Housing costs for the 1986-87 school year are $2,260 for 19 meals per week, $2,231 for 15 meals per week and $2,078 for 10 meals per week. Single rooms, if available, cost an additional $250 per semester. All residence hall rooms are air-conditioned.

In addition to the housing fees, a $35 nonrefundable application fee is assessed of each person applying for a room in the residence halls.

Rates are for fiscal year 1987. Fees may be changed by the Kansas Board of Regents.

**Financial Aids**

Wichita State offers financial assistance through scholarships, employment, and federally supported programs. Students interested in any type of financial assistance should contact the University's Office of Financial Aids, Grace Wilkie Hall, to see what aid is available for their specific needs. Most financial aid 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.

**Employment.** All full-time students are eligible for regular part-time or work-study employment at the University, with preference going to students with the greatest demonstrated financial need. Students may find employment in such positions as academic assistants, clerical workers, technical workers, custodial and food service workers and library assistants.

**Federal Grants and Loans.** Students may receive aid through several federal programs: Supplemental Educational Opportunity Grants, Pell Grants, National...
Direct Student Loans and Guaranteed Student Loans.

As part of the Office of Financial Aids, the Office of Veterans and Military Services devotes itself 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 aid information and work-study for veterans.

The Wichita State University is designated a Serviceman's Opportunity College.

Endowment Association

The Endowment Association of The 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 Chairs

The most prestigious manner in which to endow monies to the University is through an Endowed Chair. An Endowed Chair, named according to the wishes of the donor, may be established with an endowment of $500,000. The Endowed Chairs current to the University are:

- R. P. Clinton Chair in Business Entrepreneurship Chair
- Kansas Chair in Real Estate and Land Use Economics

Endowed Professorships and Fellowships

A University Professorship may cross disciplinary lines and is not restricted to a college or department. The income from such an endowment is used for support of a faculty position. A University Professorship, named according to the wishes of the donor, may be established with an endowment of $200,000.

A PhD Fellowship helps doctoral candidates to achieve their goals within a particular field. A fellowship is named according to the wishes of the donor and is established with an endowment of $120,000 or more.

The current University Endowed Professorships and Fellowships are:

- Adele Davis Professorship of Humanities
- Geraldine Hammond Visiting Professorship of Humanistic Studies
- Hugo Wall Fellowship

Other Endowments

To improve its fiscal stability, The Wichita State University has developed a permanent endowment fund invested to provide continuing income in support of various programs and activities of the University. The major portion of financial assistance to students as directed by the donors. Other programs supported by the endowment are:

- ACE Endowment Fund
- Berg Lectureship
- Sam Bloomfield Distinguished Engineer in Residence
- Business Heritage Series Fund
- Butler-Ransom Fund for Religion
- Entrepreneurship Activities
- Entrepreneurship Research Fund
- Football '70 Flower Fund
- John L. Gardough Fund
- Brad Heilman Memorial Honor Fives Fund
- Claude R. Lamb Fund
- Library Associates Fund
- John Liggitt Fund
- Eugene W. Lightner Athletic Programs
- Ralph S. Lightner Fund
- Thomas B. Meeker Memorial Fund
- PFF Fund
- Midwest Research Fund
- The Lewis and Selma Miller Fund for Fine Arts
- William Miller Memorial Fund
- Harriie S. Mueller
- Lydia Newman Fund
- Christine F. Paulsen, studio arts
- Jack G. Paulsen, athletics
- Genev and Cramer Reed
- DeIores, Etta and Sidney Rodenbod Teaching Award
- Rossdutcher Library Fund
- Anna M. Ryan Fund
- James Schwartz Lecture Series
- Seamsome Memorial Library Fund
- Ulrich Museum of Art, art
- WSU Summer Theatre
- George Van Riper Distinguished Speaker Series
- Marjorie Winthrop Williams

Endowed Scholarships and Grants

The Wichita State University has been fortunate to receive donations submitted in the names of the following individuals.

Many are past graduates, faculty and administrators of the University who wish to assist future graduates in financing their years at The Wichita State University. The scholarships listed 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 aid.

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

Endowed scholarships and respective departments include:

- Clark and Rowena Ahlberg, general
- AIFAM, athletics
- Fred and Mary Aley, business
- Robert Alley, education
- Alumni Awards, general
- Floyd Amsden, music
- Anderson Walk-On, football
- James E. Anderson, Jr., education
- Robert E. Anderson-Leonard M. Chaffee, education
- Anonymous, general
- Jack Austin, business
- A. J. and Jean Bachas, general
- Bank IV, general
- Bentley and Pearl Barnabas, business
- W. Frank Barton, business
- W. Frank Barton, entrepreneurship
- Beech Employees Club, athletics
- Walter H. Beech, aeronautical engineering
- Lloyd R. Bell Memorial, music
- Douglas Bendell, liberal arts
- Christopher Benn, medicine, science/engineering
- Big Brothers-Big Sisters of Sedgwick County, general
- Biological Science, biology
- Dr. Leslie Blake, speech
- John Blazek, WUShock
- V. Jerry Blue, entrepreneurship
- Luella Bosworth, English
- Merrill Bosworth, music
- Hazel Branch, biology
- Margaret Gillespie Brehm, general
- Sidney J. Brick, bowling
- Hazel and Edward R. Brookings, health
- War O. and Agnes Brooks, biology
- Marvin G. Brown Football Memorial, general
- Melba Cornwall Budge Piano, music
- Raymond LeClair Budge, art
- Charles M. Buesch, business
- Stephen Burnham Memorial, mechanical engineering
- Louise Byngton, liberal arts
- Marjorie Calkins Memorial, music
- Vincent Canzoneri, music
- James Ceasar, music
- Van Dilla Chapel, general
- Anna V. and Robert V. Christian, chemistry
- Donald G. Christian Football Memorial, general
- Harry Christopher, math
- James Chubb, economics
- Class of 1927, general
- Rick F. Clinton, business
- Flora Cough, English, literature
- College of Fine Arts/June Lair, fine arts
- Daisy Siever Congdon, general
- Coors-Larco Veterans, general
- Harry F. Corbin, football
- Sara Hyde Corbin, political science
- Lee Cornell, geology
- Wayne Coulson, pre-law
- Kramer Fund for Art, art
- Paul T. and Mary Jane Curry, entrepreneurship
- David Dearmore, athletics
- Urban Denkier, business
- Cecil W. and Helen J. Dorman, business
- Walter J. Duerksen, music
- John W. Duren Football Memorial, general
- Howard E. Ellis, music
- Gordon W. Evans Instrumental, musical
John L. Evans, pre-med
Dr. Carl G. Fahrbach Football Memorial, general
Floyd M. Farmer, education
Floyd Farmer, track
Louise Findlay, music
Martha Fleming, dance
Fletcher-McKinley, chemistry
Helen Johnson Frank, general
Howard Frazier Memorial, business
Friends of Delta Upsilon, general
Charlette and Lynette Furlay, liberal arts
Glen Gardner, general
Sam Gardner, golf
Edith A. Garlock, health
Morris and Mary Garvin, music
Merle Geist, athletics
Paul H. Gerling Public Affairs Internship, political science
Mabel Fay Gillespie, general
L. L. Gillespie, general
Jacob and Molly Glockman, general
Golf Memorial, golf
Harry Gore, general
Henry and Helen Gott, music
Harold and Eva Weiner Grafton, English
Marie Graham, history
Grand Army of the Republic, logopedics
Charles and Helen Graves, general
Benjamin F. Hammond, general
Geraldine Hammond, liberal arts
Eva C. Hanger, general
Herbert J. Hannah, education
Donald R. Harbour, administration of justice
Martin E. Harrison Football Memorial, general
Mary Haymaker, English
Frank Hedrick, art
Arthur J. Hoare, mathematics
Thursday Afternoon Music Club/Carol Holman, flute
Dr. Robert Holmer, education
Richard H. Homburger Award for Excellence, business
Myrl Houck, general
Grace Howell, journalism
Earl R. Hutton, aeronautical engineering
Earl R. Hutton, engineering
Eunice Jones Isely, senior honor women
Frank C. Isely
William H. Isely, senior honor men
Col. James J. Jabara, general
John C. and Meade James, engineering
J. R. and Inez Jay, general
Cheese Johnson, basketball
Ronald G. Johnson Football Memorial, general
Charles and Nina Kirby Jones, biochemistry/speech
KBI Foundation Scholarship, continuing education
Lee and Helen Kremen, liberal arts/political science
Kappa Kappa Gamma, handicapped services
Albert and Marion Kalzanieker, athletics
Marvin B. Kaufman Memorial, business
Marquette Kael, women's basketball
Randall B. Keisau Football Memorial, general
John F. Kennedy Memorial, general
James Bandsman Kerr, music
Frank and Margaret Kessler, music
Malory W. Kimmel Football Memorial, general
Robert M. Kiskadden, art
Christopher R. Knapp Memorial, health
Jay and Lillian Kornfeld, music
Susan M. Kraft, athletics
Morris and Flossie Krouse, football/basketball
Carl R. Krueger Football Memorial, general
Robert and Dorothy Langenwalter, general
J. F. Lewin, health
George Lewis, psychology
Thurlow Rummel, music
L'il Egie, general
Sally Duke Livingston, entrepreneurship
George David Lodge, business
Bob Long/Vince Lombardi, football
Anita Lusk, business
Delano Maggard, Jr., general
Charles and Amy Mann, education
D. J. Malone, geology
Frank Cliftor Malone Research, chemistry
Dr. Robert F. and Judith Malone, health
Julannea Weaver Masters, theater
C. R. Mayfield, geology
R. Wesley McCarty, political science
Xavier McDaniell, basketball
Clinton C. McDonald, science
Lenora N. McGregor, general
Marjorie McManus, math
Men of Webster, general
Dr. Daniel F. Merriam, geology
Pearl J. Milburn, general
Frank H. Miller, accounting
Ralph Miller Fund, athletics
Soroptimist of Wichita, general
Marvin Munsell, anthropology
Craig Murphy, English
Carl Nath, baseball
C. Henry and Ruth Nathan, journalism/speech
Dolly Baker Nease, general
Frank A. Neff Memorial Award, business
John M. and Nelda Nickel, education
Kenneth Northcutt, business
David A. and LaVerna L. Nygaard, health/education
Conroy G. O'Brien, administration of justice
Dr. Henry and Minnie Ousgaard, history
Thomas B. Owen, Jr., Football Memorial, general
Marge Page, golf
Robert T. Pate, education
John N. Payne, business/education
Don Phillips, geology
Physician's Assistant Student Society, health
Phil M. Epple, math
Ola Osborn Piper, health
Adrienne Poult, music
Harry and Gerry Allbritton Pranko, liberal arts
Kern Purves, golf
Mabel A. Putnam, general
Ruth Ann Reagan, music
Thomas Reaves, athletics
Tom Reeves Football Memorial, general
WSU Regents Awards, general
Richard and Jean Reidenbaugh, entrepreneurship
Dr. Martin Reif, liberal arts
Charlotte E. Rennert, German
Rho Epsilon, business
Charles and James Rickman, liberal arts
Nellie Rickman, general
Larry D. Ricks, geology
Austin and Arlene Rising, aviation management
James P. Robertson, music
Eugene Robinson Football Memorial, general
Paul Christopher and John Timothy Rose, health
Charles Rossdutcher, accounting
Robert Ryan, economics
John Rydjord Graduate Award, history
F. C. Sauer, zoology
Eugene Savaiano, liberal arts
Sawallis Award for Excellence, fine arts
George Sawallis, music
Terry and J. D. Scanlon, political science
John Schneider, music
Vera Hutton Seamans, general
Thomas F. Sheddan Football Memorial, general
Ralph and Ina Shenk, physics
Sam and Rosemary Sheer, communications disorders
Sigma Alpha Iota, music
Fritz Snodgrass, track
Soroptimist of Wichita, general
Josephine A. Stabler, liberal arts
Dave Stollworth, basketball
Clayton Staples, art
Steve Steffy, speech
Harold Steinbamp, geology
Edgar Stewart, engineering
Richard N. Stines Football Memorial, general
Nora S. Stosz, business
H. W. Sullivan Award, engineering
Dr. Ronald Summers, football
Swett Prize, general
Gladye Taggard, physical education
Paul Tasch, geology
John and Mary Tatch, geology
John R. Taylor Football Memorial, general
Teacher's Scholarship, education
Gordon B. Terwilliger, fine arts
James Ray Trapp Memorial, engineering
Andrea Uleberg, education
Bill Ulep, physical education
Harold and Mary Varnum, engineering/health
Walter A. Ver Wiebe, geology
Jack R. Vetter Football Memorial, general
Vocal Performance Majors, music
David Wainwright Memorial, ROTC
Dwane and Veima Wallace, engineering
Hazel Walpole, athletics
Wichita Gem and Mineral Society, geology
Wichita Oil Secretaries Association, business
Fern Woodard and Frederick Wieland, education
Grace Wilkie Women's Scholarship, general
J. Roscoe Williams, business
George Wilmer, speech/drama
Ben and Helen Wilson Football Memorial, football
Mary Wittenbach, psychology
Women's Aeronautical Association, engineering
Frances C. Woodard, economics
Ira Dean and Dixie Woodard, business
Jack R. and Barbara J. Woodard, liberal arts
Mack W. and Grace M. Wortmann, liberal arts
Elmer and Mabel Worthington, music
Paul R. Wunsch, music

Student Affairs

Structure
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 student life, development, programs, problems and activities on The
Wichita State University campus are addressed by the staff of the division. The dean of Student Life and Services is responsible for the residence halls, off-campus housing concerns, handicapped services, fraternities and sororities, student organizations, preschool, veterans, women's activities, placement and career services, student health, student activities, counseling students with problems or concerns and encouraging scholastic achievement.

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 dean of students is responsible for Operation Success, Project Discovery and Upward Bound, the federal TRIO programs for educationally disadvantaged students. (See the Special Programs section of the Catalog for a more complete description of these programs.)

Orientation

Special orientation programs are presented through small-group interaction and discussions. For more details about the orientation program, see the University College section of the Catalog.

Counseling

The Counseling Center provides psychological services and counseling for personal and career/life planning issues. Professional counseling is available on a cost-shared basis to all members of the University community—students, their families, faculty and staff. Individual, couple, family and group counseling are aspects of the professional counseling services. Testing services are part of the Counseling Center's function. The credit by exam program and the National Testing program are administered directly by the Counseling Center. The National Testing program includes certification tests for community professionals, CLEP tests and entrance exams for colleges and graduate schools.

Office of International Programs

International Programs, 303 Grace Wilkie Hall, serves the special needs of approximately 1,100 international students from more than 70 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 newly arriving foreign students prepares them for entrance into the American academic system and way of life.

International Programs also sponsors the International Conversation Partners Program, the Global Classroom Program and various other activities that promote interaction between American and foreign 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.

Placement and Career Services

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

Individual career counseling is available to assist students and alumni with planning and decision making. Assessment instruments, including SIGI (a computer guidance system) are offered for self-assessment. Workshops, presentations and classroom instruction are offered to enable persons 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.

Degree candidate and alumni placement services include direct referral to career employment vacancies, on-campus interviews with employer representatives; and an employment listing bulletin.

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

Housing

The Wichita State University requires new freshmen to live in a University residence hall, unless exempted, because research repeatedly has shown that freshmen who live on campus are more successful academically than freshmen who do not live on campus. All other students may select their own accommodations; however, University housing is highly recommended. The Wichita State University housing policy states:

New freshmen who have graduated from high school within the past nine months must live in a University residence hall unless they are:
1. Married
2. Living with a parent or legal guardian
3. Living with a grandparent, uncle or aunt

Special exceptions to these regulations will be reviewed by the housing officials in the Division of Student Affairs. Admission to Wichita State does not mean automatic room reservation. Each student admitted will receive information concerning housing from the Office of Admissions and the proper forms must be filled in and returned to the housing office to reserve a room. Students are encouraged to apply early since space is limited.

Requests for information should be sent to:
Director of Housing
The Wichita State University
Wichita, Kansas 67208-1595

The 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.

University Preschool

The University Cooperative Preschool is a licensed school for children of WSU students. Four certified preschool teachers and 20 part-time aides supervise activities which include art, language, music, science, numbers and literature. The school is available from 7:30 a.m. to 5:30 p.m. Monday through Friday for children 2 1/2 to six years old and 5 to 10 p.m. Monday through Thursday for children 2 1/2 to 12 years old. Each child must stay for a minimum of two hours per day. The program permits children to attend preschool while their parents are in class. It is available to the greater community as well.

Handicapped Services

The handicapped services office provides supportive services for students with impaired sensory, motor and/or speaking skills.

Student aid assistance during the 1986-87 school year has included notetakers, readers, library assistants, wheelchair pushers, test proctors, escorts, transfer assistants, transcribers and clerical services. Those interested in these services should contact the handicapped services office for updated information on such assistance. Auxiliary aids and materials available for student use include the Perkins Brailler, IBM Braille typewriters, slate and stylus, raised line drawing kits, the Speech Plus Calculator, Braille measuring instruments, mobility canes, print magnifiers, four-track cassette tape recorder players with earphones, standard tape recorder players, phonographs, digital Braille clocks, lap boards, transcribing papers and blank tapes. Textbooks are ordered
through this office for students requesting books on tape, in Braille or in large print. Tactile campus guides, Braille campus maps and manual wheelchairs for emergency use can be provided.

The Association for Handicapped Students, a campus affiliated group of handicapped and nonhandicapped individuals, promotes fellowship while exploring issues which affect the postsecondary education of individuals with physical disabilities.

**Student Health Services and Hospitalization Insurance**

The Student Health Services in 209 Aihberg Hall provides ambulatory health care for students with health concerns, medical problems, illnesses and injuries. Clinic services and health education are provided by a staff of professional nurses and certified community physicians. 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 ear, nose and throat, dermatology, gynecology, internal medicine, orthopedics, surgery and family practice are available.

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

The student body has chosen to participate in a group plan for accident and sickness insurance coverage. Opportunities to enroll in the program are offered at the beginning of each regular semester. Information is available at the Student Health Services and the Office of Student Life and Services.

**Special Programs**

**Center for Economic Development and Business Research**

The Center for Economic Development and Business Research, a service of the College of Business Administration, engages in business-economic research for a wide variety of clients in both private and public sectors. The center gathers, analyzes and publishes data describing economic conditions in Wichita and Kansas and is the sole source of comprehensive monthly economic data for the state. The center's staff of faculty and graduate and undergraduate students works together on policy-oriented research and publications, publishing the quarterly *Business & Economic Reports* alternately with the monthly *Kansas Economic Indicators*.

**Center for Continuing Engineering Education**

The Center for Continuing Engineering Education has as its objectives:

1. Providing noncredit engineering education for professional development or occupationally/professionally related purposes.
2. Cooperating with the engineering professions and related professional associations to provide specialized courses and certificate programs.
3. Sponsoring, developing and cooperating in programs and activities that extend the resources and knowledge of the University to industry, special audiences and the general public.

**Center for Continuing Health Education**

The Center for Continuing Health Education, a unit of the College of Health Professions, provides continuing educational opportunities for members of the nursing and allied health professions in Kansas. Through workshops, seminars and conferences, many offered in conjunction with local or state health and social agencies, the center and the college's educational programs provide current information on philosophy, practice and new developments in the health professions.

**Center for Entrepreneurship and Small Business Management**

The Center for Entrepreneurship and Small Business Management is housed within the College of Business Administration. The center is committed to promoting an environment that encourages private enterprise and that seeks to preserve and enhance entrepreneurial activities. The center offers a comprehensive curriculum in entrepreneurial studies and conducts seminars and workshops. The most popular workshop, "Entrepreneurship: Your Future in Business," has received international recognition.

Additional features include a visiting lecture series, a complete library of resource materials and the Association of Collegiate Entrepreneurs and the Young Entrepreneur's Organization, a resource and information base for innovative students and a network for young entrepreneurs.

The center is conducting a major research project to learn the effects of entrepreneurial education on new business start-ups and success rates, as well as a profile of individuals who start a business.

**Center for Human Appraisal**

The Center for Human Appraisal operates as a service of the College of Business Administration to extend research attitudes and interests in the behavioral sciences and apply that knowledge to governmental agencies and the business community. Projects undertaken by the center include management surveys, assessment programs, supervisory selection, selection for promotions, morale research, supervisory training and general research on people systems.

**Center for Management Development**

The Center for Management Development, through the College of Business Administration, offers a noncredit management development seminars to the business community.

The WSU management 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 serves related to women and their concerns, to their usefulness to practicing business and to enhance the women's needs, to act as an information and referral agent and to enhance the overall awareness of campus and community to the current needs of women in the areas of education, jobs and life choices. To help achieve these aims, the center maintains a small resource library of books and periodicals open to students, faculty and others; sponsors seminars, workshops and lectures; and provides community and campus speakers. The center is responsible for administering the BA in women's studies and supervises the work of students pursuing a concentration in women's studies in various graduate areas.

**Cooperative Education Program**

The Cooperative Education program is a University-wide, centrally administered academic program providing students the opportunity to integrate formal course work with periods of relevant off-
The Center for Urban Studies was established in 1972. "As the Regents' urban institution, The Wichita State University's mission includes development of programs utilizing the unique resources of the urban area."

The Center for Urban Studies was formed in 1955 and has become a leading contributor to the urban mission articulated by the Board of Regents. The center conducts instruction, research and service programs, integrating these three essential University functions in responding to the needs of students and the urban environment. The Master of Public Administration degree is administered through the center and its faculty in public administration and urban affairs. Service programs of the center include public affairs seminars, workshops for governmental personnel, professional development seminars for governmental managers and a variety of other programs designed to link the resources of the University to urban governments. The faculty and staff of the center are engaged in a wide range of research on state and local government in Kansas, including research and analysis of boards and commissions in Sedgwick County, a history of the property tax in Kansas, a labor market analysis to guide economic development policy in the City of Wichita, an assessment of productivity in the City of Wichita, a political history of Wichita and a study of service delivery of the Wichita-Sedgwick County Department of Community Health.

The Hugo Wall Center for Urban Studies coordinates the University's State Census Data Center as part of a five-member statewide consortium. The Data Center is the repository of 1970 and 1980 census data and responds to requests for census data.

Institute for Aviation Research
The Institute for Aviation Research was approved by the Kansas Board of Regents in fall 1985. It represents a focus for research with the University and a vital link with local and national aviation communities. The institute works through five centers:

1. Center for Basic and Applied Research which conducts research in the basic areas of aviation, with a focus on low speed aerodynamics, flight simulation, structures and advanced materials for airframe construction.

2. Center for Aviation Safety Research which conducts research on topics related to aviation safety, with a focus on crashworthiness of aircraft structures, deicing, stall/spin prevention and aviation software reliability.

3. Center for Productivity Enhancement which supports research and technology transfer in computer-aided design, computer-aided manufacturing, robotics, artificial intelligence, use of composite materials and related manufacturing technologies.

4. Center for Management and Human Resource Development which conducts research on issues of quality control, analysis and forecasting and international marketing as applicable to the aviation industry.

5. Center for Aviation Education and Training which provides educational, training and publication programs to aid in the transfer and dissemination of knowledge developed with the other centers of the institute.

Marcus Center for Continuing Education
Many educational services are offered through 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. In addition to renting meeting areas, the Marcus Center for Continuing Education staff provides program development, brochure preparation, mailings, fee collection, material preparation and reproduction, registration and program evaluation.

Operation Success, Project Discovery, Upward Bound
Operation Success, Project Discovery and Upward Bound are special programs designed to help students prepare for University life and to complete successfully courses of study.

Operation Success is a federally funded program providing comprehensive, one-on-one tutorial help; personal counseling; career guidance; and assistance in the development of study skills for disadvantaged students who are first generation University students and meet specific income guidelines. The program serves 250 students each year and has been in operation at WSU since 1970.

Project Discovery, a federally funded Talent Search Program, was established at The Wichita State University in July 1977. The project assists approximately 1,500 low-income people in gaining admission to postsecondary institutions throughout the nation. Specific help is provided with admission forms, financial forms and registration for ACT/SAT assessment examinations. The project's two offices at Wichita State and Coffeyville Community College serve high schools and community agencies in Wichita and 12 counties in southeast Kansas.

The Upward Bound program is a federally funded program that has been at WSU since 1966. The program, titled Wichita Prep, assists high school students from low-income backgrounds who have academic potential but inadequate secondary school preparation. The high school sophomores, juniors and seniors participate in an intensive six- to eight-week summer and academic year schedule to improve academic and social skills. Assistance includes tutorial assistance, academic, career and personal counseling, post-secondary admission, and classes and workshops.

Research and Sponsored Programs
The Office of Research and Sponsored Programs assists the faculty in developing sponsored research, training and other service proposals. The office collects, maintains and provides information regarding the programs, interests and needs of governments, private foundations and businesses; coordinates the preparation and submission of project proposals; and handles the general administration and reporting of sponsored grants and contracts.

Small Business Development Center
The Small Business Development Center, through the College of Business Administration, was established in October 1983. The SBDC provides free counseling and low-cost training to small businesses using consultants from the
University as well as the community. Funding for the center is provided by the U.S. Small Business Administration, the State of Kansas, the Defense Logistics Agency and participating universities and colleges.

The center at WSU works with businesses located in the 17 counties of southcentral Kansas. The center here is also the headquarters of the state office, the Kansas Small Business Development Centers, which oversees activities of the eight regional SBDCs and 11 associate centers in Kansas. These 19 centers are located primarily at academic institutions throughout the state.

Small Business Institute
The Small Business Institute is housed within the College of Business Administration. Its purpose is to bring together the student's knowledge and the small business experience on a consultation basis. Such interaction rounds out the senior student's education with practical experience while offering assistance to small businesses in the community.

University Gerontology Center
The University Gerontology Center develops and coordinates gerontology-related activities and programming at Wichita State, including instruction, research, service and continuing education. The center develops and manages community research in the area of aging and serves as a resource center and information clearinghouse to assist community agencies and organizations in planning and developing services for older persons.

University Press of Kansas
The University Press is operated jointly by six state Kansas universities: The University of Kansas, Kansas State University, The 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.

WSU Center for Energy Studies
The WSU Center for Energy Studies conducts energy research with particular emphasis to Kansas applications. Current areas of specialization are wind energy, electric utility and conservation research. Research in the engineering and technical use of microcomputers is also conducted. The center is directed by the College of Engineering.

Special Facilities
Instructional facilities on the 320-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.

Abiah Library
Through a wide range of materials, services and facilities, Abiah Library supports WSU courses and research. Its growing collection of more than two million items includes not only books and periodicals, but microforms, corporate annual reports, college catalogs, phonograph records and audio tapes. The library also serves as a depository for selected official publications of the United States. The library has open stacks, and reference librarians help students and faculty locate information and use the online catalog and reference collection. They also perform literature searches in the numerous computerized data bases to which the library has access. Materials not owned by the library may be borrowed from other institutions through interlibrary loan. The library also makes available study carrels, electronic carrels containing listening and viewing equipment, group-study rooms, microform reading equipment, copy machines and typewriters.

The Department of Special Collections houses a rapidly growing manuscript collection of more than 700,000 pieces including papers of the abolitionist William Lloyd Garrison and many U.S. congressmen. Other collections include original editorial cartoons by Pulitzer prize-winning cartoonists, publications of U.S. radical organizations and maps and books.

A three-year expansion/renovation project of Abiah Library is scheduled to be finished by 1988. When completed, the library will have a new entrance and additional space for its collections.

Cable Television
The Wichita State University operates Channel 13 on Wichita's cable television system. WSU 13 broadcasts 136 hours per week of adult-oriented educational, cultural and informational programming. This programming includes 10 to 15 television courses per semester offered for academic credit by the various colleges at WSU. Channel 13 also produces programs featuring distinguished guest speakers, fine arts performances and other campus events. WSU 13 is affiliated with The Discovery Channel, BizNet, Spanish International Network and Campus Network, 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.

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

The CAC 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 which stocks textbooks, supplies and gifts; a recreation center for leisure use that includes bowling, billiards and a hair-styling shop; a theater; and a variety of rooms that can be scheduled for meetings, special events and conferences.

The reservations office schedules the use of all facilities in the center as well as most University facilities for out-of-classroom use. Through the Student Activities Council, students are provided an opportunity to learn and develop leadership skills while planning a variety of programs for the campus. The CAC is also home for the Student Government Association, Student Ombudsman, Ecumenical Christian Ministries and Informed Sources, a student-run campus information center.

The CAC is supported through student fees and revenues generated from within the operation.

Computer Laboratory Facilities
The Department of Electrical Engineering within the College of Engineering has a Hewlett-Packard 2108 minicomputer system for its laboratories. This is a disc-based system with a real-time executive software operating system capable of operating in a foreground-background mode with a 16-terminal multiplexer. Every laboratory within the department has at least 10 coaxial data lines connected to this minicomputer for terminals and/or data collection.

The department also has an Apollo DN-320 Digital Workstation. This work station has 1.5M byte main memory with a Winchester Diskette system with 70/1.2M bits memory.

The department has several Zenith 150 microcomputers and a terminal to access the University mainframe computers. There are other microcomputers and terminals available in the College of Engineering computer laboratory.
Computing Center
The Computing Center serves students, faculty and staff of the University by providing contemporary computing services for instruction, research and sponsored programs, administrative data processing and public service. These services include consultation, systems analysis and design, programming, interactive time-sharing, batch operations, an on-line administrative data base and assistance to computer users in their preparation of requests for competitive bids for the acquisition and selection of computer-related equipment.

The central processing unit is an IBM 3081-D with 16 million characters of main storage and more than 26 billion characters of on-line disk storage. Magnetic tape drives, line printers and an off-line digital plotter are available for general use. A network of more than 500 terminals provides interactive computing for campus classrooms, laboratories and offices. These terminals may be used with the academic line-sharing system (CLMS), interactive graphics, computer-assisted instruction and the administrative terminal system (CiCS). Interactive terminal facilities for students and faculty are located in Abiah Library, the College of Business Administration, the College of Engineering, the departments of chemistry, mathematics, physics, geology and anthropology and in the Social Science Laboratory, where a line printer is located. More than 700 microcomputers are integrated into the instructional and research areas on campus. Facilities are available to permit transfer of information between the central computer and microcomputers equipped for communications.

The Computing Center terminal facility is located in Neff Hall. Color graphics terminals, a color graphics printer and several other CRT terminals are available in Room 114. CRT terminal facilities and hard copy terminals are located in Room 113. Both rooms are open and available 24 hours a day, seven days a week. Scientific programming and consulting services for faculty and staff instructional and research projects are located in Room 119. Student programming assistance and academic user services are located in Room 115. Batch and remote batch jobs may be submitted 24 hours a day. Printer and plotter output may be picked up from the dispatch window at Room 108 during scheduled hours.

Edwin A. Ulrich Museum of Art
The Edwin A. Ulrich Museum of Art is recognized nationally for the outstanding quality of its programs. In 1984, approximately 135,000 people visited its galleries. During its first 12 years of existence, the Ulrich Museum has presented more than 400 exhibitions, ranging in scope from the poetic paintings of Joan Miro to the hyper-realist sculptures of Duane Hanson.

The museum has shown one-person exhibitions of work by Joan Miro, David Hockney, Milton Avery, Kenneth Noland, Morris Louis, Isabel Bishop, Frederic Church, Childe Hassam, Alice Neel, Robert Motherwell, Alberto Giacometti, Gaston Lachaise, plus the work of many other famous artists.

Although the emphasis has been on contemporary art, there have been exhibitions as diverse as prehistoric American Indian pottery, treasures from Spanish galleons sunk in 1724, art from 16th and 17th century Antwerp, artifacts from the Civil War ironclad U.S.S. Monitor, holography, electronic art, African art and the art of New Guinea. In addition, there have been numerous photographic, print and ceramic exhibitions.

The on-campus museum is named after Edwin A. Ulrich, a retired New York businessman, who gave the University more than 300 paintings and $500,000 to support the collection. The Ulrich gift, valued at $1.75 million, is one of the largest single donations ever made to the University.

The Wichita State University Endowment Association art collection numbers over 6,000 items. Twentieth century American art forms the core of the collection augmented by hundreds of other paintings, drawings, prints, sculptures, photographs and ceramics. Of special note, the Ulrich Museum contains the most complete collection of paintings by the world famous American marine artist, Frederick Judd Waugh (1861-1940). The museum also houses extensive groups of work by such artists as Kathe Kollwitz, Charles Grafly, Harry Sternberg and Robert Goodnough.

Reaching beyond the traditional museum's walls, the University has an outdoor sculpture collection which is one of the best in the nation. The collection is a cross-section of 20th century sculpture, featuring works by Auguste Rodin, Henry Moore, Louise Nevelson, Joan Miro, George Rickey, Fernando Botero, Barbara Hepworth, Chaim Gross, Theodore Roszak, William Zorach, Ernest Trova, Robert Indiana, Luis Jimenez, Lynn Chadwick and many others.

The largest and most significant outdoor work is the marble and glass mosaic, Personnages Oiseaux created especially for the facade of the Ulrich Museum by the late Spanish artist, Joan Miro. The mosaic, the largest in the work by Miro, is constructed of one million pieces of colored Venetian glass.

Another aspect of the museum is its visiting artist program. More than 50 artists have visited WSU, including Henry Moore, Louise Nevelson, Luis Jimenez, Isabel Bishop, Duane Hanson, Gordon Parks, W. Eugene Smith, Arnold Newman, Milton Glaser, Paul Rand, Alice Neel, Theodore Stamos and Will Barnet. The museum also has organized traveling exhibitions of work by such artists as Duane Hanson, Gordon Parks and Ernest Trova.

Harvey D. Grace Memorial Chapel
Harvey D. Grace Memorial Chapel, located in the heart of the campus near Morrison Hall and the Campus Activities 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.

Helpenr International Center
The Milton Helfenr International Center for the Forensic Sciences serves as a vital resource of the Department of Administration of Justice and as an important repository of information relating to major forensic cases in the United States and abroad. Under the direction of Dr. William Eckert, the center serves as an important information source for forensic scientists and law enforcement agencies working to solve major criminal cases. The center also serves the needs of students majoring in the department. Its resources include extensive library material, tapes and other documents pertaining to major forensic cases. The center is located in the Liberal Arts and Sciences building.

Heskett Center
The $10 million multipurpose dance, physical education and recreation complex opened in the spring of 1983. It is named after H. D. Heskett, 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, a 200-meter indoor jogging track which surrounds five basketball courts and eight handball- raquetball 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.
Institute of Logopedics
The Institute of Logopedics is a private, nonprofit, residential and outpatient rehabilitation center located on 40 acres near the Wichita State campus. The institute is a residential facility specializing in habilitation and rehabilitation of children with speech, language, and hearing disorders. The institute is University-related through its affiliation with the College of Education’s Department of Communicative Disorders and Sciences, which offers academic preparation for Wichita State students desiring to work with communicatively handicapped children and adults. Observation and practicum opportunities are provided at the institute as part of the professional preparation of students in speech and language pathology and audiology.

KMUW-FM Radio Station
KMUW-FM radio broadcasts at 89.1 FM. The 100,000-watt station is one of more than 300 public radio stations that make up the National Public Radio network. In addition to a full-time staff, about 50 students are involved in the total operation of the radio station. KMUW-FM programming includes classical and jazz music, news and public affairs, plus coverage of special events at Wichita State.

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 with specialized audio recording studios located in the Liberal Arts and Sciences building. The MRC also operates WSU Channel 13, the University’s cable television station.

Facilities and resources include two professional television studios, three satellite downlinks, the campus cable TV network, a fully equipped mobile television production facility, complete photographic darkroom laboratories and a graphic design studio. The MRC provides the University with video teleconference reception and transmission capabilities.

A wide array of media equipment systems is available for loan to students and faculty. These include VCRs, video recording systems, microcomputers, 35 mm cameras and projection equipment. A collection of 1,000 films and videotapes is available as well.

Reading/Study Skills Center
Wichita State offers a variety of services to students through the programs of the Reading/Study Skills Center. Credit and noncredit courses are offered to help students improve their reading and listening skills. Complete descriptions of the credit and noncredit courses offered at the center are included in the University College section of the Catalog.

Rehabilitation Engineering Center
The Kansas Board of Regents formally established the Rehabilitation Engineering Center in the WSU College of Engineering during 1978. The objective of the center is to use technology to improve the vocational prospects of the severely disabled.

A qualified engineering staff, along with a rehabilitation laboratory, technicians and a well-equipped shop facility, provides the means to accomplish the center’s goals. A federally sponsored rehabilitation grant allows faculty and staff to participate actively in this research.

Satellite Television Reception
Three satellite television antennas are used to receive video and audio signals from communications satellites serving North America. Satellite television resources provide students studying foreign languages with television programs produced for French and Spanish speaking audiences, furnish programming for WSU’s cable television station and enable the University to participate in national video teleconferences. Receiving antennas are located to the southeast of Media Resources Center.

Social Science Research Laboratory
The Social Science Research Laboratory supports both instruction in research methods and student and faculty research in the social sciences. In addition, with the use of an optical scanner, examinations for classes across campus are graded and item analyzed. The Student Perception of Teaching Effectiveness (SPTE) questionnaire is administered, scored and managed by the laboratory.

The laboratory is located in the Liberal Arts and Sciences building. Equipment includes several CRTs, Decwriters and a high-speed printer, all connected to the WSU mainframe. The laboratory is open to students, faculty and social science classes.

Speech-Language-Hearing Clinic
The Wichita State University Speech-Language-Hearing Clinic, Room 104 of R. Dee Hubbard Hall, provides diagnosis and treatment of speech, language and hearing problems, including hearing aid fittings. Services are available on a cost-shared basis to University students, staff and faculty, as well as residents of surrounding communities. The clinic is open 8 a.m. to 5 p.m. Monday through Friday for scheduled appointments and also on arranged evenings for stuttering and other support group meetings. Senior and graduate students in the communicative disorders and sciences department provide services. All work is supervised by departmental faculty who hold appropriate national certification.

Sports and Recreation
Sports and recreation facilities for students at Wichita State include a regulation 18-hole golf course and an outdoor swimming pool. The 10,666-seat Henry Levitt Arena is used for intercollegiate basketball games and major entertainment events. Cessna Stadium, a 30,000-seat stadium, is used for football games and track meets. Under the west side of the stadium is the 114-foot slope of Shocker Mountain Ski School, the first synthetic ski slope ever built on a university campus. The slope has its own rope tow and a chair-lift; ski equipment is also available. Eck Stadium for Shocker baseball has an artificial surface infield and grass outfield.

Wichita State is a member of the Missouri Valley and Gateway Athletic Conferences and consistently ranks nationally in basketball, baseball, tennis 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; excursions for children of WSU students; faculty and staff; a family program; mini-classes and workshops; outdoor recreation and aquatics.

Walter H. Beech and Supersonic Wind Tunnels
Various wind tunnels are available at Wichita State for faculty and student use in aerodynamic studies. The Walter H. Beech Wind Tunnel is a 200 mph closed-return tunnel with a 7’ x 10’ test section. A digital data logging system and an on-line microprocessor with plotting capability are employed as part of the readout system. Two supersonic wind tunnels, capable of producing wind velocities from two to four times the speed of sound, are available.
A new 1 x 1.3 meter subsonic wind tunnel has recently been completed. This facility features a laser velocimetry system for flow measurement. Two smoke tunnels, a boundary layer tunnel and a water table are also available for flow visualization studies.

**Wichita Radio Reading Service**

A sub-carrier of KMUW, the Wichita Radio Reading Service programs readings of printed material to more than 2,000 print-handicapped individuals. WRRS, a 24-hour daily service, also offers programming from the In-Touch Network and National Public Radio and locally produces such creative programming as poetry and radio drama.

**Wiedemann Hall**

Wiedemann Hall houses the first organ built in North America by the world-renowned firm of Marcussen and Son, Denmark. Of neoclassic design, the hall which was built 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 announcing, recording and televising.

The firm of E. W. Johnson and Son constructed the building, which was designed by the local architectural firm of Schaefer, Johnson, Cox and Frey Associates and Marcussen and Son. The building is named for community philanthropist and music-lover Gladys H. G. Wiedemann who in 1983, as president of the K. T. Wiedemann Foundation, Inc., pledged $500,000 for the purchase, installation and maintenance of the great Marcussen Organ.

**Student Activities and Organizations**

Student organizations may be granted the privileges of a University organization if registered with the Student Government Association (SGA), providing lists of officers and other executive members, statements of purposes and copies of constitutions and bylaws. Once an organization is filed with SGA, it may use Wichita State in its name. University rooms or grounds for meetings and post announcements on University bulletin boards.

**Student Government Association**

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

The legislative, executive and judicial responsibilities of SGA are vested in the Student Senate, Cabinet and University Supreme Court. The senate appoints students to University committees, recognizes and funds student organizations and allocates approximately $1.7 million annually to campus agencies ranging from the preschool to the Heskett Center. The cabinet executes the decisions of the senate and the officers. The supreme court issues opinions on constitutional questions and also serves as an appeals court. 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 November. 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, Campus Activities Center, The Wichita State University, 669-3480.

**Student Rates**

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

**Fraternities and Sororities**

Six national sororities are active at the University: Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta and Gamma Phi Beta. Thirteen national fraternities are also on campus: Alpha Phi Alpha, Alpha Tau Omega, Beta Theta Pi, Delta Upsilon, Kappa Alpha Psi, Kappa Sigma, Phi Beta Sigma, Phi Delta Theta, Pi Kappa Alpha, Sigma Alpha Epsilon, Sigma Nu, Sigma Phi Epsilon and Omega Psi Phi.

**Organizations**

- **Honorary**
  - Alpha Lambda Delta
  - Alpha Epsilon Phi
  - Alpha Pi Mu
  - Beta Alpha Psi (Epsilon Tau Chapter)
  - Beta Gamma Sigma
  - Delta Sigma Phi—Tau Kappa Alpha
  - Emory Lindquist Honors Society
  - Eta Kappa Nu
  - Golden Key National Honor Society
  - Honors Society

- **Professional and Departmental**
  - Administration of Justice Association
  - Administrative Management Society
  - Advertising Club
  - Agri-Marketing Association, WSU Chapter of the National AIESEC
  - Alpha Kappa Psi
  - American Institute of Aeronautics and Astronautics
  - American Society of Mechanical Engineers
  - American Society for Personnel Administration
  - Anthropology Club
  - Art Education Club
  - American Society of Heating, Refrigeration and Air-Conditioning Engineers
  - Association for Computing Machinery
  - Biology Club
  - Charla Espanola
  - Chemistry Club
  - Debate Society
  - Dental Hygiene Association, Junior American
  - English Graduate Student Association
  - Geology Club
  - German Club
  - Health, Physical Education, Recreation Majors Club
  - Heartland Learning Connection (formerly Free University)
Industrial Education Club
Institute of Electronics and Electrical Engineers
Institute of Industrial Engineers
Jazz Educators; National Association of KANS (Kansas Association for Nursing Students)
Le Cercle Francois
Legal Assistants Society
Linguistics Society
Medical Technology Students Society
National Student Speech and Hearing Association
Panhellenic Council
Phi Delta Gamma
Philosophy Society
Pi Sigma Epsilon (Gamma Theta chapter)
Political Science Club
Political Science Graduate Student Association
Potters Guild
Psychology Graduate Student Organization
Public Administration, Graduate Student Association of
Rho Epsilon
SKNEA (Student Kansas National Education Association)
Society for Automotive Engineers
Society of Manufacturing Engineers
Society of Professional Journalists
Society of Women Engineers
Stammtisch
Student Advisory Council for Nursing
Student American Academy of Physician Assistants
Student American Dental Hygienist Association
Student American Federation of Teachers
Student Chapter of Women in Communications, Inc.
Student Music Educators National Conference
Student Music Teachers Association
Student Physical Therapy Organization
Student Physics Society
Student Organization of Social Workers
WSU Chapter of U.S. Committee on UNICEF

Special Interest:
A Cappella Choir
Admissions Corps
African Student Association
Alliance Francais
Amnesty International
Ananda Maiga Yoga Society
Aquatics Club
Batai Club
Baptist Student Union
Brass Chamber Ensemble
Campus Girl Scouts (Trefoil)
Chamber Singers
Chess Club
Chinese Association of WSU
Christian Science Organization
Circle K (Kiwanis)
College Republicans
Collegiate Democrats
Concert Band
Concert Chorale
Crew Club
Ecumenical Christian Ministries, Inc.
Episcopal Church of WSU
Experimental Theatre
Fellowship of Christian Athletes
Flying Club
French Study Group
Friends of Africa
Friends of Women's Studies
Frisbee Club
Gay Lesbian Resource Association
Greek Student Association
Handicapped Students, Association for Hellenic Society
Icthus
Indian Student Association
Indonesian Student Association
International Association of WSU
Intervarsity Christian Fellowship
Japanese Student Association
Jazz Arts I
Jazz Arts II
Jazz Combos
Juggling Club
Korean Student Association
Latter Day Saints Student Association
Madrigal Singers
Malaysian Student Association
Marching Band
Mexican-Movimiento Estudiantil Chicano de Aztlan
Men's Soccer Club
Mid-America Dance Theatre
Minority Engineering Students Organization
Minority Pre-Health Student Association
Model United Nations
Muslim Student Association
Native American Heritage Association
Nurses Christian Fellowship
Opera Theatre
Pakistani Student Association
Pathfinders
Percussion Ensemble
Physical Therapy Student Christian Fellowship
St. Albans University Parish
St. Paul's Newman Center
Saxophone Quartet
Skiing Club
Spanish Club
String Ensemble
Student Crime Watch
Student Orientation Leaders Association
Students Against Multiple Sclerosis (SAMS)

Student Alumni Association
Symphonic Band
Syrian Student Association
Tai Chi Club
Thai Students Association
University Forum Board
University Lutheran Center
University Orchestra
University Theatre Main Stage
Veterans on Campus
Vietnamese Student Organization
Wichita Film Society
Wichita Rangers
Wind Energy Club
Wind Ensemble
Women's Resource Center
Woodwind Ensemble
WSU Spirit Squad
WSU Summer Theatre
Young Democrats
Young Life

Governing
ASK—Associated Students of Kansas Brennan Community Association
Campus Activities Center Activities Council (Student Activities Council)
Division of Music Student Council
Engineering Council
Fairmount Community Association
Interfraternity Council
Interfraternity Council
Panhellenic Council
Student Government Association
Student Publications, Board of
Student Senate and Senate Committees

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 are usually required for one hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration; and P, practicum, 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 references to courses offered by those departments.

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<thead>
<tr>
<th>Abbreviation</th>
<th>Department/Area</th>
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<td>WS</td>
<td>Women's Studies</td>
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**Wright State University**

This institution is accredited by the North Central Commission on Higher Education, which evaluates the quality of its programs and ensures that they meet national standards. The university offers a wide range of undergraduate and graduate degree programs, including degrees in arts, sciences, business, education, and health professions. Its campus is located in Ohio, USA, and is associated with the Association of Independent Colleges and Universities of Ohio (AICUOH). The Student Government Association (SGA) plays a significant role in campus life.
University College

William W. Harmon, PhD, Dean

The primary goal of University College, as a part of the Division of Student Affairs, 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 credit or noncredit personal development courses offered by University College.

University College is the academic home for: (1) all freshmen working toward degrees; (2) those transfer students who have not completed 24 semester hours with at least a 2.000 grade point average; or who have not declared academic majors; (3) nondegree-bound adult students; (4) guest students attending other colleges and universities who wish to enroll at Wichita State on a temporary basis (for one term only); and (5) selected high school students who have the consent of their high school principals.

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 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, job advancement, career change, general updating or professional certification. Academic and career advising are also provided for those students who may decide after initial enrollment to work toward a degree.

University College services include orientation and educational planning programs; registration, advising and consultation; personal development courses in reading, writing, listening and study skills; adult seminars and occupation seminars for individualized assessment and vocational exploration.

Admission to University College

Degree-bound Students: For more information on general University College 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 center. 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 or
3. They are currently on active military duty or
4. They hold a baccalaureate 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 nondegree 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.

All students enrolled in University College who are admitted through open admission shall be limited to a maximum enrollment of five credit hours. Exception to the five-credit-hour rule may be waived by the Dean of University College and/or designee.

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. The programs assist students in thinking through and developing written plans for their personal development, education and future careers.

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 prerequisites to education, but rather are a part of college education itself, all degree-bound University College students are required to attend an academic orientation and to participate in personal planning sessions. A required, nonrefundable orientation fee is charged to all students and includes a part of the division of student affairs.

Nondegree-bound Students: Orientation programs are available and recommended, for nondegree-bound students. PD 100A, Adults Seminar, a class designed for adults who have been out of school for one year or more, is also 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.

Academic Advising

Academic advising is more than class schedule building. It is a shared relationship between student and adviser that is an essential part of the university experience. As with any good relationship, each must contribute to make it work effectively.

Degree-bound Students: Every semester all degree-bound students enrolled in University College are expected to develop academic plans with the assistance of their academic advisers. Each degree-bound student is assigned an academic adviser. When a student declares a major field of study, he or she is assigned a faculty member
in the academic department offering that area of study. Students who have not declared majors are assigned to faculty from the various departments, to academic counselors in University College or to faculty members in the Division of Student Affairs.

Students planning on professional graduate-level studies (medicine, law, theology, etc.) are assigned to qualified faculty advisers in the selected preprofessional areas for developing strong undergraduate preparation. Students should check with their assigned advisers to see what preprofessional courses should be taken while they are in University College.

Nondegree-bound Students: Nondegree-bound students are not normally 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.

Career/Life Planning
Degree-bound Students: A career/life planning emphasis helps degree-bound students begin to develop systematic career plans after realistically assessing their interests, values and capabilities.

University College academic counselors assist students in the exploration of the academic curriculum in preparation for their career choices. The counselors also help to identify people and information resources for further information on academic majors and/or career options. A course entitled Occupation Seminar is offered as part of the program.

Nondegree-bound Students: Career/life planning activities are designed to provide nondegree students with support for exploration, clarification, decision making and follow-through in issues related to self-enrichment, job advancement, career change, general updating or professional certification. Specific activities include personal and group consultations, using resource materials, interest testing and referrals. Credit courses, including Adult Seminar and Occupation Seminar, are offered as part of this emphasis.

General Education Program
Degree-bound students at Wichita State are required to enroll 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— not a narrow discipline of knowledge and skills.

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 social 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 not for the first job after graduation, but 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.

Personal Development
All students should continue their education through experience, knowledge and skills development. Toward that objective, University College provides courses in reading, listening and study skills. The departments of mathematics and English also offer high school-level courses for those who are not prepared for university-level work.

Advanced Placement and Credit
WSU students may earn credit toward a degree by satisfactory achievement on specific tests. Scores on the American College Test (English and mathematics), Advanced Placement Program, College-Level Examination Program (all general and certain subject examinations) and the Proficiency Examination Program (specific tests) may be presented for evaluation. For full details, consult the coordinator of testing in the Counseling Center.

Student Responsibility
Students are expected to familiarize themselves with course prerequisites, enrollment dates, procedures and all other policies stated in the current Catalog and in the Schedule of Courses.

Once students in University College have enrolled in a course, they are officially entered in that course. Students must either withdraw from the course by completing and filing an official drop slip or they must complete the course. If students fail to withdraw or to complete courses, they receive F grades on their transcripts. (See Academic Information in the Catalog for full details about grading policies, incompletes and similar policies.)

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 at the end of the semester in which they complete 24 semester hours. To qualify for transfer to a degree-granting college, a student must have completed 24 semester hours successfully, met the minimum GPA required by the college and successfully completed any prerequisite courses.

Students who have declared a major and who qualify for transfer into the colleges of their choice are transferred automatically.

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 by filing and having approved a petition of intent for nondegree status with the Dean of University College.

Those who subsequently wish to work toward Wichita State baccalaureate degrees may transfer their credits to an undergraduate degree-granting college. In transferring to another college, students must meet the admissions requirements established by that 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 cumulative 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, achieve a 2.000 grade point average on work at Wichita State and have a 2.000 cumulative grade point average before probation is removed.

Students on probation are normally limited to maximum loads 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: Degree-bound 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 2.000 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.

Nondegree-bound students are subject to the same probation/dismissal standards as above with the following exception: At 48 hours, nondegree students will be asked to reaffirm their non-degree status with the Dean of University College or transfer to a degree college if eligible.

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 themselves. They should center their petitions around explanations for their failures and presentations of evidence for their future successes.

Personal Development Courses

All the following courses are graded Credit (Cr) for satisfactory work or No Credit (NCr) for unsatisfactory work.

Credit 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. J 11 100 2 0601

100A. Adult Seminar. (1). A special class for adults who have been out of school for one year or more. Designed to help adults learn more about themselves and about the Wichita State University. Covers career information, interest testing and interpretation, educational planning and other activities. J 10 100A 2 0601

100P. Parents' Course. (1). A study of the issues and experiences which confront new students at The Wichita State University, how these issues may impact on parents and how parents can be constructively supportive during this major, new life experience. J 10 100P 2 0601

160. Reading Improvement Techniques. (3). A course designed for those students who are interested in developing writing skills directly related to use in academic courses. Emphasis is placed on individualized and basic skill development. J 12 160 1 1501

Noncredit Courses

The following courses are not applicable to a degree in the baccalaureate colleges.

050. Personal Assessment Planning. (1 or 3). A course designed to provide specialized developmental instruction, using a variable format. J 10 050 2 4999

060. Basic Reading Skills. (3). For students with significant reading skill deficiencies. Students will undergo extensive diagnostic testing and appropriate individualized instruction will be provided based on results of administered tests. J 12 060 1 1501

080. Writing Improvement Techniques. (2). Designed for those students who are interested in developing writing skills directly related to use in academic courses. Emphasis is placed on individualized and basic skill development. J 12 080 1 1501

090. Listening and Verbal Communication. (2). Much of the information students gain in college is through listening to lectures and discussions. This course provides training in the skills of recognizing important information and taking good notes. J 12 090 0 0601
College of Business Administration

Douglas Sharp, PhD, Dean

The mission of the Wichita State College of Business Administration is to provide an educational environment in which students and faculty can discover, examine critically, preserve and transmit the knowledge and values essential to the improvement of the quality of life for society and for the individual. By offering these learning opportunities, the college contributes to the development of professionally competent and socially responsible men and women for careers in business, government and other organizations requiring the organizational, managerial and analytical skills necessary in today's rapidly changing environment.

This mission is influenced by the location of the college 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 College of Business Administration is committed to programs and activities that will help sustain the contribution that this urban center makes to the economic, professional and cultural health of the state and nation.

Within this context, the faculty of the college state the following objectives:

1. To offer programs (undergraduate, graduate and postgraduate) to develop and update professional competence in all facets of management and administration.
2. To add to the total body of knowledge concerning business and administration through fundamental and applied research and to participate actively in the search for solutions to business and community problems.
3. To serve as an information and research center for the community, state and region.
4. To foster mutually supportive relationships with the business community of the city, state and nation in order to promote understanding and cooperation in educational and professional activities.

The college is a member of the American Assembly of Collegiate Schools of Business; all its undergraduate and graduate programs are accredited by this organization.

Degrees Offered

Baccalaureate

The undergraduate curriculum of the College of Business Administration 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: business education; economics; finance, real estate and decision sciences; management; and marketing and small business.

Students may obtain a second bachelor's degree in the College of Business Administration if they: (1) complete a minimum of 30 hours in residence in the College of Business Administration, in addition to the work required for the first bachelor's degree and (2) satisfy the college'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

Two-year programs in secretarial and legal assistant training, which lead to the Associate of Science, are available. The secretarial program is offered by the Department of Business Education and the legal assistant program by the Department of Finance, Real Estate and Decision Sciences.

Graduate

Master's degree programs in the college lead to the Master of Business Administration (MBA), Master of Professional Accountancy (MPA), Master of Science (MS) in accounting and administration and the Master of Arts (MA) in economics.

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

Business Teacher Education

Students interested in preparing to teach business subjects in high school should enroll in the first year in University College and then transfer into the College of Education. All Wichita State students who receive a certificate to teach must meet the requirements outlined in the College of Education section of the Catalog.

Business Emphases in Other University Programs

Students in Fairmount College of Liberal Arts and Sciences may major in economics. Students from all colleges may minor in accounting, business administration or economics. Students in the College of Education may major or minor in business education or economics, as well as minor in accounting. Students in all colleges other than business may pursue a minor in business administration.

A field major in international studies is offered in cooperation with Fairmount 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 College of Business Administration 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.

The College of Business Administration cooperates with the College of Engineering in offering a graduate degree in engineering management science.

Policies

Admission

Entering Wichita State freshmen interested in business administration are first admitted to University College and must meet the general entrance requirements of the University.

Initial admission to the College of Business Administration is available to students from University College, degree-granting colleges within the University or other universities 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 speech and three hours of college algebra.

Advanced standing in the College of Business Administration 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 programming course and (4) declared a professional major in the college. Note: For degree-seeking students in the College of Busi-
ness, advanced standing is a prerequisite for all upper-division courses in the college.

Transfer students planning to transfer into the College of Business Administration 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)

**Communications**
- Grammar (6 hours)
- Speech (3 hours)

**Computer Science**
- Any programming language (3-4 hours)

**Humanities**
- Principles of economics (6 hours)
- Psychology, sociology, anthropology, political science (6 hours)

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

**Probation and Dismissal**

Students are placed on probation at the end of any semester in which they do not have a cumulative grade point average of 2.250. Probation is removed when their cumulative 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 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 College of Business Administration if they fail to meet the requirements of their probationary status. When dismissed, students must apply to the College of Business Administration Exceptions Committee to be considered for readmitance 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 college, (2) are required for any emphasis within the college or (3) are offered at the junior or senior level in the college.

**A/Pass/Fail**

The following restrictions pertain to courses taken for A/Pass/Fail credit. To students enrolled in the College of Business Administration:

1. No course in the College of Business Administration core may be taken on an A/Pass/Fail basis.
2. No course in the student's area of emphasis may be taken on an A/Pass/Fail basis.
3. Except for the cases given above, students enrolled in the College of Business Administration are subject to the A/Pass/Fail regulations of the University.

**Limitations on Student Load**

Initially admitted College of Business Administration students are limited to a maximum of 16 hours, to which may be added one hour of military studies or 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 military studies or physical education.

All College of Business Administration 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 College of Business Administration 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 and his faculty adviser. 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 College of Business Administration is to help students progress toward their educational objectives. The college's advising system offers:

1. Transcript evaluation for transfer students and continuous monitoring of degree progress for all students.
2. Suggestion 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 advising 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 The Wichita State University for a degree and (2) the continuing evaluation of completion of graduation requirements.

Evaluation of transfer work is initially accomplished by the University's office of admissions. Evaluation of business and economics course work is done by the college's student records office, 106 Clinton Hall, working in conjunction with the dean's office and the various departments within the college.

The student records office also keeps a current record of each student's progress at The Wichita State University. Many students will be able to take advantage of the college'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 adviser or staff of the college's advising center to determine a specific course of study. Selection of specific sections and times for courses is the student's responsibility. The tentative schedule must be approved by an adviser.

**Program Planning.** Students are en-
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 college.

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 college and University regulations. The dean’s office will also 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 for providing referrals to other University offices for assistance as appropriate.

Student Records Office (106 Clinton Hall). The Student Records Office maintains a complete and up-to-date file for each student admitted to the College of Business Administration.

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 the Office of the Dean.

Business Education/Secretarial Science Majors (114 Business Education Building). All business education and secretarial science majors are advised in the Department of Business Education.

Academic Honesty
The faculty of the College of Business Administration 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 College of Business Administration requirements:
1. Complete at least 56 hours of course work offered outside the college (Econ 201Q and 202Q may count as courses outside the college, but Hist. 515, 516 and 614 and Pol. Sci. 655 and 687 may not.)
2. Complete at least 50 semester hours of course work offered by the College of Business Administration
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 College of Business Administration
5. 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 College of Business Administration and (3) college 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
Eng. 101-102, College English I-II
Speech 111 or 112—Basic Public Speaking or Basic Interpersonal Communication
General education electives

Sophomore Year
Acctg. 210, Financial Accounting I
Acctg. 220, Managerial Accounting I
CS 190, Introduction to Programming for Business, or CS 200, Introduction to Programming and a programming language selected from CS 201-216
Econ. 201Q-202Q, Principles of Economics I-II
Econ. 231, Introductory Business Statistics

General education electives

Junior Year
DS 350, Introduction to Production Management
DS 495, Management Information Systems for Business
Fin. 340, Finance

Mkt. 360, Concepts of Administration
Mkt. 380, Marketing
Upper-division economics course
Major courses

Senior Year
Mkt. 430, Business and Society
Mkt. 681, Administrative Policy

Major courses

Students planning to enroll in upper-division business courses (courses numbered 300 to 600) must have completed 60 semester credit hours. Accreditation of the college by the American Assembly of Collegiate Schools of Business stipulates that students must 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 2.50 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 college’s Exceptions Committee for special permission to enroll in upper-division courses.

The suggested sequence of courses includes classes which are part of the College of Business Administration core requirements. Core courses required for the BBA are:

I. Mathematics
Math. 111, College Algebra*
Math. 144, Business Calculus*
Math. 242Q, Introductory Analysis I, will be accepted in lieu of Math. 144*

II. Environment of Business
Mkt. 300, Marketing
Fin. 340, Finance
DS 350, Introduction to Production Management

IV. Accounting, Quantitative Methods and Information Systems
Acctg. 210, Financial Accounting I*
Acctg. 220, Managerial Accounting I*
Econ. 231, Introductory Business Statistics*

CS 190, Introduction to Programming for Business, or CS 200, introduction to Programming, and a programming language
selected from CS 201-216.

Note: Accounting majors should take Acctg. 300.
DS 495, Management Information Systems for Business (except accounting majors)

V. Organizational Theory
Mgmt. 360, Concepts of Administration

VI. Business Policy
Mgmt. 681, Administrative Policy

Note: Any faculty member teaching an upper-division course in the College of Business Administration may assume that all students have completed the specific courses listed under Freshman and Sophomore Tier above.

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.

Accounting Major

School of Accountancy

Two degree programs are offered by the School of Accountancy—the Master of Professional Accountancy 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 College of Business Administration—Master of Professional Accountancy section of the Catalog.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 300, Accounting Systems and the Microcomputer</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 310, 410 and 510, Financial Accounting II, III and IV</td>
<td>9</td>
</tr>
<tr>
<td>Acctg. 320, Managerial Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 430, Taxation I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 560, Accounting Information Systems I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 640, Auditing I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. elective</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 435, Law of Commercial Transactions</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 436, Law of Business Associations</td>
<td>3</td>
</tr>
<tr>
<td>† Econ. 340, Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 210, Composition: Business, Professional and Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>


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. The areas tested on the examination include auditing, business law, accounting theory and accounting practice.

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 in the School of Accountancy.

Note: These courses are prerequisite to upper-division courses.

May be counted as part of the College of Business Administration core requirements.

Aviation Management Major

Department of Marketing and Small Business

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. Mgt. 320, Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 420, General Aviation Management and Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 421, Airport Planning and Management</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 422, Airline and Air Travel Management</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 615, Economics of Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 616, Economics of Air Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Mkt. 604, Distribution Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. Mgt. 222, Ground School</td>
<td>2</td>
</tr>
<tr>
<td>Av. Mgt. 223, Private Flight</td>
<td>3</td>
</tr>
</tbody>
</table>

Business Administration Major

Required courses:

A minimum of 15 hours must be selected from courses listed below and distributed over five of the seven areas

Note: Math. 111, College Algebra, is a prerequisite for some of the required courses; students should include Math. 111 as part of their background preparation. Students who wish to take CS 350 must have Math. 144 and Econ. 231 or the equivalent as prerequisites. Students who have not met these prerequisites as part of their major program of study may
take them as part of their electives for the minor.

Business Education Major

Department of Business Education

Required courses for the secretarial major are:

Course | Hrs.
--- | ---
Bus. Ed. 133, Beginning Typewriting | 3
Bus. Ed. 138, Advanced Typewriting | 3
Bus. Ed. 237, Technical Typewriting | 3
Bus. Ed. 231, Elementary shorthand | 3
Bus. Ed. 234, Advanced shorthand | 3
Bus. Ed. 240, Technical shorthand | 3
Bus. Ed. 136, Records Management | 3
Bus. Ed. 203, Office Procedures and Organization | 3
Bus. Ed. 204, Office Machines | 3
Bus. Ed. 260, Automated Word Processing | 3

Business Education Minor. In addition to following the major in business teacher education with emphasis in secretarial science described above, students may minor in business education. Students planning to teach business education as a second subject in secondary schools are required to take 24 hours of business courses, including Acctg. 210 and 220, Econ. 201Q, Bus. Ed. 138 and 237, and nine hours from business administration courses or shorthand, of which one course must be upper division.

Economics Major

Department of Economics

A major requires a minimum of 21 upper-division hours in economics beyond the college core. Within the 124 hours required for graduation, a maximum of 41 hours in economics are required, counting the courses in the college core. The following courses are required and must be included in the 124 hours:

Course | Hrs.
--- | ---
Fin. 444, Contemporary Issues in Banking | 3
Fin. 644, Commercial Bank Management | 3
Fin. 645, Security Analysis and Valuation | 3
Fin. 648, International Finance | 3
Econ. 340, Money and Banking | 3
Econ. 341, National Income Analysis | 3
Econ. 350, Production, Price and Distribution Analysis | 3
Econ. 340, Money and Banking | 3

Electives, selected with consent of major adviser | 6

Bank Management Emphasis. Finance majors wishing to emphasize bank management should include the following courses in their major:

Course | Hrs.
--- | ---
Fin. 444, Contemporary Issues in Banking | 3
Fin. 644, Commercial Bank Management | 3
Econ. 340, Money and Banking | 3

International Business Major

Department of Management

Required courses:

Course | 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. 601, International Marketing
Mkt. 604, Distribution Management
Mkt. 606, New Product Marketing
Mkt. 607, Promotion Management
Mkt. 608, Selling and Sales Force Management

Directed electives:

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

Mkt. 615, Economics of Transportation
Mkt. 671, Economics of Transportation
Geog. 580, Economic Geography
Mgmt. 492, Internship in Management

Free business elective | 3

Within the student's total degree program, at least nine hours are required in the areas of language, culture, history and politics of countries other than the United States.

Management Major

Department of Management

Seven courses selected from the following:

Course | Hrs.
--- | ---
Mgmt. 462, Leadership and Motivation | 3
Mgmt. 464, Organizational Communication | 3
Mgmt. 665, Organizational Development | 3
Mgmt. 667, Organizational Structures and Design | 3
Mgmt. 668, Decision Making | 3
Mgmt. 683, Comparative and International Management | 3
Pers. 466, Personnel Management | 3
Pers. 468, Compensation Management | 3
Pers. 666, Labor Relations | 3
DSc. 651, Design of Operations Systems | 3
DSc. 652, Operations Planning Systems | 3

Up to six credit hours may be substituted from upper-level courses in business administration with consent of the major adviser.

Marketing Major

Department of Marketing and Small Business

Required courses:

Course | 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. 601, International Marketing
Mkt. 604, Distribution Management
Mkt. 606, New Product Marketing
Mkt. 607, Promotion Management
Mkt. 608, Selling and Sales Force Management

Economics 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 of economics exclusive of Econ. 100, 101G, 102, 200G and 231, Econ. 201Q and 2020 (or equivalent) 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 do teachers of economics should contact a secondary social studies adviser in the College of Education for program planning.

Finance Major

Department of Finance, Real Estate and Decision Sciences

Required courses:

Course | Hrs.
--- | ---
Fin. 640, Financial Management | 3
Fin. 641, Investments | 3
Fin. 643, Capital Markets and Financial Institutions | 3

Electives, from the following: | 6

Fin. 444, Contemporary Issues in Banking
Fin. 644, Commercial Bank Management
Fin. 645, Security Analysis and Valuation
Fin. 648, International Finance
Acctg. 310, Financial Accounting
Econ. 340, Money and Banking
Re 611, Real Estate Finance
Re 618, Real Estate Investment Analysis
**Admission Requirements**

During the semester in which the preprofessional curriculum will be completed, the candidate for the MPA must apply for admission to the Graduate School. No bachelor's degree will be awarded; however, the student desiring such a degree may be granted the degree with a minimum of additional course work as specified in the Bachelor of Business Administration—Accounting Major section of the Catalog. Requirements for admission in full standing to the MPA program are as follows:

1. Completion of the 96-hour preprofessional program, including all specified course requirements, described above.
2. A total of 1,100 points based on the formula of 200 times the overall grade point average (4.000 system) of the last 60 hours plus the Graduate Management Admission Test (GMAT) score.
3. A grade point average not less than 2.750 on all courses identified as College of Business Administration core courses.
4. A grade point average of not less than 3.000 on the 12 hours of accounting courses required beyond the introductory level (Acctg. 310, 320, 410 and 430).

**Conditional Admission**

Students who have completed 96 semester hours and lack no more than nine hours of specific preprofessional course requirements may be admitted 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.

**Students From Other Educational Institutions**

Students who hold a baccalaureate degree from an accredited institution may be admitted to the School of Accountancy if they meet the minimum scholastic requirements. They will be required to make up any specific preprofessional course deficiencies, as soon as course scheduling permits, and to complete all specific admission requirements for which they have not had an equivalency.
including a minimum of 30 semester credit hours beyond the requirements for the baccalaureate degree.

Professional Program
Candidates in the professional curriculum must complete 55 credit hours in the following courses while maintaining an overall grade point average of 3.00 or better based on all courses taken while in professional status.

Course  Hrs.
Acct. 710 and 715, Financial Accounting IV and V ....... 6
Acct. 720, Managerial Accounting III .............. 3
Acct. 730, Taxation II ......................... 3
Acct. 760 and 860, Accounting Information Systems I and II .... 6
Acct. 740, Auditing I .......................... 3
Acct. 890, Professional Seminar* ... 1
B. Law 436, Law of Associations 3
Mgmt. 830, Business and Society 3
Mgmt. 862, Organizational Behavior 3
Mgmt. 885, Administrative Policy (to be taken during the last semester of the program) ............. 3
Fin. 841, Financial Management 3
DS 871, Multivariate Statistical Methods or Econ. 631, Intermediate Business Statistics .... 3
Accounting electives (courses numbered 800 or above) .... 9
Other College of Business Administration courses, excluding accounting (courses numbered 500 or above) ........ 6

*Must be repeated for four full semesters; one credit hour will be awarded in total.

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 without 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, filing 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 the University, the initial requirements of the College of Business Administration and the special requirements of the Legal Assistant Program.

Initial admission to the College of Business Administration requires (1) completion of 24 semester credit hours, (2) a cumulative grade point average of 2.50 and (3) completion of six hours of English composition, three hours of speech and three hours of college algebra. Students may apply for admission to the Legal Assistant Program during the semester that these three requirements will be completed.

Admission to the Legal Assistant Program involves three steps: (1) submission of a properly completed application for admission, (2) completion of a personal interview with the associate director or other program counselor and (3) acceptance by the Legal Assistant Program Admissions Committee. In making its determination, the Admission Committee considers the student's academic record, American College Test (ACT) scores, evidence of written and oral communication skills, grade performance in B. Law 1300 and Legal 230 and motivation toward a professional career as a legal assistant. Because the number of applicants exceeds the number of students who can be accommodated in the program, the admissions process is by its nature competitive. Students interested in pursuing the Legal Assistant Program are encouraged to make an early appointment with the associate director to clarify pre-professional course and admissions requirements and deadlines.

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 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 impede the class and (3) whether there is space available.

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

### Nondegree and Single Course Admission

#### Course  Hrs.
I. General Education Requirements  (30 hours)
Basic Skills (12 hours)
Eng. 101 and 102, College English I and II .... 6
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication 3
Division A—Humanities and Fine Arts
"G" or "O" course electives 3-12
Division B—Social and Behavioral Sciences
"G" or "O" course electives 3-12
Division C—Mathematics and Natural Sciences
"G" or "O" course electives 3-12

II. Professional Curriculum (34 hours)
A. Required Courses (16-19 hours)
B. Law 1300, Introduction to Law 3
Legal 230, Introduction to Paralegalism 1
"Legal 231A, Legal Research and Writing I 3
"Legal 232, Legal Assistant Internship 3
"Legal 235, Legal Environment of Business 3
"Mgmt. 360, Concepts of Management 3
"Legal 236, Law of Commercial Transactions 3
"B. Law 331, Legal Environment of Business 3
"B. Law 435, Law of Commercial Transactions 3
"B. Law 436, Law of Business Associations 3
"RE 438, Real Estate Law 3
"Acctg. 430, Taxation I 3
""AJ 220, Criminal Law 3
""AJ 320, Criminal Procedure 3
"CS 190, Introduction to Programming for Business, or CS 200, Introduction to Programming, and a programming language selected from CS 201-216 3-5
"Mgmt. 360, Concepts of Administration 3

C. The 34-hour professional curriculum must include a minimum of 18 hours of legal specialty courses. Legal specialty courses are identified with an asterisk (*). Other courses may
Associate of Science in Secretarial Training

The Associate of Science program in secretarial training provides students an opportunity to receive high quality secretarial preparation in a college atmosphere. At the same time the program is designed with a view toward helping students attain the status of Certified Professional Secretary. The degree requirements are summarized as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition and Speech</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td></td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking,</td>
<td>3</td>
</tr>
<tr>
<td>Speech 112, Basic Interpersonal</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Science and/or Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
</tr>
<tr>
<td>Administration</td>
<td></td>
</tr>
<tr>
<td>Mgmt. 360, Concepts of Administra-</td>
<td>3</td>
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<tr>
<td>tion, or</td>
<td></td>
</tr>
<tr>
<td>B. Law 332, Law and Society</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td></td>
</tr>
<tr>
<td>Econ. 201Q, Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Business Education</td>
<td></td>
</tr>
<tr>
<td>Bus. Ed. 133, 138, 237, Typewriting</td>
<td>6-9</td>
</tr>
<tr>
<td>Bus. Ed. 136, Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 203, Office Procedures and</td>
<td>3</td>
</tr>
<tr>
<td>Organization</td>
<td></td>
</tr>
<tr>
<td>Bus. Ed. 204, Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 231, 234 and 240,</td>
<td></td>
</tr>
<tr>
<td>Shorthand</td>
<td>6-9</td>
</tr>
<tr>
<td>Bus. Ed. 260, Automated Word</td>
<td>3</td>
</tr>
<tr>
<td>Processing</td>
<td></td>
</tr>
<tr>
<td>Total hours</td>
<td>64-70</td>
</tr>
</tbody>
</table>

Thirty hours and 60 credit points must be earned in residence, and 12 of the last 15 hours must be taken in residence.

Of the required 64 hours, not more than one-fourth of D work will count on the Associate of Science in secretarial training.

Course Descriptions

Business 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.

Business courses numbered 300 to 499 are available only to juniors and seniors. Graduate students may not take these courses for graduate credit.

Business courses numbered 500 to 699 are available to juniors and seniors, but graduate students may also receive graduate credit for these courses.

Business courses numbered 700 to 899 are designed for graduate students only, and students may not be admitted to 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.)

Accounting

School of Accountancy

Lower-Division Courses

210. Financial Accounting I. (3). The study of accounting as a means of communicating financial information about the activities of business enterprises. Emphasis is placed on 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. Prerequisites: sophomore standing and Math. 109 or Math. 111. B 11 210 0 0502

220. Managerial Accounting I. (3). The study of accounting in terms of management's information requirements. Emphasis is given to the use of accounting in planning and controlling a firm's activities. Prerequisites: Acctg. 210; Math. 109 or 111; sophomore standing. B 11 220 0 0502

Upper-Division Courses

300. Accounting Systems and the Microcomputer. (3). An overview of accounting systems with particular emphasis on the accounting microcomputer environment. Prerequisites: declared accounting major A, or School of Accountancy consent; Acctg. 220. B 11 300 0 0502


320. Managerial Accounting II. (3). The study of accounting for manufacturing operations. Topics include costing, analysis and interpretation of cost data for income determination; inventory valuation and internal management use are stressed. Prerequisites: Acctg. 220 and junior standing. B 11 320 0 0502

390. Special Group Studies in Business. (1-3). Repeatable for credit with School of Accountancy consent. B 11 390 0 0502

410. Financial Accounting III. (3). A continuation of Acctg. 310. Liabilities, equity and the Statement of Changes in Financial Position are emphasized. Prerequisites. Acctg. 310; Acctg. 300 or concurrent enrollment; Math. 109 or 111; junior standing. B 11 410 0 0402

430. Taxation I. (3). An examination of the federal income tax law relating to individual income taxation. Prerequisites: Acctg. 210; Math. 109 or 111; junior standing. Acctg. 300 or concurrent enrollment. B 11 430 0 0502

491. Independent Study in Accounting. (1-3). Individual study for credit only. Prerequisites: 2.75 grade point average in accounting, junior standing and School of Accountancy consent. B 11 491 0 0502

Courses for Graduate/Undergraduate Credit

Dual course numbers are used for courses that will be taken simultaneously by baccalaureate candidates and candidates in the School of Accountancy. Additional work will be required of the latter.

510/710. Financial Accounting IV. (3). A continuation of Acctg. 410. Includes an examination of accounting concepts and techniques related to partnerships, consolidated statements, foreign exchange and fund accounting. Prerequisites: Acctg. 310; Math. 109 or 111; junior standing. Acctg. 710 requires admission to the MPA program or School of Accountancy consent. B 11 510 0 0502; B 11 710 0 0502

560/760. Accounting Information Systems I. (3). A study of the content, design and controls of accounting systems, with emphasis on the use of computers for processing financial data. Prerequisites: Acctg. 220; Math. 109 or 111; CS 200 and 205 or Acctg. 300; senior standing. Acctg. 760 requires admission to the MPA program or School of Accountancy consent. B 11 560 0 0502; B 11 760 0 0502

615/715. Financial Accounting V. (3). An examination of accounting concepts and techniques related to consolidated statements subsequent to date of acquisition. A systematic treatment of the basic concepts and methodology of accounting theory. Prerequisites: Acctg. 430; Math. 109 or 111; senior standing. Acctg. 715 requires admission to the MPA program or School of Accountancy consent. B 11 615 0 0502; B 11 715 0 0502

620/720. Managerial Accounting III. (3). Advanced study of the use of accounting information in financial policy decisions, profit planning and control, quantitative analysis of financial data and capital budgeting. The ap-
application of selected quantitative methods of accounting is included. Prerequisite: Acctg. 320. Math 144. Econ 221, senior standing. Acctg. 370 requires admission to the MPA program or School of Accountancy consent. B 11 620 0 0502. B 11 720 0 0502

630/730. Taxation II. (3). A study of the federal tax law as it applies to corporations, partnerships, estates, trusts and gifts. Prerequisites: B 11 660 0 0502; B 11 630 0 0502; B 11 730 0 0502

640/740. Auditing I. (3). A study of the auditor's attest function, with emphasis on auditing standards and procedures, independence, legal responsibilities, codes of ethical conduct and evaluation of accounting systems and internal control. Prerequisites: Acctg. 510/710, Acctg. 560/760, CS 200 and 205 or Acctg. 300; Math 109 or 111; senior standing. Acctg. 740 requires admission to the MPA program or School of Accountancy consent. B 11 630 0 0502. B 11 730 0 0502

690/790. Seminar in Selected Topics. (1-3). Repeatable for credit with School of Accountancy consent. B 11 690 0 0502. B 11 790 0 0502

Courses for Graduate Students Only

800. Financial Accounting. (3). A study of the basic structure of accounting, income determination, asset valuation, liability recognition and accounting ownership. The interpretation and analysis of financial statements are included. May not be taken for credit in the School of Accountancy, prerequisite: no previous credit in accounting or School of Accountancy consent. B 11 800 0 0502

801. Managerial Accounting. (3). An examination of the use of accounting data to analyze management problems. Concepts of cost analysis, return on investment analysis, and benefit-cost analysis are illustrated. Cost control budgets are covered. May not be taken for credit in the School of Accountancy, prerequisite: Acctg. 800 or equivalent. B 11 801 0 0502

803. Federal Taxes and Management Decisions. (3). An examination of the dollar differences in federal income taxation. Selected topics in federal taxation are also examined. Prerequisites: Acctg. 630/730; Math 109 or 111; Acctg. 300. B 11 830 0 0502

840. Auditing II. (3). An advanced study of auditing with emphasis on EDP auditing, statistical sampling and ethics. Prerequisites: Acctg. 640/740; CS 200 and 205 or Acctg. 300; Math 109, 111 or 144. B 11 840 0 0502

850. Accounting Information Systems II. (3). A study of the concepts of information systems, their design and implementation and the relationship of these concepts to the economic information requirements, information flows, decision criteria and control mechanisms in the business organization. Prerequisites: Acctg. 560/760, Acctg. 220 or 801; Math 300 and 200 or Acctg. 300. B 11 880 0 0502

860. Contemporary Issues in Accounting. (3). An examination of current issues in accounting, with emphasis on issues of professional organizations and governmental agencies. Prerequisites: Acctg. 510/710; Math 109 or 111. B 11 880 0 0502

866. Professional Seminar. (1). An orientation to the accounting profession. Continuous enrollment and satisfactory completion of designated segments required of all students in the School of Accountancy. B 11 890 0 0502

891. Directed Study in Accounting. (1-3). Prerequisite: School of Accountancy consent. B 11 891 0 0502

897. Research Seminar in Accounting. (3). An advanced seminar offering an opportunity for oral discussion and written reports on matters of current importance in diverse areas of accounting. A major course objective is to determine the student's ability for independent research and the presentation and defense of findings. Prerequisite: undergraduate emphasis in accounting including a course in statistics; admission to the MPA program or School of Accountancy consent. B 11 897 0 0502

899. Thesis Research. (1-3). B 11 899 4 0502

Aviation Management

Department of Marketing and Small Business

Lower-Division Courses

190. Selected Topics. (1-3). Repeatable with departmental consent. B 17 190 0 0501

222. Ground School. (2). A preparation for the FAA private pilot written examination. The student must show evidence of successful completion of this examination before receiving credit for this course. Credit by examination or experience is available only to aviation majors or present majors. Graded on CNCR basis only. B 17 222 0 0506

223. Private Flight. (3), includes approximately 40 hours of flight required to obtain a private pilot certificate. Credit by examination or experience is available only to aviation management major or aviation management major or present majors. Graded on CNCR basis only. Prerequisite: Av. Mgt. 222. B 17 223 0 0506

Upper-Division Courses

320. Introduction to Aviation. (3). A study of the various branches of aviation: manufacturing, fixed base operations, airport management, government activities, airline operations and military aviation. Covers employment opportunities, professional organizations and government representatives from the various facets of the aviation industry and government will participate. Prerequisite: junior standing. B 17 330 0 0506


420. General Aviation: Management and Marketing. (3). An overview of general aviation and its relations with the total aviation industry, including the worldwide organization of the general aircraft industry, its marketing strategies, social and environmental impact and the economics of corporate aircraft utilization. Prerequisites: Mkt. 300 and Mgmt. 360. B 17 420 0 0506

421. Airport Planning and Management. (3). The principles and procedures pertaining to the planning of airport facilities, including the economic and physical design and location, development and financial analysis. Also includes current problems in certification and regulations, safety, land acquisition, zoning and state and federal participation in airport development. Prerequisites: DS 349, Mkt. 300 and Mgmt. 360. B 17 421 0 0506

422. Airline and Air Travel Management. (3). The organizational and financial structure of air carriers, their operating policies, marketing policies, equipment selection, personnel and public relations, a review of the pertinent federal and international regulations. Covers both air cargo and passenger operations. Also contains a section on the organization and operation of air travel agencies and their relations with airlines. Prerequisites: DS 350, Fin. 340, Mkt. 300 and Mgmt. 360. B 17 422 0 0506

491. Independent Study. (1-5). Offered for CNCR only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in aviation management. B 17 491 3 0501
Offered for Repeatable Prerequisite: An introduction to Law of contracts, bailments, sales, commercial paper and secured transactions. This course considers the organization and relational aspects of small, closely held businesses and large corporate enterprises. Prerequisite: junior standing. B 15 436 0 0506

435. Law of Commercial Transactions. (3). Law of agencies, partnerships and corporations. This course considers the ethical and social responsibility aspects of business behavior. Prerequisite: junior standing. B 15 436 0 0506

436. Law of Business Associations. (3). Law of agencies, partnerships and corporations. This course considers the ethical and social responsibility aspects of business behavior. Prerequisite: junior standing. B 15 436 0 0506

491. Independent Study. (1-5). Offered for Cr/Nr only. Closed to graduate credit. Prerequisite: junior standing and 2.750 grade point average in business law and departmental consent. B 15 491 2 0506

492. Internship in Business Law. (1-3). Offered for Cr/Nr only. Repeatable with departmental consent. B 15 492 2 0506

Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 17 690 9 0501

750. Workshop in Aviation Management. (1-4). Prerequisite: junior standing. B 17 750 9 0501

Business Education

Department of Business Education

Lower-Division Courses

133. Beginning Typewriting. (3). A survey of the correct fingering and mechanical operation of a typewriter and an introduction to business forms. B 14 133 1 0514

136. Records Management. (3). A study of modern management methods and practices used in the creation, utilization, maintenance, retention, preservation and disposition of business records. B 14 136 0 0514

186. Advanced Typewriting. (3). A course stressing business, letter and manuscript forms, tabulation, and timed production problems. Prerequisite: Bus. Ed. 133, or one year of high school typewriting or departmental consent. B 14 139 5 0514

190. Selected Topics. (1-3). Repeatable with departmental consent. B 14 190 3 0514

203. Office Procedures and Organization. (3). A study of the various secretarial procedures in a modern office. Prerequisite: sophomore standing or departmental consent. B 14 203 0 0514

204. Office Machines. (3). A course covering the operation of 10-key adding machines and electronic calculators, office duplicating machines and voice transcription, as well as the study of copying machine processes. Prerequisite: BE 133. B 14 204 5 0514

231. Elementary Shorthand. (3). A study of the theory of Gregg Series 90 Shorthand. Prerequisite: Bus. Ed. 133 or one unit of high school typewriting or departmental consent. B 14 231 5 0514

234. Advanced Shorthand. (3). A review of Gregg Series 90 Theory. Emphasis is placed on advanced dictation and mailable transcription. Prerequisite: Bus. Ed. 231 with a grade of C or better or departmental consent. B 14 234 5 0514

237. Technical Typewriting. (3). A study of letter forms used in business, difficult tabulating projects, legal typewriting, medical typewriting and advanced timed production problems. Emphasis is placed on accuracy at a high rate of speed to meet office standards. Prerequisite: Bus. Ed. 138 or two units secretarial training in high school or departmental consent. B 14 237 5 0514

240. Technical Shorthand. (3). Advanced dictation, with emphasis on technical vocabulary. Prerequisites: Bus. Ed. 234 with a grade of C or better and Bus. Ed. 237, or departmental consent. B 14 240 3 0514

260. Automated Word Processing. (3). This course provides a basic background of the concepts, processes and careers in the automated office. Each student will receive individualized instruction in the Microsoft Word and Microsoft Excel with an introduction to the major frameworks of private and public law. Emphasis is placed on the realm of public law, including the ethical and social responsibility aspects of business behavior. Prerequisite: junior standing. B 15 331 0 0501

Upper-Division Courses

300. Office Practice. (3). An exploration into advanced office duties, techniques and procedures. Also included are various methods of teaching office machines, the functional use of selected machines and a survey of available equipment. Prerequisites: Business education major or minor with credit in Bus. Ed. 237 or departmental consent and junior standing. B 14 460 3 0514

400. Directed Studies. (1-5). Prerequisites: departmental consent and junior standing. B 14 460 3 0514

Course for Graduate/Undergraduate Credit

750. Workshops in Business Education. (1-4). The selection of one major area of business education for study in terms of methods, materials, research and curricular problems. The instructor is assisted by guest lecturers. Repeatable for credit. Prerequisites: junior standing and 2.750 grade point average in business law and departmental consent. B 14 750 9 0514

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 function 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. B 15 130Q 0 0506

230. Introduction to Business Law. (3). Emphasis is placed on business laws and legal concepts as they relate 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. Emphasis is placed on the realm of public law, including the ethical and social responsibility aspects of business behavior. B 15 831 0 0501

231. Legal Environment of Business. (3). An introduction to the legal environment within which the business system operates. The course considers the factors of law in relation to the business system, the institutions and processes involved in the interactions between business, society and government and the major frameworks of private and public law. Emphasis is placed on the realm of public law, including the ethical and social responsibility aspects of business behavior. Prerequisite: junior standing. B 15 331 0 0501

232. Legal Environment of Business. (3). An introduction to the legal environment within which the business system operates. The course considers the factors of law in relation to the business system, the institutions and processes involved in the interactions between business, society and government and the major frameworks of private and public law. Emphasis is placed on the realm of public law, including the ethical and social responsibility aspects of business behavior. Prerequisite: junior standing. B 15 331 0 0501


435. Law of Commercial Transactions. (3). Law of agencies, partnerships and corporations. This course considers the occupational and relational aspects of small, closely held businesses and large corporate enterprises. Prerequisite: junior standing. B 15 435 0 0506

436. Law of Business Associations. (3). Law of agencies, partnerships and corporations. This course considers the occupational and relational aspects of small, closely held businesses and large corporate enterprises. Prerequisite: junior standing. B 15 436 0 0506

437. Regulatory Law. (3). An introduction to the realm of regulatory law and its business context. Considers the legal principles common to most regulatory agencies. Topics considered include trade regulation, occupational health and safety, product safety and environmental law. Prerequisite: junior standing. B 15 437 0 0506

492. Internship in Business Law. (1-3). Offered for Cr/Nr only. Repeatable with departmental consent. B 14 190 3 0506

Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 17 690 9 0501

750. Workshop in Business Law. (1-4). Prerequisite: junior standing. B 17 750 2 0501

Courses for Graduate Students Only

831. Legal Environment of Business. (3). An introduction to the legal environment within which the business system operates. The course considers the factors 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. Emphasis is placed on the realm of public law from a managerial perspective, including the ethical and social responsibility aspects of business behavior. B 15 831 0 0501

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 15 890 9 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 3 0501

Decision Sciences

Department of Finance, Real Estate and Decision Sciences

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 15 190 0 0501
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 personnel planning. Prerequisites: Econ. 231 and Math. 144, or equivalent, and junior standing. B 15 350 0 0506


491. Independent Study. (1-5). Offered Cr/Ncr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 grade point average in decision sciences. B 15 491 3 0506

492. Internship in Decision Sciences. (1-3). Offered Cr/Ncr only. Prerequisites: junior standing, 2.750 grade point average in decision sciences and departmental consent. B 15 492 3 0506

495. Management Information Systems for Business. (3). A study of business information systems for management decision making and control. Includes coverage of system components, controls and application. Prerequisite: one course in programming from CS 201-216 or equivalent, or CS 190 and junior standing. B 15 495 0 0701

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. Topics include linear, integer, goal, and dynamic programming, transportation models, network models, queueing theory and simulation. Prerequisite: DS 350. B 15 575 0 0507

651. Design of Operations Systems. (3). A course structured to give an in-depth view of the long-term design aspects of operations systems. Topics include 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. B 15 651 0 0506

652. Operations Planning Systems. (3). A course structured to give an in-depth analysis of the short-term or operational aspects of goods or service-producing systems. Topics include forecasting methods, inventory control models, material requirements planning, aggregate planning, and scheduling and current issues. Prerequisite: DS 350. B 15 652 0 0506

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 15 690 3 0501

750. Workshop in Decision Sciences. (1-4). Prerequisite: junior standing. B 15 750 2 0507

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 control models, and waiting-line models. Not open to students with credit in DS 350. Prerequisites: calculus and statistics. B 15 850 0 0506

851. Intermediate Production Management. (3). Theory of productive systems, decision-making under uncertainty and advanced mathematical forecasting methods for business and industry. Application of forecasting methods and some operations research models to real-world productive systems. Prerequisite: DS 350 or 650. B 15 851 0 0506

871. Multivariate Statistical Methods. (3). A study of selected multivariate statistical methods used in support of modern decision making. Topics include multivariate hypothesis testing, multiple regression, correlation, analysis of variance and covariance and discriminant analysis. Prerequisite: Econ. 870 or Econ. 231. B 15 871 0 0503

872. Advanced Statistical Analysis. (3). Topics such as sample design, chi square, variance analysis and correlation and regression analysis are examined from conceptual and decision-making points of view. Prerequisite: DS 871. B 15 872 0 0503

874. Management Information Systems for Business. (3). A study of business information systems for management decision making and control. Includes coverage of system components, controls and application. Prerequisite: one course in programming from CS 201-216 or equivalent, or CS 190 and junior standing. B 15 874 0 0705

875. Management Science. (3). A course providing 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. B 15 875 0 0507

876. Advanced Management Science. (3). An in-depth examination of selected management science models. To be included are advanced inventory and quality control topics, goal programming, and other current decision-making techniques. Prerequisite: DS 875 or departmental consent. B 15 876 0 0507

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 15 890 9 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 3 0506

893. Special Project in Decision Sciences. (1-4). A special project including original case research, supervised internships or field research. Prerequisite: approval of project by the Committee. Open only to MS in administration candidates. B 15 893 3 0506

895-896. Thesis. (2-2). B 15 895 4 0501; B 15 896 4 0501

Economics

Department of Economics

The requirements for an emphasis in economics for a Bachelor of Business Administration are listed under the Bachelor of Business Administration information at the beginning of this section.

Students who plan to continue their study of economics in a PhD program should see an adviser in the Department of Economics and, in most cases, include additional mathematics courses.

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, 203H, 204H, 301, 302, 304, 605, 800, 801, 802, 803, 804

Industrial organization and regulated industries—Econ. 614, 615, 616, 617, 810, 814, 815

History and comparative systems—Econ. 100, 622, 625, 626, 627

Statistics and econometrics—Econ. 231, 602, 631, 831, 836

Monetary theory; money and banking—Econ. 340, 640, 840

Public finance—Econ. 653, 655, 656

Labor, manpower and health economics—Econ. 303, 660, 661, 662, 663, 665, 861

Economic growth and development; international economics—Econ. 671, 672, 674, 870, 871

Urban environmental and regional economics—Econ. 685, 687, 688, 865, 888

Directed study; thesis—Econ. 491, 692, 750, 891, 892, 895, 896

Lower-Division Courses

100. Business History of the United States. (3). Cross-listed as Amer. StUd. 100. A survey of American business evolution from colonial times to the present. Emphasis is placed on types of business structures and the role of the public sector. Not open to upper-division students in the College of Business Administration. B 13 100 0 2204

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 College of Business Administration. Not substitutible for Econ. 201Q and Econ. 202Q. B 13 101G 0 2204

102Q. Consumer Economics. (3). An examination of the consumer’s role in the economy. The study of market organization and its impact on consumers, a discussion of information sources for consumers and an analysis of programs for consumer protection are included. Not open to upper-division students in the College of Business Administration. B 13 102Q 0 2204

201Q. Principles of Economics I. (3). (Macroeconomic theory) An introduction to determinants of national income, employment and economic growth. B 15 201Q 0 2204
202G. Principles of Economics II. (3). Microeconomic theory. An introduction to price and distribution analysis. Market structure and performance, contemporary issues and public policy are also included. Prerequisites: Econ. 201C. B 13 202G 0 2204

203H. Honors Principles of Economics. (4). A general survey of economic method, critical appraisals of major economic and macroeconomic principles with applications aimed at helping the student develop an analytic framework for interpreting economic trends, trends, institutions and public policies. Included is an analysis of resource use, price and output determination, the level of national income and the general price level, business fluctuations, the monetary and banking system, international trade, economic growth and development. Open only to honors students. B 13 203H 0 2204

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 managerial decisions. Included are the economics of environmental control, externalities, public 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 seniors. Prerequisite: Econ. 204H. B 13 204H 0 2204

Upper-Division Courses

301. Intermediate Macroeconomics. (3). The concepts of aggregate demand and aggregate supply are introduced and the determinants are discussed. The behavior of interest rates and inflation and the rate of economic growth are examined in detail. Emphasis is on understanding the mechanics of the economy. Prerequisites: Econ. 202 and junior standing. B 13 301 0 2204

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 and production, distribution and exchange. Prerequisites: Econ. 202 and junior standing. A 13 302 0 2204

303. Economic Problems of the Aged. (3). Cross-listed as Ger. 303. An examination of the special economic problem areas of health, transportation and income, including social security, retirement planning, fraud and consumer protection, community resources and services, insurance, taxes, nutrition and housing. The course emphasis is on economic problems of the elderly and on improving the consumer knowledge and management skills of the elderly. Prerequisite: Econ. 2020 or departmental consent. B 13 303 0 2204

304. Managerial Economics. (3). An application of microeconomic theory to the solution of business problems. Prerequisites: Econ. 2020, one course in calculus and junior standing. B 13 304 0 0517

340. Money and Banking. (3). A study of money, credit, inflation and the structure and role of the commercial banking and Federal Reserve systems. The relationship between banks and other financial institutions is included, as is the role of money in determining the level of economic activity and prices. Prerequisites: Econ. 2010 and junior standing. B 13 340 0 0504

491. Directed Study. (1-3). Individual study of various aspects and problems of economics. Repeatable for credit. Cr/NC only. Prerequisites: junior standing, departmental consent and a B in average in economics. B 13 491 S 2204

Courses for Graduate/Undergraduate Credit

602. Mathematical Methods in Economics. (3). An introduction to mathematical tools that are especially useful in economics, econometrics and finance. Topics include a review of differential and integral calculus, an introduction to matrix algebra and various constrained optimization techniques. Emphasis is on economic applications and modeling. Prerequisites: Econ. 2020 and Math 144 or equivalent and junior standing. B 13 602 0 2204

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. 2020 and junior standing. B 13 605 0 2204

614. Industrial Organization. (3). A study of both competitive and noncompetitive market structure, conduct and performance, with special emphasis on related public policy, such as antitrust. Prerequisites: Econ. 202 and junior standing. B 13 614 0 2204

615. Economics of Transportation. (3). A study of economic characteristics of transportation modes, problems and policies. Prerequisites: Econ. 2020 and junior standing. B 13 615 0 0504

616. Economics of Air Transportation. (3). A study of economic characteristics of air transportation and policies. Prerequisites: Econ. 2020 and junior standing. B 13 616 0 0510

617. Economics of Regulation. (3). A study of the theory and practice of regulation. Included are both the traditional regulation of public utilities and communications and the newer forms of regulation, such as safety and environmental regulations. Prerequisites: Econ. 2020 and junior standing. B 13 617 0 0510

622. Comparative Economic Systems. (3). A comparative analysis of the evolutionary structure of capitalism, socialism and communism. Emphasis is placed on differences in resource allocation, distribution of income and economic planning. Prerequisites: Econ. 2020 and junior standing. B 13 622 0 0504

625. Economic History of Europe. (3). Cross-listed as Hist. 614. An analysis of the development of economic institutions; the rise of nation states; the growth of overseas expansion, foreign trade, politics and war; changes in economic ideologies; and cultural effects of economic change. Prerequisites: Econ. 201Q and junior standing. B 13 625 0 2204

626. Origins of the Industrial State. (3). Cross-listed as Hist. 516. U.S. economic development and policy, from the Civil War to the present. Emphasis is on changes in the regulations and influence of businessmen in American society. Prerequisites: Econ. 201Q and junior standing. B 13 626 0 2204

627. Economic History of the United States. (3). Cross-listed as Hist. 515. An analysis of the basic factors in economic growth. Agriculture, trade and commerce, industrial development and the changing role of the government in economic activity are explored. Prerequisites: Econ. 201Q and junior standing. B 13 627 0 2204

631. Intermediate Business Statistics. (3). A study of the regression model with extensions, analysis of variance models and other related statistics, methods, with emphasis on application to business and economics data. Prerequisites: Econ. 220 and junior standing. B 13 631 0 0503

640. Monetary Problems and Policy. (3). An analysis of monetary problems and policy. Debt management policies and the structure of interest rates are included. Prerequisites: Econ. 2020, 340 and junior standing. B 13 640 0 0504

653. Public Finance. (3). An analysis of fiscal institutions and decision making in the public sector of the American economy, budget planning and execution, taxation, and debt and fiscal policy. Prerequisites: Econ. 2020 and junior standing. B 13 653 0 2204


666. Labor Economics. (3). An introduction to labor economics, surveying both theoretical and empirical research in this field. Topics include labor market institutions and regulations, theories of individual and human capital theory and others. Prerequisites: Econ. 20200 and junior standing. B 13 666 0 0516

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. The manner in which wages are determined will deal with the demographics of the labor force, methods of rewarding those who participate in the labor force and such topics as the quality of work life, worker alienation and the nature of work under capitalism. Prerequisites: Econ. 2020 and junior standing. B 13 661 0 0516

662. Work and Pay. (3). The orientation of this course will be to the economic aspects of work and the workplace. Its scope will deal with the demographics of the labor force, methods of rewarding those who participate in the labor force and such topics as the quality of work life, worker alienation and the nature of work under capitalism. Prerequisites: Econ. 2020 and junior standing. B 13 662 0 0516

663. Economic Insecurity. (3). Cross-listed as Ger. 663. Personal economic insecurity, such as unemployment, old age, health care, distribution of income and output, and the problems of social welfare. Costs and benefits of government action to aid in meeting such insecurities are included. Prerequisites: Econ. 2020 or in-
665. Health Economics. (3). Cross-listed as HAE 504. An analysis of health care systems in the United States, including the demand for and supply of health services, access to hospital care, quality and pricing of health services; the need for insurance, and the role of government in the health sector. Prerequisites: Econ. 2020 and junior standing. B 13 665 0 0516

671. Economic Growth and Development. (3). Survey of leading growth theories, with an emphasis on the processes of development and capital formation in developed and underdeveloped economies. Determinants of real income, resource allocation, investment criteria, balance of payments problems, national policies and related topics are analyzed within this framework. Prerequisite: Econ. 2020 and junior standing. B 13 671 0 2204

672. Introduction to International Economics and Business. (3). Cross-listed as Mgmt 651. A survey of the economic foundations of international trade and investment. After a study of international trade theory and policy (the international economy), it explores the operations of the multinational firm within that environment. Prerequisites: Econ. 2020 and junior standing. B 13 672 0 0513

674. International Finance. (3). Cross-listed as Fin 640. 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. Relevant aspects of international financial management are explored through a series of case studies. Prerequisites: Fin. 340, Econ. 2020 and junior standing. B 13 674 0 0513

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. Statistical data are extensively used to evaluate the past and present energy and natural resources situations and the trends for the future. Simple economic concepts and theories are employed to interpret the facts and to assess the impact of various public policies on the use of energy, and natural resources. Prerequisite: Econ. 2020 or instructor's consent. B 13 680 0 2204

685. Natural Resources and Regional Planning. (3). A study of the approaches to the optimal allocation of natural resources. Criteria for policy decisions and the evaluation of the social and economic benefits and costs of using resources through time are examined. Prerequisites: Econ. 2020 and junior standing. B 13 685 0 2204

687. Introduction to Urban Affairs. (3). Cross-listed as Pol. Sci. 687 and Soc. 687. An introduction to the study of the metropolis as a social, political and economic system. Prerequisite: Econ. 2020 or instructor's consent. A course in sociology or political science and junior standing, or instructor's consent. B 13 687 0 2214

688. Urban Economics. (3). A survey of the economic structure and problems of urban areas or both the macroeconomic and microeconomic levels. The application of regional economic analysis in the study of urban areas as economic regions is stressed. Prerequisites: Econ. 2010 and 2020 or Econ. 600, and junior standing. B 13 688 0 2214

692. Group Studies in Economics. (1-3). Repeatable for credit with departmental consent. Prerequisite: junior standing. B 13 692 B 2204

750. Workshop in Economics. (1-4). Prerequisite: junior standing. B 13 750 2 2204

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: B 13 800 0 2204

801. Macroeconomic Analysis. (3). An intensive analysis of contemporary literary and problems of national income analysis. Prerequisites: Econ. 301 and one course in calculus. B 13 801 0 2204

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 and one course in calculus. B 13 802 0 2204

803. Analysis of Business Conditions. (3). A study of economic forecasting and its relationship to macroeconomic analysis. Not for graduate credit in the MA program in economics. Prerequisites: Econ. 800 or equivalent and one semester of introductory statistics. B 13 803 0 2204

804. Managerial Economics. (3). A survey of theoretical and practical methods of analyzing problems that are useful in decision-making by managers. Not for graduate credit in the MA program in economics. Prerequisites: Econ. 2020 or 800 and one course in calculus. B 13 804 0 0517

810. Business and Public Policy. (3). The study of the effects of government regulation, monetary and fiscal policy on business, as well as the impact of the economics of business. Not for graduate credit in the MA program in economics. Prerequisite: departmental consent: B 13 810 0 2204


815. Seminar in the Regulated Industries. (3). An intensive analysis of the economic characteristics of regulated industries (i.e., transportation and public utilities), with emphasis on problems, issues and public policy in these industries. Prerequisite: Econ. 302, 615, 616, 617 or 804. B 13 815 0 0510

830. Statistical Methods for Business. (3). An examination of statistical concepts and methods applicable to business decision making. Included are probability theory, point and interval estimation, hypothesis testing, regression analysis, analysis of variance and selected nonparametric techniques. Not open to students with credit in Econ. 231 or equivalent. Not for graduate credit in the MA program in economics. Prerequisite. calculus: B 13 830 0 0503

831. Introduction to Econometrics. (3). Analysis of time series, multiple regression, and partial correlation, analysis of variance and introduction to econometric techniques. Prerequisites: Econ. 631 and one course in calculus. B 13 831 0 0503

836. Methodology of Economics. (3). A study of the basis of knowledge in economics. The principles of abstract reasoning, deduction and induction can be applied to produce knowledge in economics is explored. Prerequisites: Econ. 302 and 631. B 13 836 0 2204

840. Seminar in Monetary Theory. (3). An examination of neoclassical and contemporary monetary theories. An analysis and an evaluation of current monetary problems are included. Repeatable for credit with departmental consent. Prerequisites: Econ. 202Q and 340. B 13 840 0 0504

853. Seminar in Public Finance. (3). An analysis of theoretical and applied aspects of public finance in the American and foreign economies. Selected topics of current and permanent importance are explored. Repeatable for credit with departmental consent. Prerequisite: Econ. 653. B 13 853 0 2204

861. Seminar in Contemporary Labor Issues. (3). An intensive analysis of contemporary labor 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: Econ. 350. B 13 861 0 0516

870. Seminar in International Trade and Finance. (3). Cross-listed as Fin 860. A study of theoretical and practical problems of the analysis, and current selected issues of international economics and finance. Selected issues include such areas as foreign exchange markets, the Eurocurrency market, the price of dollars in the international monetary system, transference of inflation between countries, developments in the common markets, etc. Prerequisite: Econ. 674. Fin. 648 or instructor's consent. B 13 870 0 0513

871. Seminar in Economic Growth and Development. (3). A study of theories of economic growth and development. Selected topics relating to economic growth and development, such as national planning, allocation of resources, selection and evaluation of investment projects and other current issues, are included. Prerequisite: Econ. 301 or 671. B 13 871 0 2204

895. Seminar in Environmental Quality Control. (3). Examination of actual problems, projects and current approaches to environmental quality control. A critical look at current environmental issues and trends is taken. Prerequisite: Econ. 885. B 13 885 0 2204

888. Seminar in Urban Economics. (3). An analysis of the determinants of city structure, the location of economic activity and land use. Current urban problems such as crime, pollution, zoning, housing and optimal city size are discussed with specific reference to current empirical research. Prerequisite: Econ. 302 or 888. B 13 888 0 0504

891. Directed Study. (1-3). Individual study
of various aspects and problems of economics. Repeatable for credit with departmental consent. Prerequisites: graduate standing and departmental consent. B 13 891 3 2204

892. Group Studies in Economics. (1-3). Repeatable for credit. Prerequisite: departmental consent. B 13 892 9 2204


896. Thesis. (1-2). B 13 896 4 2204

Finance

Department of Finance, Real Estate and Decision Sciences

Lower-Division Courses

1400. 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 with emphasis given to risks and returns. The student is exposed to a set of tools that can be applied in personal financial management to provide a flexible and relevant framework for future decision making. B 15 1400 0 0504

190. Selected Topics. (1-3), Repeatable with departmental consent. B 15 190 3 0504

Upper-Division Courses

340. Finance. (3). A study of corporate organization, types of securities and obtaining short- and long-term capital. Financial planning and control, forecasting and budgeting are included. Prerequisites: Acctg. 210 and 220 and junior standing. B 15 340 0 0504

348. 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 loss 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. B 15 348 0 0504


444. Contemporary Issues in Banking. (3). A survey of contemporary issues facing the U. S. commercial banking system. Course content varies according to the timeliness of various issues. The course is not only for those planning a career in banking but for anyone interested in current trends and issues in banking. Prerequisite: Fin. 340 B 15 444 0 0504

491. Independent Study. (1-5). Offered Cr/Ncr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 grade point average in finance. B 12 491 3 0504

492. Internship in Finance. (1-3). Offered Cr/Ncr only. Prerequisites: junior standing. 2.750 grade point average in finance and departmental consent. B 15 492 2 0504

Courses for Graduate/Undergraduate Credit

640. Financial Management. (3). An explo-
239. Special Topics. (1-3).
Crl/NCr only. Prerequisite: 12 hours of legal department or government agency. Offered departmental consent. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 230 0 5096

231A. Legal Research and Writing I. (3).
An introduction to the tools and techniques of legal research, with emphasis on the basic analytical skills. The course introduces the student to the components of a law library and the use and abuse 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. B 15 231 0 5096

232. Legal Aspects of Business Organizations. (3).
The law of business organizations with emphasis on the practice aspects related to formation of operation of proprietorships, partnerships and corporations. Includes drafting aspects related to employment agreements, partnership agreements and corporate documents. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 232 0 5096

233. Litigation I. (3).
An introduction to the civil litigation process with emphasis on the practice aspects associated with a civil action. Topics covered include civil procedure, preparation and use of pleadings, discovery, law of evidence and appeals. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 233 0 5096

234. Estate Administration. (3).
The law of intestate succession, wills and trusts, with emphasis on the administration of an estate under Kansas law. Includes the preparation of wills, trust instruments and documents related to the probate process. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 234 0 5096

235. Law Office Management and Technology. (3).
The application of modern concepts of organization, management and systems technology to the law office. Emphasis is placed on the application of systems management 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. B 15 235 0 5096

236. Litigation II. (3).
A continuation of Litigation I with emphasis on 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. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 236 0 5096

237. Family Law. (3).
An introduction to family law, including the role of a paralegal as counselor. Emphasis is placed on the practice aspects related to divorce, separation, custody, support, adoption and guardianship matters. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 237 0 5096

238. Legal Assistant Internship. (3).
Internship training in a law office, corporate law department or government agency. Offered Crl/NCr only. Prerequisite: 12 hours of legal specialty courses and internship committee approval. B 15 238 0 5096

239. Special Topics. (1-3). Repeatable with departmental consent. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 239 0 5096

240. Substantive Law. (3).
An introduction to substantive law for the paralegal with emphasis on the law of contracts, torts and property. Special emphasis is placed on development of skill in recognizing substantive law issues. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 240 0 5096

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. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 241 0 5096

242. Estate Planning. (3).
A study of the federal estate and gift tax structure and the planning techniques which are utilized to minimize the impact of taxation on the transmission of property from one generation to another. Includes a study of wills and trusts as estate planning tools. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 242 0 5096

Management

Department of Management

Lower-Division Courses

100. Introduction to Business. (3).
Introduction to the current issues, concepts and functions of business and its environment. Not open to upper division students in the College of Business Administration. Students may not receive credit in both Mgmt. 101G and Mgmt. 100. B 16 100 0 0501

101G. Introduction to Business. (3).
Everyone spends a lifetime dealing with and being influenced by business firms. The main goal of this course is to introduce students to current issues, concepts and functions of business and its environment. Students may not receive credit in both Mgmt. 101G and Mgmt. 100. B 16 101G 0 0501

Considers women in all phases of business with an in-depth look at women in management. Examples of specific subject areas include hiring, promotion and problems unique to women. The primary aim is to make men and women aware of the role that women now play and their future potential. B 16 163 0 0506

190. Selected Topics. (1-3). Repeatable with departmental consent. B 16 190 0 0501

Upper-Division Courses

360. Concepts of Administration. (3).
A study of behavioral and traditional concepts that apply to the management of organizations. An analysis of administrators and the environment in which they operate is included. Prerequisite: Junior standing. B 16 360 0 0506

390. Special Group Studies in Management. (1-3). Repeatable with departmental consent. B 16 390 0 0501

430. Business and Society. (3).
An examination of the economic, political, social and legal environment in which business operates. Consideration is given to the philosophic foundation of capitalism and how business has interacted with government, consumers and labor over time. Emphasis is placed on the role of business in dealing with various societal issues, such as the social responsibility of business, affirmative action, occupational safety and health, environmental protection and the challenge to the legitimacy of technology are dealt with from the perspective of the decision-making manager. Prerequisite: Junior standing. Completion of Mkt. 330, Fin. 340, DS 330 and Mgmt. 360 is strongly recommended. B 16 430 0 0501

462. Leadership and Motivation. (3).
A study of theories of human motivation and adaptation of these theories to programs in organizations. Concepts of authority and delegation are probed and leadership styles are analyzed. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 462 0 0506

464. Organizational Communication. (3).
An examination of the design of organizational communication systems. An introduction to communication models and the analysis of the interpersonal communication process are included. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 464 0 0506

491. Independent Study. (1-5). Offered for Crl/NCr only. Closed to graduate credit. Prerequisites: Junior standing and 2.75 grade point average in management and departmental consent. B 16 491 3 0501

492. Internship in Management. (1-3). Offered for Crl/NCr only. Prerequisites: Junior standing and 2.75 grade point average in management and departmental consent. B 16 492 3 0501

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 business. After a study of international trade, theory and policy (the international economy), it explores the operations of the multinational firm within that environment. Prerequisites: Econ. 202Q and junior standing. B 16 561 3 0501

663. Organizational Interactions. (3).
A study of interpersonal, organizational and interorganizational interactions. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 663 0 0506

685. Organizational Development. (3). Planned organizational change. Emphasis is upon team building in organizations. Individual, group and structural developments are included. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 685 0 0506

687. Organizational Structure and Design. (3).
An introduction and exploration of the theories pertinent to the study of organizational subsystem structure and design. The interrelationships of organizational goals, decision-making, environment, technology, climate, innovation and organizational structure/design are analyzed utilizing a systems approach. Additional topics include formal versus informal structure, differentiation, integration and matrix organizations. Prerequisites: Junior standing and Mgmt. 360. B 16 687 0 0506

680. Decision Making. (3). Cross-listed as...
A study of decision making with attention directed to the factors of creativity, the quest for subjective certainty, rationality, cognitive inhibitors, problem identification, evaluation of alternatives, applications of quantitative methods to decision processes, and implementation. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

681. Administrative Policy. (3). An integration of all aspects of business administration in the analysis of and making decisions for policy development. Prerequisites: DS 350, Fin. 340, Mkt. 300, Mgmt. 360 or departmental consent and senior standing.

683. Comparative and International Management. (3). The study of contemporary management concepts and practices applicable to private and public sector organizations in an international setting and their impact on operational and management functions of multinational corporations. The student is introduced to the dynamic growth of business and government interaction on a global basis. The course includes an examination of nationalism and industrial development, labor relations, host-country activities to promote or restrict international business; development of technological and managerial skills and marketing expertise. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing.

684. Health Administration Policy. (3). An integration of all aspects of health administration in the analysis of and making decisions for policy development. Prerequisites: A basic course in economics, accounting, finance, and management or administration and junior standing.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: Junior standing. B 16 684 0 0506

750. Workshop in Management. (1-4). Prerequisite: Junior standing. B 16 750 2 0506

Courses for Graduate Students Only

830. Socio-Legal Environment of Business. (3). An examination of the economic, political, social and legal environment in which business operates. Consideration is given to the philosophic foundation of capitalism and how business has interacted with government, consumers, and labor over time. Emphasis is placed on the role of business in dealing with various social problems. Current issues, such as the social responsibility of business, affirmative action, occupational health and safety, environmental protection and the challenge of the legitimacy of the firm, are dealt with from the perspective of the decision-making manager.

836. International Business Administration. (3). An introduction to international business administration with particular attention given to the development of multinational business strategies in light of the diverse economic, political, social, and cultural dimensions of the environment that exist in both developed and developing areas of the world. B 16 836 0 0513

860. Management of Organizations. (3). An introduction to management and organizational theory, including such topics as, classification and contemporary management theory, human relations, group dynamics, motivation, communication, organizational structure and design and behavioral control. B 16 860 0 0506

862. Organizational Behavior. (3). A study in individual behavior in an organizational setting. Human variables in business are analyzed from the standpoint of job placement, performance and individual development. Topics covered include behavioral development, motivation, interpersonal relations in human relations. Prerequisite: Mgmt. 860 or departmental consent. B 16 862 0 0506

865. Communication. (3). An analysis of communication models in terms of their application to communication problems in organizations. Social-psychological processes underlying persuasion in interpersonal relations and through the mass media are explored. Communication systems and techniques within formal organizations are analyzed critically. Prerequisite: Mgmt. 860 or departmental consent. B 16 865 0 0506

866. Organizational Conflict and Stress. (3). Studies in flexibility and rigidity. A review is made of research and thinking in the areas of innovation, conflict, resolution, stress and anxiety as relevant to organizational structures and behaviors. Prerequisite: Mgmt. 860 or departmental consent. B 16 866 0 0506

869. Research in Behavioral Science. (3). An analysis of some of the concepts and tools in behavioral science that are 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. B 16 869 0 0506

880. Analysis of Behavioral Systems. (3). Concentration on theoretical and methodological contributions to the understanding of behavioral systems. Models and research methodology in individual behavior, small group processes and organizations are critically analyzed. Prerequisite: departmental consent. B 16 880 0 0506

881. The Philosophy of Management. (3). Concentrated readings and research to define the relationship of management leadership in our society. Prerequisite: departmental consent. B 16 881 0 0506

885. Business Policies. (3). An analysis of business problems from the perspective of top management. Prerequisite: departmental consent. B 16 885 0 0506

886. Seminar in Research Methodology. (3). A study of concepts and procedures in the design and performance of research. B 16 886 0 0506

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 16 890 0 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 16 891 3 0506

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 in Organization Administration degree candidates. B 16 893 3 0506

895-896. Thesis. (2-2). B 16 895 4 0501; B 16 896 4 0506

Marketing

Department of Marketing and Small Business

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 17 190 3 0509

Upper-Division Courses

300. Marketing. (3). A description and analysis of the U.S. marketing system and an examination of the factors affecting management of the major policy areas of marketing in the firm. Prerequisite: junior standing. B 17 300 0 0509


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. B 17 403 0 0509

404. Retail Management. (3). An examination of the essential principles and practices of retail business management. Prerequisites include site selection, store design and departmental layout, merchandising, sales promotion and customer services. In addition, the course 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. B 17 404 0 0509

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 sociocultural, psychological and economic aspects of consumer behavior. Prerequisites: Mkt. 300 and junior standing. B 17 405 0 0509

491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisites: Junior standing and 2.75 grade point average in marketing. B 17 491 3 0509

492. Internship in Marketing. (1-3). Offered for Cr/NCr only. Prerequisites: Junior standing, 2.75 grade point average in marketing and departmental consent. B 17 492 2 0509

Courses for Graduate/Undergraduate Credit

601. International Marketing. (3). Problems and procedures of marketing in foreign countries. The effects of foreign cultures and marketing systems on the design of marketing programs are included. Prerequisites: Mkt. 300 and junior standing. B 17 601 0 0509

604. Distribution Management. (3). A study of all areas involved with the distribution of a firm's products or services. These areas focus 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. B 17 604 0 0509
606. New Product Marketing. (3). This course addresses the issues of identifying, evaluating, developing, and commercializing new products within both smaller and larger firms. It explores the role of the product/brand manager, a person who often acts as an internal entrepreneur. Prerequisites: Mkt. 300, 403 and 406: B 17 635 0 059.

607. Promotion Management. (3). An analysis of issues involved with the promotion of an organization and its products or services. These promotion issues deal with the development of advertising campaigns, management of the personal sales force, development of marketing associations of business and public relations. Prerequisites: Mkt. 300 and junior standing: B 17 607 0 0509.

608. Selling and Sales Force Management. (3). 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. B 17 608 0 0509.

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 three additional hours of marketing and junior standing. B 17 609 0 0509.


750. Workshop in Marketing. (1-4). Prerequisite: Junior standing. B 17 750 2 0509.

Courses for Graduate Students Only

800. Marketing Systems. (3). An intensive analytical introduction to the combination of institutions that comprise the overall marketing system. The marketing function as a major subsystem within the total business firm is also presented. B 17 800 0 0509.

801. Contemporary Issues in Marketing Management. (3). A broadening of the concept of marketing by examining the impact of contemporary macro-environmental conditions upon micromarketing decisions. Analysis includes identification and study of environmental issues, issues participants, new managerial decisions required and limitations to marketing decision making. Prerequisite: Mkt. 800 or equivalent. B 17 801 0 0509.

802. Marketing Strategy. (3). Integration of long-range marketing and corporate policies. Budgetary control and the evaluation of the effectiveness of marketing systems are included. The organization of the marketing department and its relation to the total organization are also explored. Prerequisite: Mkt. 800 or departmental consent. B 17 802 0 0509.

803. Marketing Analysis. (3). The application of the scientific method to the solution of marketing problems. Prerequisite: Mkt. 800 or equivalent: B 17 803 0 0509.

805. Consumer Decision Processes. (3). An examination of different aspects of the behavior of consumers and of the factors that help explain their behavior. An analysis of current concepts and models is included. Prerequisite: Mkt. 800 or departmental consent. B 17 805 0 0509.

809. Marketing Theory. (3). A utilization of marketing research findings to analyze current marketing theory. Conceptual and theoretical frameworks for marketing analysis are developed. Prerequisite: Six hours of marketing, including Mkt. 801. B 17 809 0 0509.


891. Directed Studies. (1-5). Prerequisite: Departmental consent. B 17 891 3 0501.

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 administration degree candidates. B 17 893 3 0501.

895-896. Thesis. (2-2). B 17 895 4 0501; B 17 896 4 0501.

Personnel

Department of Management

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 16 190 3 0511.

Upper-Division Courses


466. Personnel Management. (3). An analysis of the functions of personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 466 0 0515.

486. Compensation Administration. (3). Approaches to compensation processes in organizations. Discussion of job evaluation techniques, wage level and wage structure determination, individual performance analysis, individual wage rate decisions, incentive plans and benefits. Consideration of the legal constraints on compensation practices. Prerequisite: Pers. 460 or consent of instructor. B 16 468 0 0515.

491. Independent Study. (1-5). Offered for Cr/NC only. Closed to graduate credit. Prerequisites: Junior standing and 2,750 grade point average in personnel courses. B 16 491 3 0515.

492. Internship in Personnel. (1-3). Offered for Cr/NC only. Prerequisites: Junior standing. 2,750 grade point average in personnel courses and departmental consent. B 16 492 3 0515.

Courses for Graduate/Undergraduate Credit

664. Labor Relations. (3). A course designed to present the philosophy underlying labor legislation and the function of collective bargaining in labor-management relationships. Prerequisite: Junior standing. B 16 664 0 0515.

666. Selection, Training, and Placement. (3). An analysis of advanced programs of employee selection, training and placement. Testing, interviewing, counseling, appraisal, job analysis and job design are explored. Prerequisites: Pers. 466 or departmental consent and junior standing. B 16 666 0 0515.

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: Pers. 466 or departmental consent. B 16 690 9 0511.


Courses for Graduate Students Only

867. Seminar in Personnel Administration. (3). An intensive study of several critical and major current problems in personnel and a review of significant literature. The direction of the course could be determined by the interests of the class. Prerequisite: Pers. 466. B 16 867 9 0515.

890. Wage and Salary Administration. (3). A study of job evaluation and other procedures that lead to the development of a sound wage and salary schedule. Prerequisite: Pers. 466 or instructor's consent. B 16 890 9 0501.


893. Special Project in Personnel. (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 administration degree candidates. B 16 893 3 0501.

895-896. Thesis. (2-2). B 16 895 4 0501; B 16 896 4 0501.

Real Estate

Department of Finance, Real Estate and Decision Sciences

Lower-Division Course

190. Selected Topics. (1-3). Repeatable with departmental consent. B 15 190 3 0511.

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. B 15 310 0 0511.


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. B 15 438 0 0511.

491. Independent Study. (1-5). Offered for Cr/NC only. Closed to graduate credit. Prerequisites: Junior standing and 2,750 grade point average in real estate courses. B 15 491 3 0501.
492. Internship in Real Estate. (1-3). Offered Cr/N/Cr only. Prerequisites: junior standing. 2.750 grade point average in real estate and departmental consent. B 15 492 2 0511

Courses for Graduate/Undergraduate Credit

611. Real Estate Finance. (3). Real estate financing, instruments, institutions, traditional and creative financing techniques. Risk analysis, mortgage banking and underwriting, primary and secondary mortgage markets. Prerequisite: Fin. 340. RE majors should have completed RE 310. B 15 611 0 0511

614. Real Estate Appraisal. (3). Impact of socio-economic conditions on real estate values. Cost, sales comparison and capitalized income approaches to market value. Demonstration appraisal. Prerequisite: RE 310. B 15 614 0 0511

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. B 15 618 0 0511

519. Residential Marketing, Management and Development. (3). Theory and practice, includes supply and demand, urban and neighborhood market analyses, location theory and land-use succession, forecasting activities, brokerage administration, closing procedures, property management and public policy devices relative to land-use decisions. Case studies or problems. Prerequisite: RE 310. B 15 619 0 0511

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. B 15 690 9 0511

750. Workshop in Real Estate. (1-4). Prerequisite: junior standing. B 15 750 9 0511

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. Detailed comprehensive case studies are approached with contemporary analytical techniques. Prerequisite: RE 310, 614 and 618. B 15 810 0 0511

890. Seminar in Special Topics. (1-5). Repeatable with departmental consent. B 15 890 9 0511

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 3 0511

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 administration degree candidates. B 15 893 2 0511

Small Business/Entrepreneurship

Department of Marketing and Small Business

Lower-Division Course

160Q. Introduction to Entrepreneurship. (3). An introductory course that is 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 will be given to the elementary concepts of planning, financing, starting and managing a new business. B 17 1600 0 0505

Upper-Division Courses

361. Entrepreneurship: The Start-Up. (3). This course will help the student explore various ways to own a business including starting a new business, buying a franchise or buying an existing business. Students will work in teams to identify a product or service need of their fellow WSU students or the larger Wichita community. They will develop a simplified business plan to start a profitable business to meet the needs identified. Prerequisites: Mkt. 300, Fin. 340 and Mgmt. 360 or consent of instructor. B 17 361 0 0506

465. Small Business Management. (3). The focus of this course is on the techniques of managing small businesses from startup to goal setting to efficient operations. Topics to be covered are (1) management concepts, (2) marketing techniques, (3) record-keeping procedures, (4) new product and business strategies, (5) small business finance. Prerequisites: Acctg. 210-220, Mkt. 300, Mgmt. 360 and junior standing. B 17 465 0 0506

491. Independent Study. (1-5). Offered for Cr/N/Cr only. Closed to graduate credit. Prerequisites: junior standing and 2.750 grade point average in entrepreneurship courses. B 17 491 3 0506

492. Internship in Entrepreneurship. (1-3). Offered for Cr/N/Cr only. Prerequisites: junior standing and 2.750 grade point average in entrepreneurship and departmental consent. B 17 492 3 0506

Courses for Graduate/Undergraduate Credit

560. Consulting with Small Business. (3). This course will give hands-on experience consulting with an existing small business. Students will work with the owner in teams under the guidance of the instructor to identify the problem, gather information relevant to the problem, propose solutions to the problem and help the owner implement agreed upon solutions. The student will gain a personal knowledge of the lifestyle of an entrepreneur, both pro and con, as well as experienced-based knowledge about various aspects of managing a smaller business. Prerequisites: Mkt. 300, Fin. 340, Mgmt. 360, senior standing. Preferred Sm. Bus. 465 also be taken. B 17 560 2 0506

680. Advanced Entrepreneurship. (3). This course will explore advanced subjects such as leveraged buyouts, R&D limited partnerships, private placements of stock, role of entrepreneur in economic development, marketing strategy for smaller businesses and strategic planning during early growth stages. The student will prepare a business plan and be required to present the plan for evaluation by a panel of academics from various business disciplines. Prerequisite: Sm. Bus. 465 or consent of instructor. B 17 680 0 0506

750. Workshop in Entrepreneurship. (1-4). Prerequisite: junior standing. B 17 750 2 0501

Courses for Graduate Students Only

668. New Venture Feasibility Seminar. (3). The focus of this course is on directing students in the appropriate methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Topics to be covered are (1) sources of capital, such as venture capitalists, investment bankers, banks and creative forms of financing, (2) marketing opportunity analyses, (3) proforma development, (4) feasibility decision making and (5) actual preparation of the loan package. Prerequisites: Sm. Bus. 668, Mkt. 465, Mgmt. 360 or equivalent and approval of the instructor. B 17 668 0 0506

890. Seminar in Special Topics. (1-5). Repeatable with departmental consent. B 17 890 9 0506

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 17 891 3 0506

893. Special Project in Entrepreneurship. (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 administration degree candidates. B 17 893 3 0506
College of Education

Leonard M. Chaffee, PhD, Dean

Providing professional programs appropriate for the development of broadly educated and competent teachers, administrators, supervisors, counselors, school psychologists and other specialists is the principal purpose of the College of Education. The college's faculty provides leadership in professional service and research designed to contribute to the improvement of both schools and professional practice at local, state and national levels.

Curricula listed in the following sections are organized to give students an opportunity for systematic study. Programs are arranged to permit the development of (1) an understanding of education's place in a democratic society, (2) a philosophy of education consistent with functioning within that society, (3) an adequate professional preparation which affords an opportunity to relate content to practice, (4) a knowledge of human growth and development and (5) skills in the application of principles of human learning.

The College of Education is accredited by all appropriate agencies. (See the Accreditation and Associations section of the Catalog.) Since it is accredited by the State Board of Education in Kansas, the college can recommend to the board that appropriate teacher's certificates be awarded upon completion of other requirements established by the Kansas Board of Education.

Degrees Offered

Undergraduate

The college offers programs leading to the baccalaureate degree and/or to state teacher certification at the elementary, early childhood/elementary and secondary levels. The State Board of Education regulates the standards for all teaching certificates, and the curricula offered by the college are altered as needed to keep abreast of requirement changes established by the board.

Additional courses in industrial technology, physical education and recreation provide optional nonteaching routes to the baccalaureate degree. A student may obtain a second bachelor's degree in the College of Education by being admitted to the College of Education completing a minimum of 30 hours in a planned program in addition to the work required for the first bachelor's degree and satisfying the requirements for graduation from the College of Education.

Graduate

Course sequences available through departments within the Graduate School can lead to the Master of Education (MEd) or Master of Science Education (MSE). Students wishing advanced coursework in counseling and school psychology may fulfill program requirements leading to the Specialist in Education (EdS). Students may also earn graduate credit leading to the specialist degree in educational administration or the doctoral degree in educational administration through the doctoral transfer program with The University of Kansas. The Master of Arts (MA) and Doctor of Philosophy (PhD) can be earned through the Department of Communicative Disorders and Sciences.

The graduate offerings include programs designed to help students meet the requirements for certification as elementary principals, secondary principals, supervisory personnel, educational administrators, school counselors, early childhood teachers, early childhood handicapped teachers, special education teachers, reading specialists, school psychologists, speech and language pathologists and audiologists, library/media specialists and other specialists. Master's programs in elementary education, secondary education and educational psychology have also been designed for teacher practitioners who wish to enhance their teaching skills levels. Master's programs are available also for persons interested in physical education and sports business. For specific graduate programs see The Wichita State University Graduate School Bulletin.

Policies

Admission to the College of Education

Before being admitted to the College of Education, students must fulfill the general entrance requirements of the University. To transfer to the College of Education, students must complete 24 hours and achieve a 2.250 grade point average.

Admission to Teacher Education Programs

Admission to the College of Education does not mean that a student is accepted into one of the teacher education certification programs. To be admitted as a candidate for the state teacher's certificate, students will meet the following criteria:

1. successfully complete IS 231
2. complete 50 semester hours of University credit
3. attain a minimum grade point average of 2.500 overall as well as 2.500 in the major field. (An applicant whose GPA does not meet the minimum 2.500 may apply for probationary status. If admitted, the student must achieve the minimum standard GPA points by the time he/she has completed the first 30 hours after probationary admission.)
4. have a grade of C or higher in English 101 and 102.
5. have a grade of C or higher in Speech 111 or 112.

Any student denied admission to the Teacher Education Program may appeal the denial by filing a written petition with the Admissions, Retentions and Exceptions Committee of the College of Education.

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 3.000 or higher may petition their department chairperson for permission to enroll in excess hours.

Probation and Dismissal

Students are expected to make satisfactory progress in their studies. Students who fail to do so may be placed on probation at any time and may ultimately be dismissed from Wichita State. Although a 2.500 GPA is required for admission to the teacher education program, students in the College of Education are placed formally on pro-
bation at the conclusion of any semester in which their overall or their WSU grade point average falls below 2.250. They will be continued on probation at the end of any semester in which they have been on probation if their grade point average for the semester is at least 2.250, and they will remain on probation until they achieve a cumulative grade point average of 2.250. Students who fail to earn at least a 2.250 for any semester on probation may be dismissed for poor scholarship.

Students may not be academically dismissed at the end of a semester unless they began that semester on academic probation. Also, students may in no case be academically dismissed from Wichita State before they have attempted a total of at least 12 semester hours at the University after being placed on probation.

Students dismissed for poor scholarship may reenroll only with the special permission of the Admissions, Retentions and Exceptions 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 Admissions, Retentions and Exceptions Committee of the College of Education 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 should secure their recent academic records, complete their petition and have had 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 must develop their own cases for readmission. They should center their petitions around explanations for their failures and presentations of evidence for their future successes.

Placement and Career Services

The Wichita State University provides career planning and placement assistance for students and alumni desiring positions with schools and other educational agencies. Eligible for registration are individuals who have completed at least 15 semester hours at The Wichita State University and who meet the required education curriculum for certification in their field. Undergraduates may register if their overall grade point average permits entry into the student teaching block. Application forms may be obtained from Placement and Career Services, Grace Wilkie Hall.

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-related 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 various academic departments in the college. To enroll in the program or for more information, students should contact the college Cooperative Education coordinator.

Requirements for Graduation and Certification

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 carefully study the requirements for their particular area of study.

Students enrolled in the College of Education are expected to attain at least a 2.500 grade point average except for students in the nonteaching program who are required to maintain a 2.250 GPA. Admission to the student teaching semester requires an overall grade point average of at least 2.500 and at least a 2.500 average in the major field, a grade of C or higher in Eng. 101 and 102, or a statement of proficiency from the Department of English, a grade of C or higher in Speech 111 or 112, or an equivalent, and the recommendation of the teacher education representative of the student's major department. A grade of C or higher in student teaching is necessary to receive a recommendation for a teaching certificate.

Requirements for admission to student teaching for communicative disorders and sciences students are listed in the department's program description later in this section. Certain programs may require a higher grade point average for admission to student teaching.

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.)

Students interested in the following fields should contact an adviser in the College of Education: special education; bilingual education, in conjunction with either the elementary or secondary program; early childhood certification and library certification, in conjunction with the elementary or secondary education programs.

Effective May 1, 1986, all graduates applying for teacher certification in Kansas must satisfactorily complete a pre-certification examination established by the Kansas State Department of Education in order to qualify for their initial certificate.

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 (12 hours)
   A. Written communication (six hours)*
   B. Oral communication (three hours)*
   C. Mathematics (three hours)—college algebra
   D. At least six hours of natural science

II. Distribution Requirements (G or Q courses only)
   A. At least nine hours of humanities and fine arts—literature (three hours and fine required), American studies, art education, art history, foreign languages, history, linguistics, musicology-composition, music education, philosophy, religion or other
   B. At least six hours of social and behavioral sciences—Psychology 111 (required), anthropology, economics, geography, political science, sociology or other
   C. At least six hours of natural sciences and mathematics—biology, chemistry, geology, mathematics, physics or other
   D. At least nine hours of electives from general education course work

Note: (a) No courses from the student's major department may be counted in the general education area; and (b) courses must be taken in at least two departments in each division outside the division containing the student's major. All course work in divisions A-D must be G or Q courses.

*Must have a grade of C or better in Eng. 101 and 102 and in Speech 111 or 112.
Professional Education

Professional education requirements in areas of specialization as well as 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, at least six hours of psychology are required. Within Division B, or in the Professional Education section, either Psych. 414, Child Psychology, or IS 233, Educational Psychology: Child Development, must be taken.

II. Professional Education

Selected courses from major, plus 18 hours including the following courses:

- IS 231, Teacher Education Lab, 0 hours
- IS 232, Introduction to Professional Education, 2 hours
- IS 233, Educational Psychology: Child Development, 3 hours
- CDS 327, Clinical Methods in the Public Schools, 3 hours
- CDS 447, Speech and Language Practicum in the Public Schools, 5 hours, or
- CDS 457, Audiology Practicum in the Public Schools, 5 hours
- CDS 448, Public School Speech and Language Programs, 2 hours, or
- CDS 458, Public School Audiology Programs, 2 hours

Electives in special education (three to nine hours) to be selected in consultation with an adviser.

Elementary Education

I. General Education

Students majoring in elementary education must meet all requirements in the General Education Program. In addition, three social science courses and Psychology III are required in Division B. In Division C, both a biological science and a physical science are required, along with Math. 501.

II. Professional Education (55 hours)

The following courses must be completed:

- IS 231, Teacher Education Lab, 0 hours
- IS 232, Introduction to Professional Education, 2 hours
- ISFD 234, Philosophy and History of Education, 2 hours
- ISFD 428, Social and Cultural Foundations of Education, 2 hours
- IS 233, Educational Psychology: Child Development, 3 hours
- IS 433, Educational Psychology: Learning and Evaluation, 3 hours
- IS 456, Multicultural Education, 3 hours
- IS 601, Introduction to Exceptional Children, 3 hours
- IS 316, Children's Literature, 3 hours, or
- IS 616, Literature for Adolescents, 3 hours
- IS 319, Language Arts in the Elementary School, 3 hours
- IS 321, Science in Elementary Education, 3 hours
- IS 406, Social Studies in the Elementary School, 3 hours
- IS 420, Reading in the Elementary School, 3 hours
- IS 421, Teaching Methods and Instructional Materials for Elementary Reading, 3 hours
- IS 444, Mathematics in the Elementary School, 3 hours
- IS 453, Classroom Dynamics, 2 hours
- IS 446, Elementary Education-Student Teaching Seminar, 1 to 3 hours
- IS 447, Student Teaching in the Elementary School, 13 hours, and/or
- IS 448, Student Teaching in the Elementary/Early Childhood School, 13 hours.

Secondary Education

I. General Education

Students majoring in secondary education must meet the requirements in the General Education Program as listed above.

II. Secondary Teaching Major

Students majoring in secondary education 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.

1. Major field—a field normally taught in secondary schools must be studied.

2. Minor field—at least one minor field must be taken. Completion of a minor does not qualify the student to teach that field. Special arrangements must be made for the student to qualify to teach in minor fields. In no case may the minor consist of fewer than 15 semester hours. No minor is required if an area major of 50 hours is elected.

III. Professional Education

a. IS 232, Introduction to Professional Education (2 hours)
b. IS 231, Teacher Education Lab (0 hours)
c. IS 333, Educational Psychology: Adolescent Development (3 hours)
d. IS 234, Philosophy and History of Education (2 hours)
e. IS 428, Social and Cultural Foundations of Education (2 hours)

For majors in art, speech and drama, English, social studies, science and mathematics:

- IS 433, Educational Psychology: Learning and Evaluation (fall only)...
- IS 454, General Methods of Secondary Teaching (fall only)...
- IS 455, Advanced Methods of Secondary Teaching (spring only)...
- IS 456, Multicultural Education...
- IS 453, Classroom Dynamics (optional)...
- IS 601, Introduction to Exceptional Children...
- IS 401, Secondary Reading Foundations...

For majors in industrial technology, music, physical education, foreign languages and business education:

- IS 433, Educational Psychology: Learning and Evaluation...
- IS 442, Special Methods in Teaching...
- IS 456, Multicultural Education...
- IS 453, Classroom Dynamics (optional)...
- IS 601, Introduction to Exceptional Children...
- IS 401, Secondary Reading Foundations...

* See specific listing of course numbers under Instructional Services—Secondary Student Teaching.
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, the College of Business Administration 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, 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 adviser 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.

The selection of teaching fields for the junior or senior high school is made with an academic adviser representing the College of Education. The teaching field or major should be declared no later than the beginning of the junior year. Students who plan to teach in secondary schools may select their major and minor from the fields given below. The specific course requirements of the department from which the major or minor work is taken prevail. Any of the fields is suitable as a supporting minor, but it should be remembered that the minor will not qualify a student to teach unless special arrangements have been made in advance.

Majors and Minors

An

Biological sciences
Business education*
Chemistry
Economics†
English language and literature*French†
German†
History†
Industrial technology*
Mathematics
Music*+Natural sciences—biological*:
Natural sciences—physical*
Physical education
Physics
Political science†
Psychology†
Social studies*
Sociology†

Spanish†
Speech
Speech/theater
Theater
Minors Only
Accounting
American studies
Anthropology
Computer studies
Geography†
Geology
Journalism
Philosophy
Religion and philosophy§

* Needs no minor if a 50-hour field major is outlined in consultation with an adviser from the College of Education.
† Students majoring in history, psychology or one of the social sciences should consult a social sciences adviser in the College of Education concerning specific requirements.
‡ Teaching preparation for a modern language requires 24 semester hours in the language to be taught or 15 semester hours if the prospective teacher has 24 hours in another modern language.
§ Religion must be combined with philosophy on a major—no more than eight hours of religion will count toward a degree.

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 advisers to ensure proper course selection for certification.

Business Education

Secondary business education majors at Wichita State will be certifiable in the various subject areas.

Courses | Hrs.
--- | ---
Acctg. 210 and 220 | 6
CS 190 or CS 200 and one programming course | 3 or 4
DS 350 and 495 | 6
Econ. 201Q-202Q and 231 | 10
Fin. 340 | 3
Math. 144 | 3
Mgmt. 360, 430 and 681 | 10
Mktg. 300 | 3

Business Education | 27
Typewriting | 6
Shorthand | 6
Records management—Bus. Ed. 136 | 3
Office procedures—Bus. Ed. 203 | 3
Office Machines—Bus. Ed. 204 | 3
Automated word processing—Bus. Ed. 260 | 3
Office practice—Bus. Ed. 300 | 3

71 or 72

Minor. For a business education minor, students must take Acctg. 210 and 220; Econ. 201Q and 231; Bus. Ed. 138, 237 and 260, and nine hours, including one upper-division course, from the following: accounting, aviation management, business law, decision sciences, economics, finance, legal assistant, management, marketing, personnel, real estate, shorthand or small business and entrepreneurship. Additional work will be required for teacher certification.

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*Econ. 201Q and 202Q fulfill three hours of the social sciences requirement of the general education program as well.
†A total of 15 hours in accounting may be substituted for shorthand.

Natural Sciences—Biological

This major requires a minimum of 50 hours. A teacher who qualifies under this provision may also teach chemistry and general science as well as biology. Students may also make special arrangements to qualify to teach earth and space science. Requirements for a major listed below include the general education requirements in mathematics and science for the College of Education.

Major. Requirements for a natural sciences—biological major are: core requirements—Biol. 203Q, Chem. 111Q, Geol. 302Q and Physics 111Q or 213Q; biology requirements—Biol. 204, 418, 520, 524, any class in botany and one of Biol. 560, 640F, 575 or 578; chemistry requirements—Chem. 112Q and 531.

Minor. A teaching minor in the natural sciences—biological consists of at least 25 hours including Biol. 203Q and 204, Chem. 111Q, Physics 213Q and Geol. 302Q. Students should not elect this minor if they are majoring in one of the sciences. Those who do may use the same course for both major and minor requirements only if they select additional hours equal to those taken to satisfy both the major and minor requirements.

Natural Sciences—Physical

This major requires a minimum of 50 hours. A teacher who qualifies under this provision may also teach chemistry and general science as well as physics. Students may make special arrangements to qualify to teach earth and space science and physics. Requirements for a major listed below include the general education requirements in mathematics and science for the College of Education.

Major. Requirements for a natural sciences—physical major are: core requirements—Biol. 203Q, Chem. 111Q, Geol. 302Q and Physics 111Q or 213Q; additional requirements—Chem. 112Q.
Cultural Anthropology, 124Q, General Anthropology.

Minor: A teaching minor in the natural sciences—physical—consists of at least 25 hours including: Bioi. 203Q, Chem. 111Q, Math 144 (must be taken as general education), Physics 213Q and Geol. 302Q. Students should not elect this minor if they are majoring in one of the sciences. Those who do may use the same course for both major and minor requirements only if they select additional hours equal to those taken to satisfy both the major and minor requirements.

Social Studies
Completion of the following 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.

Major. The major requires the following:

1. American history (18 hours)
   a. History 131Q and 132Q
   b. 10 hours chosen from:
      Hist. 517 and 518, Constitutional History
      Hist. 521 and 522, Diplomatic History
      Hist. 330G, The Americans
      Hist. 513, American Popular Culture
      Hist. 530, American Women in History
      Hist. 533, The American City

2. World History (8 hours)—Hist. 101G and 102G, History of Western Civilization.

3. Political Science (12 hours)—Pol. Sci. 121Q, American Politics, plus nine hours from (a) for interest in U.S. government or (b) for international emphasis.

4. Anthropology (3 hours)—Anthro. 102Q, Cultural Anthropology, or Anthro. 124Q, General Anthropology.

5. Economics (3 hours)—Econ. 210Q, Principles of Economics.

6. Geography (3 hours)—Geog. 125Q, Principles of Geography, or Geog. 210Q, World Geography, or Geog. 262Q, Cultural Geography.

7. Sociology (3 hours)—Soc. 211Q, Introduction to Sociology.

Minor: A teaching minor consists of not less than 25 hours from the above program including one half of (a) and (b) and Pol. Sci. 121Q.

Art Education
See Department of Art Education, College of Fine Arts.

Communicative Disorders and Sciences
The Department of Communicative Disorders and Sciences provides academic and clinical training for students at the 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 and language clinician or audiologist in the public schools, hospital clinics or rehabilitation centers or to engage in private practice. With an undergraduate, preprofessional major, students can normally complete the master's program in one calendar year and be eligible for certification by the American Speech-Language-Hearing Association and the state of Kansas public schools. The PhD in communicative disorders and sciences prepares individuals to function professionally as independent clinicians or as teacher-scholars in an academic setting.

Undergraduate Major
The preprofessional, undergraduate major places primary emphasis on the general areas 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 training program. CDS 417 is required for undergraduate students majoring in speech and language pathology, and CDS 447 and 448 are required for students wishing to qualify as speech and language clinicians in the public schools. CDS 441 is required for undergraduate students majoring in audiology, and CDS 457 and 458 are required for students wishing to qualify as audiologists in the public schools. CDS 785 is also required for all students on either an undergraduate or graduate level. Students should make formal application for practicum courses during enrollment in CDS 220 or no later than the second semester of the sophomore year. Transfer students should apply during the semester prior to, or immediately upon, taking upper-division courses in the department. Evaluation of the student's speech, language and hearing proficiency will be conducted at this time. Significant deviations in any area must be corrected to maximum ability before enrollment in practicum courses or student teaching. Thus, admission to a major in CDS does not constitute assurance of automatic entrance into the practicum or student teaching sequence.

Undergraduate students may major in communicative disorders and sciences in either the College of Education or Fairmont College of Liberal Arts and Sciences. Most students take the program in the College of Education, but those wishing to prepare themselves exclusively for employment in community speech and hearing clinics or hospitals may enroll in Fairmont 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 and Language Pathology
The major with emphasis in speech and language pathology consists of a minimum of 34 hours and includes the following courses:

Required: CDS 111Q, 132, 214, 218, 220, 231, 315, 316, 322, 417 and 520. To qualify as speech and language clinicians in the public schools, students must also complete CDS 327, 447 and 448.

Optional: CDS 540, 700, 710, 720, 726, 747, 760 and 785.

Audiology
The major with emphasis in audiology consists of a minimum of 35 hours and includes the following courses:

Required: CDS 111Q, 132, 214, 218, 220, 231, 315, 316, 322, 417, 441 and
540. To qualify as an audiologist in the public schools, students must also complete CDS 327, 457 and 458.

Optional: CDS 700, 710, 735, 747, 760 and 785.

Deaf Education
Undergraduate preparation with beginning emphasis in deaf education consists of a minimum of 36 hours and includes the following courses:

Required: CDS 111Q, 132, 214, 218, 220, 231, 315, 316, 540, 561, 747, 760 and 785. In addition, selected methods courses in elementary education will be chosen in consultation with an advisor.

Teacher Education
One full semester of student teaching is required for all students working toward certification as public school speech and language clinicians or audiologists. To complete this requirement, students must take CDS 417 or 441, in a clinical setting, then CDS 447 and 448, or CDS 457 and 458, in a public school setting, accumulating a total of ten hours of credit.

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 both student teaching semesters (CDS 447 and 417 or 441 and 457). They must have an overall grade point average of 2.500; a 2.500 average in the major field; a grade of C or higher in Speech 111 or 112, or their equivalents; and the recommendation of the major department. Medical clearance must also be obtained before the start of the student teaching assignment. Evaluation of the student’s speech, language and hearing proficiency will be conducted at this time. Significant deviations in any area must be corrected to maximum ability before student teaching.

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 and language pathology or in audiology.

Undergraduate Minor
A minor in communicative disorders and sciences consists of 18 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, 132, 214, 218, 220 and 316. Arrangements for the minor should be made in consultation with the Department of Communicative Disorders and Sciences.

Other Requirements
Participation in many of the department’s clinical practicum 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 $200,000/$600,000. This must be done on a yearly basis, when appropriate.

CDS 705, Communicative Disorders, which is cross-listed as Speech 665, 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.

Corrective Training
Corrective training for members of the community with speech, language or hearing disorders, as well as students enrolled at Wichita State, may be arranged with the Department of Communicative Disorders and Sciences. A minimal fee may be charged.

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.

General

Lower-Division Course

200. Foreign Accent and Dialect Reduction. (3) 2R; 3L. Designed primarily for the non-native speaker of English or for the speaker of a non-standard dialect of English wishing to improve pronunciation. Problems of foreign accent and English dialect reduction are studied. Speech patterns are analyzed and an individual program in dialect reduction is designed. Intensive practice is provided. Not for the student who is beginning the study of English. D 12 200 1 1220

Communication Sciences

Lower-Division Courses

214. 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. The respiratory, phonatory, articulatory and auditory mechanisms are discussed from a functional point of view. Prerequisite: prior or concurrent enrollment in CDS 111Q. D 12 214 0 1220

216. Phonetics: Theory and Application. (3). Cross-listed as Linguistics 216. The study of physiologic, acoustic and perceptual specification of speech sounds and a survey of current phonological theory and applications to speech improvement. Extensive practice is given in transcription of speech. Prerequisites: sophomore standing and prior or concurrent enrollment in CDS 111Q. D 12 216 0 1220

220. Developmental Psycholinguistics. (3). The study of the acquisition of language in the child from birth to six years of age. Various acquisition theories are evaluated in the light of current psychological and linguistic thought. Special emphasis is given to the development of phonology, morphology and syntax. Prerequisites: sophomore standing and prior or concurrent enrollment in CDS 218. D 12 220 0 1220

Upper-Division Course

316. Introduction to Speech and Hearing Sciences. (3). Examination of elements in the chain of events that lead to human communication. Speech production and perception are studied at physiological and acoustical levels, with primary emphasis on acoustics. Prerequisites: junior standing and prior or concurrent enrollment in CDS 111Q. D 12 316 0 1220

Courses for Graduate/Undergraduate Credit

710. The Neurology of Speech and Language. (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 neurolinguistic impairment. Prerequisite: at least junior standing. D 12 710 0 1220

735. Anatomy, Physiology and Pathology of the Auditory System. (3). Detailed anatomy and function of the auditory system. Normal and pathological conditions are studied, with emphasis on clinical manifestations. Prerequisite: CDS 231. D 12 735 0 1220

Courses for Graduate Students Only

828. Advanced Speech and Hearing Science. (3). 3R; 1L. Advanced study of speech and hearing processes, primarily in their normal aspects. Attention is devoted to current understanding of speech generation, the speech signal and the normal function of hearing. Attention is also given to techniques of investigation of these processes. Prerequisite: CDS 316 or equivalent or departmental consent. D 12 828 1 1220

830. Laboratory Instrumentation. (3). 2R; 3L. An introduction to clinical and research instrumentation used in the fields of communicative disorders and sciences. Experience with instrumentation is gained through practical projects and assignments within the laboratory. Prerequisite: CDS 828. D 12 830 1 1220
Speech and Language Pathology

Lower-Division Courses

111Q. Disorders of Human Communication. (3). An introduction to disorders of human communication, including psychosocial, perceptual, and neurological problems commonly encountered in the process of general and general approaches to habilitation. Prerequisite: CDS 1110. D 12 1110 0 1220

132. Introduction to Clinical Management in Speech and Language Pathology and Audiology. (3). Students will work in a simulated clinical setting with clients presenting with speech and language disorders. Prerequisite: CDS 1110 or 218. D 12 01 0 1220

Upper-Division Courses

315. Articulation Disorders: Diagnosis and Clinical Management. (3). Study of normal and deviant articulation, etiology, evaluation, and methods of modification. Prerequisite: CDS 214 and 218. D 12 31 3 1220

322. Introduction to Assessment of Speech and Language Disorders. (2). Test instruments pertaining to the assessment of speech and language disorders are covered. Prerequisite: CDS 214. D 12 322 1 1220

327. Clinical Methods in the Public Schools. (3). Organization, administration and professional relationships in public school speech and language programs on the elementary and secondary school levels. Prerequisite: CDS 214. D 12 327 0 1220

447. Speech and Language Practicum in the Public Schools. (1-3). Technological methods and methods for development of clinical skills in a supervised practicum. Prerequisite: CDS 214. D 12 447 0 1220

448. Public School Speech and Language Programs. (2). Discussion and evaluation of student teaching experiences in public schools, demonstrations of applied clinical skills in regular and non-regular secondary schools. Prerequisite: CDS 214. D 12 448 0 1220

490. Directed Study in Speech Language Pathology. (1-3). Individual study or research on specific problems. Repeatable for credit with instructor's consent. Prerequisite: CDS 214. D 12 490 0 1220

Courses for Graduate/Undergraduate Credit

520. Language Disabilities in Children. (3). Psycholinguistic and cognitive approaches to language disabilities in children. Prerequisite: CDS 214 or 218. D 12 520 0 1220

700. Cleft Palate: Evaluation and Clinical Management. (3). Methods of evaluation and modifying articulation and resonance in cleft palate individuals. The role of the speech clinician within an interdisciplinary team is explored. Prerequisite: CDS 214. D 12 700 0 1220


850. Interviewing and Parent Counseling. (3). Presentation of current techniques of interviewing and counseling as they apply to speech, language, hearing, learning and behavior disorders in handicapped children and adults. Prerequisite: CDS 214. D 12 850 0 1220

860. Examination Methods in Speech and Language Pathology. (3). Survey of current methods of examination and diagnostic techniques in speech and language pathology. Prerequisite: CDS 214. D 12 860 0 1220
Prerequisites: medical clearance and terminal language of semester graduate program. D 12 820 1 1220

824. Language Intervention Strategies. (3) Discussion of current language intervention strategies and programs. Assessment procedures leading to the development of individualized programs are also examined. D 12 824 0 1220

825. Seminar in Communicative Disorders. (2-3). Review of recent developments and a study of methods of integrating research findings and newer clinical methods and concepts into a rehabilitative procedure. D 12 825 9 1220

833. Clinical Process in Speech-Language Pathology. (2). A clinical process approach to developing competence in a supervised practicum setting. Emphasis is given to the objectives of clinical training, development of clinical skills, tools for process analysis, intervention outcome analysis and an introduction to the supervisory process. Corequisites: must be taken concurrently with CDS 834. D 12 833 0 1220

834. Beginning Graduate Practicum in Communicative Disorders. (1) 1R; 3L. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Introduction to supervised practicum at the graduate level and practicum procedures are stressed in the lecture portion of the course. Fifty hours of practicum are required. Intended for students in their first semester of full-time graduate studies. Prerequisites: CDS 417 or equivalent, CDS 447 or equivalent, departmental consent and medical clearance. D 12 834 2 1220

835. Graduate Practicum in Communicative Disorders. (1-3). 3-9L. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Fifty hours practicum for each hour of credit is required. Repeatable. Prerequisites: CDS 834 or equivalent, departmental consent and medical clearance. D 12 835 2 1220

Audiology

Lower-Division Course

231. Introduction to Audiology. (3). 3R; 1L. History and scope of the field. Basic aspects of normal hearing function are studied and a survey of audiometry testing procedures, including audiometric screening, is made. An introduction to the use of hearing aids, auditory training, lip reading and rehabilitative counseling is also included. Prerequisites: CDS 111Q. D 12 231 1 1220

Upper-Division Courses

441. Beginning Practicum in Audiology. (1) 1R; 4L. Introduction to supervised practicum and the application of audiological techniques in clinical situations. Lecture stresses clinic and clinic procedures. Four hours of audiological practicum per week are required. Prerequisites: CDS 231 or equivalent, medical clearance and departmental consent. D 12 441 2 1220

457. Audiology Practicum in the Public Schools. (5). Half-time participation in a public school audiology program under the guidance of a certified clinician and a college supervisor. Prerequisites: CDS 231, 327 and 441, senior standing, medical clearance and departmental consent one semester prior to enrollment. D 12 457 2 1220

458. Public School Audiology Programs. (2). Discussion and evaluation of student audiology experiences in public schools; demonstration of applied audiological skills, counseling on the elementary and secondary school levels. To be taken concurrently with CDS 457. D 12 458 9 1220

540. Introduction to Audiological Technology. (3). An exploration of the techniques and procedures for administering the basic auditory test battery and screening tests for various age levels and the interpretation of audiometric results. Calibration and maintenance of audiological equipment. Students in nonsupervised practicum enroll for five hours of credit. Prerequisites: CDS 231 and at least junior standing. D 12 540 1 1220

Courses for Graduate Undergraduate Credit

747. Rehabilitative Audiology. (3). Educational and psychological impact of hearing loss. Methods and equipment used in the diagnosis of the hearing impaired and family environment for the benefit of the hearing impaired are covered. Procedures for maximal usage of amplification are discussed. Speech reading and auditory training are studied as methodologies for dealing with speech and language deficits by utilizing auditory and visual cues. Prerequisite: CDS 231. D 12 747 0 1220

785. Supervised Practicum in Rehabilitation Audiology. (1-3). 1R; 3-9L. Supervised experience in the teaching of speech, language, speech reading and listening skills to deaf or hard of hearing children and adults. Supervised experience in the testing of hearing. Three to four hours practicum per week are required for each hour of credit. Repeatable. Prerequisites: CDS 540 and prior or concurrent enrollment in CDS 474, departmental consent one semester prior to enrollment and medical clearance. D 12 785 2 1220

Courses for Graduate Students Only

850. Supervised Practicum in Audiology. (1-3). 1R; 3-9L. Application of audiological techniques in clinical situations. Experience gained in patient management, counseling and rehabilitation follow-up, when appropriate. Three to four hours of practicum per week are required for each hour of credit. Repeatable. Prerequisites: medical clearance, departmental consent and CDS 441 and 540. D 12 850 2 1220

855. Auditory Evaluation of Infants and Children. (3). 3R; 1L. Demonstration and practice in assessing auditory functioning of infants and children through 48 months of age. Repertoire of tests is developed, and as a study of appropriate instruments and procedures, are included. Prerequisites: CDS 540 and medical clearance. D 12 855 1 1220

860. Hearing Aids. (3). 3R; 2L. The history and function of hearing aids. The measurement and significance of the electroacoustic characteristics, principles and procedures for the selection and recommendation of specific hearing aids for individual hearing losses, hearing aid orientation and counseling related to various age categories are covered. Prerequisite: CDS 540. D 12 860 1 1220

865. Advanced Clinical Audiology. (2). 3R; 2L. Diagnostic and rehabilitative procedures in the audiology clinic. Techniques and procedures for the administration and interpretation of special audiometric impedance and evoked auditory response measurements. Prerequisite: CDS 540. D 12 865 1 1220

870. Seminar in Audiology. (2-3). Review of recent developments and research, with attention given to industrial audiology and environmental noise problems. Prerequisite: CDS 540. D 12 870 9 1220

875. Physiologic Measurements of the Auditory and Vestibular Systems. (3). 3R; 1L. Techniques and procedures for administration and interpretation of physiologic tests of the auditory and vestibular systems, including electrocochleography (ECOG), auditory brain stem response (ABR), electronystagmography (ENG) and acoustic reflex. Test administration practicum is included. Prerequisites: CDS 540, 735, and 710 (may be taken concurrently). D 12 875 1 1220

Deaf Education

Courses for Graduate Undergraduate Credit

560. 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. Prerequisite: junior standing or departmental consent. D 12 560 0 1220

561. Signing Exact English II. (2). 2R. An advanced class in the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. Vocabulary and interpreting skills will be emphasized. Prerequisite: CDS 560. D 12 561 0 1220

760. Introduction to Deaf Education. (3). Evolution of educational programs and methods used with the deaf. Contributions of related disciplines to educational methodology and special aspects of curriculum development in schools and classes for the deaf are included. Also included is a review of common communication systems and social and vocational considerations. Prerequisite: CDS 231. D 12 760 0 1220

General

Lower-Division Course

231. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. Offered Cr/NCr only. D 12 231 2 1220

Upper-Division Courses

481. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. Offered Cr/NCr only. D 12 481 2 1220

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. D 12 490 3 1220

Courses for Graduate Undergraduate Credit

715. Selected Topics in Communicative Disorders and Sciences. (1-3). Individual or
Courses for Graduate Students Only

800. Introduction to Graduate Study and Research. (3). A general introduction to graduate study. A survey is made of research procedures utilized in the fields of communication sciences and communication pathology. Presentation of principles for scientific writing and critical reading of professional research journals is included. Final project involves the formulation of a possible research methodology in the area of communication science or communication pathology. D 12 800 0 1220

800. 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. D 12 890 4 1220

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. D 12 890 3 1220

895. Thesis Research. (1-2). Repeatable, but total credit hours counted toward degree requirements must not exceed two. D 12 895 4 1220

899. Thesis. (1-2). Repeatable, but total credit hours counted toward degree requirements must not exceed two. D 12 899 4 1220

905. 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. D 12 890 3 1220

925. Clinic and Program Administration. (1-3). 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. This course is intended for doctoral students or advanced master’s-level students. Repeatable, more than one section may be taken concurrently. D 12 935 2 1220

935. Advanced Practicum in Communicative Disorders and Sciences. (1-4). 1R; 3-12L. 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. This course is intended for doctoral students or advanced master’s-level students. Repeatable, more than one section may be taken concurrently. D 12 935 2 1220

950. Advanced Individual or Group Study in Communicative Sciences and Disorders. Intended for doctoral students or advanced master’s-level students. Repeatable. More than one section may be taken concurrently. D 12 950 2 1220

960. Seminar in Clinical Research. (3). Writing and critical reading of professional communication sciences and communication pathology. A survey is made of research methodology in the area of communication science or communication pathology. D 12 960 0 1220

960. Advanced Practicum in Communicative Disorders and Sciences. (1-3). Arranged individual, directed study in specialized content areas in speech and language pathology, audiology or speech sciences. Repeatable. Prerequisites: advanced standing and instructor’s consent. D 12 990 3 1220


Industrial Technology

The overall goal of the department of Industrial Technology is to provide a broad concept of industrial strategies. Within this concept students are given specific educational content that will allow them to pursue a management-oriented technical profession. The curriculum is built upon a sound knowledge and understanding of materials, processes, technical management and human relations. Proficiencies in the physical sciences, mathematics and technical skills enable the graduate to address capably technical, managerial and production problems.

The Bachelor of Science degree in Industrial Technology requires the development of technical skills at post secondary schools other than The Wichita State University. The curriculum is designed to build upon technical specialties (construction, computers, drafting, electricity, electronics, graphic arts, metals, power, photography, plastics, woodworking, etc.) developed at a community college or technical institution. Technical specialty competency will be evaluated by the industrial technology faculty.

Cooperative Education (work experience in the technical emphasis area) forms an integral part of this curriculum by blending the theories of the classroom with state-of-the-art experiences in industry.

The industrial technology program may be tailored to prepare the student for either employment in teaching or industry. Teaching opportunities are available at both secondary and post-secondary levels. Opportunities in industry may include production or construction supervision, quality assurance, process management, systems analysis, production control, cost estimating, purchasing, product design, industrial relations, tool design, prototype development and technical communications.

Undergraduate Minor—Technical Emphasis. This minor requires a minimum of 18 semester hours. Courses must be chosen in consultation with the department adviser.

Admission to the industrial technology program requires a 2.250 grade point average. Students who fail to make satisfactory progress in their studies are governed by College of Education policies on probation and dismissal.

Graduate Courses. The Master of Education program provides for specialization in secondary education with an emphasis in industrial education. Courses must be selected in consultation with the student’s graduate adviser. For further information consult The Wichita State University Graduate School Bulletin.

Industrial Technology Major

A degree in Industrial Technology requires:

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<th>Teaching Option</th>
<th>Hours</th>
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<tbody>
<tr>
<td>General Education*</td>
<td>42</td>
</tr>
<tr>
<td>Technical specialty (transferred)</td>
<td>30</td>
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<tr>
<td>Industrial Technology courses</td>
<td>29</td>
</tr>
<tr>
<td>Supplemental required courses</td>
<td>3</td>
</tr>
<tr>
<td>Teacher Certification requirements</td>
<td>32</td>
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Total Hours: 136

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<tr>
<th>Technical Option</th>
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<tr>
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<tr>
<td>Industrial Technology courses</td>
<td>42</td>
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<tr>
<td>Supplemental required courses</td>
<td>15</td>
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Total Hours: 129

*General Education courses must include literature. Division A: Psychology 111Q, Division B: Chemistry 111Q, Division C: Physics 111Q, Division D: Mathematics 111Q, Division E: English 111Q, Division F: American History 111Q, Division G: World History 111Q.

Model Program (Teaching Option)

**Freshman**

**Course** | **Hrs.**
--- | ---
Eng. 101, College English I (C or better) | 3
Eng. 102, College English II (C or better) | 3
Math. 111, College Algebra | 3
Math. 123, College Trigonometry | 3
IT 120, Drafting I | 3
IT 121, Drafting II | 3
Technical specialty | 12

**Sophomore**

**Course** | **Hrs.**
--- | ---
Phys. 111Q, Introduction to Physics | 4
Spch. 111, Basic Public Speaking | 3
Psy. 111Q, General Psychology | 3
Chem. 111Q, General Chemistry | 5
Technical specialty | 12
Humanities (Division A) | 3

**Summer**

**Course** | **Hrs.**
--- | ---
General Education electives | 6
A study of how industry integrates man, machines and materials into efficient production systems. The study focuses on the management, personnel and production techniques of manufacturing.

120. Drafting I. (3), 2R, 3L.

An introduction to orthogonal projection, pictorial representations with emphasis placed on auxiliary views, sectional views, sketching, revolution, dimensioning, lettering and care and use of drafting instruments.

121. Drafting II. (3), 2R, 3L.

A study of the relationship of views in drafting, emphasis on rotation, projection of solids, planes and lines using standard drafting techniques and procedures. Prerequisite: IT 120. D 11 121 0 0839

170. Materials and Processes. (3), 2R, 3L.

A study of basic material processing methods, emphasizing those processing methods most common to all materials. Through laboratory projects, the student can develop an understanding of material processing that will facilitate the appropriate selection of suitable materials and processes for particular products.

180. Power and Energy. (3), 2R, 3L.

A study of energy sources, means of harnessing energy, transmitting energy and the effects of power systems. The major types of power and energy to be considered are mechanical, fluid, electrical and combinations.

190. Visual Communications. (3), 2R, 3L.

A study of systematic procedures common to development of visual communications, including analysis of communication processes, selection of media, communication preparation, communication dissemination, communication evaluation and communication storage and retrieval systems. Students develop communication projects using each of the following media: technical writing, printing, television and photography.


A basic course dealing with the processes, equipment, materials and products of the metal-working industry; lab experience in sheetmetal, benchmetal, forging, foundry, welding and machine tools.

240. Woodwork I. (3), 2R, 3L.

A study of the use and care of hand and power tools, methods of finishing, wood technology and an overall view of the woods industry.


A study of the operation of motor vehicles, including chassis and drive-line components. Lab experiences include repair techniques and procedures.


Study of plastic materials being used in industry; fundamental operations including molding, casting, forming, fabrication and finishing.
280. Electricity I. (3). 2R; 3L. A study of basic principles of electricity and electronics as related to home and industry. Emphasis on electrical theory, transmission and utilization. Laboratory exercise in the fabrication and testing of electrical components. D 11 290 1 0839

Upper-Division Courses

300. Concepts of Industrial Technology. (3). introduction to industrial technology, including how materials are altered by industrial processes, utilization and application of energy systems, and the processes of industrial visual communications. D 11 500 0 0859

310. Safety, Product Liability and Litigation (3). The study and court policies as related to accident prevention programs for safety and occupational health from the perspective of the industrial technologist. Emphasis is placed upon safety, safety education, product liability and litigation. Prerequisite: departmental consent. D 11 310 0 0839

320. Quality Assurance. (3). Industrial practices with respect to the control of quality of manufactured products and construction projects including standards, inspection, organization, sampling, corrective and preventive measures. Quality assurance simulations will be provided. Prerequisites: IT 300, IT 310 or concurrent enrollment. D 11 320 0 0839

325. Woodwork II. (3). 2R; 3L. For advanced woodworking students with special emphasis on tools, materials and construction practices as they relate to the building trades. Prerequisite: IT 240. D 11 325 1 0839

328. Drafting III. (3). 2R; 3L. Development of working drawings in machine, aircraft, structural steel, electrical, architectural details, and orthographic methods, all conforming to industrial and prescribed standards. Prerequisite: IT 121. D 11 328 1 0839

330. Manufacturing: Estimating, Planning and Scheduling. (3). Production planning and scheduling of human resources in relation to facilities, tools, equipment, capital and materials. Emphasis is placed upon computer discipines, and instructional and procedural techniques used in product and service management. Prerequisite: IT 300 or concurrent enrollment. D 11 330 0 0839

331. Metals II. (3). 2R; 3L. A study of materials, machines, and hand tools used by the metalworking industry and intermediate machine tool operations. Prerequisite: IT 230. D 11 331 1 0839

337. Metals III. (3). 2R; 3L. A study of the structure, mechanical properties, and the effect of heat treatment on these characteristics. An introduction to hot working metals by forging and casting. Emphasis is placed on combining metals by oxyacetylene, arc, mig and tig welding techniques. Prerequisite: IT 230. D 11 337 0 0839

340G. Appropriate Technology. (3). A study of new technological approaches and their contribution to quality living. Technological options in the production and consumption of food, clothing, shelter, energy, communication and transportation will be explored and a framework developed for making wise choices within the options. This course may not be counted toward an industrial education major. D 11 340G 0 0839

341. Woodwork II. (3). 2R; 3L. A study in design, construction and finishing of woodworking projects with special emphasis on woodworking machine tools, including methods and processes used by industry. Prerequisite: IT 260. D 11 341 0 0839

351. Power Mechanics II. (3). 2R; 3L. A study of motor vehicles, including tune-up, electrical systems, fuel systems and engine service. D 11 351 1 0839

360. Industrial Design Technology. (3). An introduction to industrial design techniques emphasizing the perennials elements of design and the systematic approach to product development and manufacturing. Prerequisites: IT 300, IT 310 or concurrent enrollment. D 11 360 0 0839

361. Plastics II. (3). 2R; 3L. Technical information and product development and construction of molds and forms for molding, casting, laminating and thermofusing. Prerequisite: IT 260. D 11 361 1 0839

362. Plastics III. (3). 2R; 3L. Advanced problems in production techniques; compression and injection molding; recent developments in plastics technology. Prerequisite: IT 260. D 11 362 1 0839

381. Electronics I. (3). 2R; 3L. A basic study of electronics including the function of components. Inductive circuits, networking and transistor theory as applicable to analog electronics are studied and applied through experimentation and project construction. Prerequisite: IT 260. D 11 381 1 0839

384. Electronics II. (3). 2R; 3L. Course includes the theory, instrumentation and application of semiconductors in electronic circuits. Emphasis is placed upon utilization of integrated circuits in digital applications. Prerequisite: IT 381. D 11 384 1 0839

400. Computer Applications in Industry. (3). Introduction to computer hardware and software in the industrial environment. Emphasis is placed upon the use of microcomputer technology in industrial applications. Prerequisites: CS 105 or CS 110Q or equivalent. D 11 400 0 0839

420. Machine Control Systems. (3). The control of industrial machines through electro-mechanical devices. An overview of the functioning of control and monitoring systems by the student's area of technical emphasis. Emphasis is placed upon utilization of computer control and instrumentation systems. Prerequisites: IT 240 and IT 320 or concurrent enrollment. D 11 420 0 0839

426. Woodwork IV. (3). 2R; 3L. Advanced work for specialists in the woodworking field with emphasis placed on problems growing from the needs of the student. Prerequisite: IT 320. D 11 426 1 0839

429. Drafting IV. (3). 2R; 3L. Advanced study for drafting students with emphasis on problems growing from the needs of students based on past performances and progress. Computer-aided drafting problem-solving techniques with special emphasis on industrial practices and procedures are included. Prerequisite: IT 240. D 11 429 0 0839

430. Product Development. (3). An application course for industrial personnel involved in product development. Emphasis is placed upon the "team" approach in formulating ideas, screening technologies, market research, feasibility studies, protection, determining profit margins, building prototypes, producibility and performance testing. Prerequisites: 300, 310 and 320 or concurrent enrollment. D 11 430 0 0839

434. Methods of Teaching in the Comprehensive General Shop. (3). 2R; 3L. Preparation for teaching technology in the comprehensive general shop. Emphasis is placed upon theory, organization and operation of a comprehensive general shop program. Offered spring semester only. Prerequisites: departmental consent. D 11 443 1 0839

440. Industrial Technology Education. (3). An introduction to a variety of conditions, related to the needs of the student. Prerequisites: IT 240 and IT 325. Classroom/laboratory methodologies and simulations. Emphasis upon procedures used in industry. D 11 440 0 0839

450. Metals IV. (3). 2R; 3L. Fundamentals of metal working and basic operations of lathes, mills, grinders, shapers and drills. Prerequisite: IT 331. D 11 450 1 0839

457. Power Mechanics IV. (3). 2R; 3L. Advanced study in the power mechanics field with emphasis placed on problems growing from the needs of the student. Prerequisite: IT 325. D 11 457 0 0839

463. Plastics IV. (3). 2R; 3L. Advanced problems in production techniques. Extrusion, rotational casting and forming are included and recent developments and experimental work are explored. Prerequisite: IT 320. D 11 463 1 0839

470. Industrial Organizational Analysis. (3). An analysis of industrial concepts, models and organizational structures. Course work will relate to concurrent cooperative education experience. Prerequisite: concurrent enrollment with IT 480-A. D 11 470 0 0839

480. Applied Problem Solving. (3). Synthesis of previous course work in special technical and managerial problems relative to the students' area of special emphasis. Techniques with which the student can address problems in the workplace are identified and discussed. Group participatory problem-solving principles are stressed. Prerequisites: IT 320, 360 and concurrent enrollment in IT 481-B. D 11 480 0 0839

481. Cooperative Education. (1-6). A cooperative education experience for students enrolled in the Cooperative Education program. Offered Cer/Nonr only. D 11 481 2 0839

481-A. Cooperative Education—Part 1. (4). This is the first of three required courses designed to develop both the managerial and technical skills of the student participant. Provides students an opportunity to perform work in the special technical field. Prerequisites: junior standing and concurrent enrollment in IT 470. D 11 481-A 2 0839

481-B. Cooperative Education—Part 2. (4). The second of three required courses. The students' level of experience in their special technical specialty and their experience in IT 481-A determine the appropriate co-op placement. Emphasis is placed on both application and theory through involvement with specific problems in business and industry. Prerequisites: departmental consent. D 11 481-B 2 0839
The Study of Examinations

This course will provide an introduction to research and development of alternative strategies for better meeting the needs of preadolescents in grades five through nine. It is an overview of the historical, philosophical, social, and psychological factors affecting the movement toward better education and will focus on the needs of learners from ages 10 to 14.

Courses for Graduate/Undergraduate Credit

500. Industrial Field Studies. (1-4). An in-depth analysis of industrial concepts from the perspective of an industrial employee. A comprehensive paper on conceptualizing research and development, finance, marketing, production and industrial relations is a course requirement. The paper involves a comparison of the theoretical to the state-of-the-art in a local industrial firm. A one-hour group conference is held on campus each week for purposes of directing student perceptivity. This course may be repeated by selecting specific areas from the industrial principles listed above. D 11 500 2 0839

501. Preparation of Instructional Materials. (3). The selection, development and organization of instructional materials for effective teaching of industrial technology. D 11 501 0 0839

505. Shop Planning and Organization. (3). Selection, purchase and organization of shop equipment and supplies. Developing and maintaining necessary records and reports and planning of shop facilities are also included. D 11 519 0 0839

570. Directed Studies in Materials and Processes. (3). This course will provide an opportunity for the advanced student to pursue an area of emphasis within the materials and processes on a synthesis level. The use of industrial principles, basic and applied, or a combination thereof, in consultation with the professor: culminating in research and/or report. Prerequisite: departmental consent. D 11 570 2 0839

580. Directed Studies in Power and Energy. (3). Provides an opportunity for the student to pursue an area of emphasis within the realm of power and energy on a synthesis level. The method of study will be research, basic and applied, or a combination thereof, in consultation with the professor: culminating in research and/or report. Prerequisite: departmental consent. D 11 580 0 0839

590. Directed Studies in Visual Communications. (3). Provides an opportunity for the advanced student to pursue an area of emphasis within the realm of visual communications on a synthesis level. The method of study will be research, basic and applied, or a combination thereof, in consultation with the professor: culminating in research and/or report. Prerequisite: departmental consent. D 11 590 0 0839

Innovations and critical analysis of contemporary problems in industrial arts and vocational education with directed reading and research. Repeatable. D 11 590 0 0839

Courses for Graduate Students Only

620. Foundations for Curriculum Development in Industrial Technology. (3). A study of the theory and practice of curriculum development and the current and changing educational and industrial changes, including current industrial technology curriculum designs, problems and trends. D 11 620 0 0839

621. Curriculum Construction in Industrial Technology. (3). Selection and construction of general and specialized areas of study in industrial technology. Prerequisite: IT 820. D 11 621 0 0839

640. Instructional Technology in Industrial Technology. (3). A course designed to acquaint graduate students with the emerging technology of instruction. The course includes a study of programmed instruction, systems approach to instruction, instructional television, projected media, motion films, computer-assisted instruction, learning resource centers and other pertinent topics. Students are involved in planning and preparing instructional material using systematic procedures. Prerequisite: departmental consent. D 11 640 0 0839

650. Seminar in Industrial Technology. (1-3). Innovations and critical analysis of contemporary problems in industrial arts and vocational education with directed reading and research. Repeatable. D 11 650 0 0839

Instructional Services

Instructional Services—General

General courses may apply to the program areas of early childhood, educational psychology, elementary education, special education and secondary education.

Lower-Division Courses

231. Teacher Education Lab. (0). During the sessions, students receive information concerning the required health examinations and the English and mathematics competency examinations and are given the audio-visual and computer equipment use check. D 21 231 2 0839

232. Introduction to Professional Education. (2). This first course in professional education permits the student to become acquainted with formal education. Teaching as a profession, the school as an organization, the nature of the curriculum, human relations aspects of education and career options outside of public schools are the major topics studied. Twenty hours of field experience in the schools are required. Prerequisites: sophomore standing and grade of C or better in Eng. 101 and 102. D 21 232 0 0839

235. Directed Study. (2-3). D 21 290 2 0839

Upper-Division Courses

452. Special Studies in Education. (1-3). Designed primarily for elementary and secondary education majors. Repeatable with adviser’s consent. D 21 452 2 0839

453. Classroom Dynamics. (2). Study of concepts from sociology and psychology with particular reference to learning. It is essential for teaching a defined subject area.

454. Special Problems in Education. (1-3). A study of a problem in education, determined by social, cultural and industrial changes, including current industrial technology curriculum designs, problems and trends. D 11 454 0 0839

456. Multicultural Education. (3). Examination of concepts of race, racism, culture, social class, oppression, cultural pluralism and their implications for education generally and the classroom specifically. Educational materials and instructional strategies are analyzed with regard to the concepts studied. D 21 456 0 0839

481. Cooperative Education. (1-8). The goal of this course is to provide the student a work-related placement that integrates theory with a planned and supervised learning experience designed to complement and enhance the student’s academic program. Prerequisites: successful completion of 24 credit hours, 2.250 grade point average and IS 232. Repeatable for credit. Offered CR/NC only. D 21 481 2 0839

490. Individual Studies in Education. (1-3). D 21 490 3 0839

Courses for Graduate/Undergraduate Credit

520. Introduction to Middle-Level Education. (3). An overview of the historical, philosophical, social and psychological factors affecting the movement toward better educational opportunities for learners from ages 10 to 14. D 21 520 0 0839

621. Curriculum/Instruction Alternatives for Middle-Level Education. (3). An exploration into the development of alternative curricular organizations and instructional strategies for better meeting the needs of preadolescents in grades five through nine. D 21 621 0 0839

703. Research and Implementation of Learning Centers. (3). This course will consider a variety of instructional approaches to the teaching of students at all grade levels and subject matter areas via learning centers. D 21 703 0 0839
714. Activities for Human Relations I. (3). Topics covered are values, communications and creativity. Activities in the above areas can be used both individually and groups in instructional settings. They are used to explain, teach and enhance human relationships. D 21 714 0 0829

715. Activities for Human Relations II. (3). Topics covered are introductory activities, cooperation and self-awareness. Activities in the above areas can be used both individually and in groups in instructional settings. They are used to explain, teach and enhance human relationships. D 21 715 0 0829

718. Group Dynamics for Educators. (3). A laboratory course in human relations and group dynamics based upon involvement in various group activities. D 21 718 0 0829

745. Utilizing the Print Media in Classrooms. (3). Explores various ways the print media may be utilized to teach critical thinking skills, propaganda analysis, communicative skills through word study and writing practices. Improved reading through speed and comprehension. Special stress is placed upon the utilization of the daily newspaper as a supplement to other materials in the teaching the various school subjects. Preparation of teaching materials for the school classroom is also emphasized. D 21 745 0 0803

746. Introduction to Career Education. (3). An introduction to the philosophical consideration of career education. Participants examine the concepts of career education and explain how the concepts can be utilized into the existing curriculum. Experience-based activities related to career opportunities in the local business-industrial sector and potential areas of career development programs are offered in addition to the preparation of curricular units. D 21 746 0 0829

747. Curriculum Development in Career Education. (3). Designed to assist school personnel in the development of a K-14 scope and sequence for a curricular design that considers the principles of a career education as a unifying theme. Following the scope and sequence development, participants are assisted in the writing of curricular units for their individual teaching assignments. Prerequisite: IS 746 or instructor's consent. D 21 747 0 0821

750. Workshops in Education. (1-4). D 21 750 2 0803

751, 752, 753 or 754. Special Studies in Education. (1-3). Designed for elementary and secondary school teachers. Repeatable with advisor's consent. Prerequisite: teacher certification or departmental consent. D 21 751 2 0802; D 21 752 2 0802; D 21 753 2 0802; D 21 754 2 0802

785. Instructional Media. (3). Selection, use and production of educational media. Includes instructional design, media planning skills, visual literacy, slide show production, design and production of transparencies, basic Macintosh G 260, recording and mixing, video tape recording and the operation of instructional audio-visual equipment. Student assignments involve the design and production of materials for teaching. D 21 785 0 0869

789. Values Clarification Education. (3). An introduction to one approach to values education. Students develop competencies, Indian and non-Indian, with values clarification strategies: valuing techniques and the essential skills for valuing. Dealing with value-laden issues in the school curriculum is emphasized. D 21 789 0 0829

Courses for Graduate Students Only

838. Curriculum Alternatives. (3). An examination of curriculum models that are alternatives to the traditional curriculum and the socioeconomic, political and psychological factors that motivate their development. Attention is given to a comparison of historical and contemporary models for the curriculum. D 21 838 0 0829

660. Seminar on Research Problems. (1-3). Development and presentation of research proposals. Required of students enrolled in thesis programs. D 21 860 0 0824

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum total of two hours of credit. Prerequisite: IS 860. D 21 862 0 0824

975-876. Master's Thesis. (2-3). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent. D 21 889 0 0802

Instructional Services—Early Childhood

In addition to the following courses, ISEP 728, Growth and Development I, and ISEP 740, Introduction to Early Childhood Special Education: Infancy and Preschool, relate to this area. Their descriptions appear under the heading Instructional Services—Educational Psychology, and Instructional Services—Special Education.

Courses for Graduate/Undergraduate Credit

760. Parent Education for Preschool Teachers. (3). An introduction to ways of working with parents of preschool children and an analysis of formal and informal approaches, with emphasis on the teacher's role in developing these procedures. Prerequisite: IS 761 or instructor's consent. D 21 760 0 0823

761. Early Childhood Education. (3). An introduction to the problems and philosophy of educating children in the preschool years. D 21 761 0 0823

762. Methods and Materials in Preschool Education. (3). The study of teaching methods for the teacher of preschool children and the preparation of materials to enhance the learning experiences of these children. Prerequisite: IS 761 or instructor's consent. D 21 762 0 0823

763. Teacher/Child Relations. (3). Designed to assist the student in developing the necessary skills for effective communication with children from birth to age nine. Emphasis is placed upon helping the child build a positive self image and a positive relationship with others. D 21 763 0 0823

764. Day-Care Services. (3). Instructional methods and operational procedures for day-care center workers. D 21 764 0 0823

Course for Graduate Students Only

870. Research and Contemporary Influences in Early Childhood Education. (3). Analysis of current early childhood education based upon an in-depth study of contemporary programs influencing the education of young children. D 21 870 0 0823

Instructional Services—Educational Psychology

Lower-Division Courses

233. Educational Psychology: Child Development. (3). A study of educational and psychological topics as they relate to teaching the elementary school child. Particular emphasis is given to the teaching-learning process and characteristics of child development. Prerequisites: IS 232 and entry into the teacher education program. D 21 233 0 0822

Upper-Division Courses

333. Educational Psychology: Adolescent Development. (3). Development during early and middle adolescent years and relation of theory and research to instruction. Prerequisites: IS 232 and entry into the teacher education program. D 21 333 0 0822

433. Educational Psychology: Learning and Evaluation. (3). A study of the learning process and principles related to learning in the classroom. Consideration and study are given to evaluation of the products of learning. Not open to students who have taken IS 534. Prerequisites: IS 232 and 233 or 333. D 21 433 0 0822

Courses for Graduate/Undergraduate Credit

534. Principles of Learning and Evaluation for Teachers. (3). For description of course see IS 433. The course is intended for those students not taking IS 433 in the secondary student teaching block. It may be substituted for IS 433 but is not open to students with credit in IS 433. Prerequisite: IS 333. D 21 534 0 0822

700. Understanding Statistics in Research Literature. (1). Designed to increase understanding of statistical information in journal articles and other evaluative documents. Assumes no previous knowledge of statistics. D 21 700 0 0824

704. Introduction to Educational Statistics. (3). An introduction to statistics, including measures of central tendency, measures of variability, correlation, chi square, median test, t test, correlated t test and one-way and two-way analysis of variance. D 21 704 0 0824

726. Growth and Development I: Infancy and Early Childhood. (3). The growth of the infant and young child from birth to approximately age five in the areas of physical, cognitive, psychosocial and moral development. Not open to students who have taken Ed. Psych. 730 (no longer offered). Prerequisite: IS 232 or 433 or instructor's consent. D 21 728 0 0822
Courses for Graduate Students Only

800. Principles and Applications of Educational Psychology. (3). A critical examination of the major topic areas traditionally defined as educational psychology. After examination of basic paradigms and strategies of the discipline, students apply them to such areas as instructional practices and design, classroom management and discipline, etc. Prerequisites: IS 233 or departmental consent. D 21 800 0 0822

811. Educational Measurement and Evaluation. (3). Issues and techniques for measurement and evaluation in the cognitive, affective and psychomotor domains. D 21 811 0 0823

819. Social Psychology of Education. (3). A critical study of the individual in social interaction in a variety of educational settings. Application of theory and research to school-related issues and problems. D 21 819 0 0822

820. Learning Theory for Teachers. (3). Applications of some major learning theories and learning principles. Prerequisite: IS 801 or departmental consent. D 21 820 0 0822

823. Experimental Design in Educational Research. (3). A consideration of sampling theory, design for testing hypotheses about populations from samples, testing correlation coefficients, means and differences between means, simple factorial designs, designs involving matched groups, designs involving repeated measured of the same group and analysis of covariance. Prerequisite: IS 704. D 21 823 0 0824

844. Mathematics in the Elementary School. (3). A study of the basic methods of instruction; with emphasis given to relating mathematical concepts to cognitive development and learning. Specific attention is given to differing levels of instructional materials and the organization of learning experiences. Observation and participation in a public school may be required. Prerequisites: IS 232 and IS 233 or departmental consent. D 21 420 0 0830

846. Elementary Student Teaching Seminar. (1-3). Study and discussion of experiences emerging from student teaching. Prerequisites: IS 233, 407, 420 and 444. D 21 424 0 0832

447. Student Teaching in the Elementary School. (13). The student teaching program provides full-time participation in the public schools under guidance of a master teacher and a college supervisor. Prerequisites: IS 231, 319, 421, 406, 420 and 444. Students must be enrolled in IS 446 and 453. Prerequisites may be waived for qualified experience with departmental consent. The student teaching semester is required of all students working toward a degree in elementary education. Every student wishing to receive the certificate must file an application with the coordinator of laboratory experiences. Application for the fall semester must be filed by February 15 and for spring semester by September 15. Applications may be secured in Room 107, Corbin Education Center. The only exception to the requirement of 13 semester hours is the transfer student who has taken student teaching elsewhere, or students who hold other certificates or 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 Committee on Admissions, Retentions and Exceptions. D 21 447 0 0829

448. Student Teaching in the Elementary/Early Childhood School. (13). The student teaching program provides half-time participation in the elementary and half-time in the preschool (three- and four-year-olds) under guidance of a master teacher and a college supervisor. Prerequisites: IS 231, 319, 421, 406, 420 and 444 and nine semester hours of early childhood education. Prerequisites may be waived for qualified experience with departmental consent. Note descriptions for filing an application to enroll in student teaching listed under Student Teaching in the Elementary School. Students must also be enrolled in IS 466 and 453. D 21 448 0 0829

449. Student Teaching in the Elementary School—Physical Education. (13). Prerequisite: physical education major. 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: IS 231. D 21 449 0 0830

451. Student Teaching in the Elementary School—Music. (3). Prerequisites: music education major and IS 231. D 21 451 0 0829

459. Student Teaching in the Elementary School—Art. (3). Prerequisites: art major and IS 231. D 21 459 0 0829

Courses for Graduate/Undergraduate Credit

518. Methods for the Kindergarten Teacher. (3). To acquaint students with all aspects of the kindergarten program and introduce the wide variety of materials available and in use. Prerequisites: IS 232 and 233. D 21 518 0 0823

705. Introduction to the Reading Process. (3). Designed to acquaint students and teachers with all aspects of current reading theory and practice. Reading research to point out the possibilities of applying this theory and research to the actual teaching of children. D 21 705 0 0829

734. Affective Approaches to Teaching Reading. (3). The course develops specific methods for developing a literature program with children (preschool—elementary years).
Courses for Graduate Students Only

802. Classroom Reading Diagnosis. (3). Designed to emphasize the understanding and use of reading survey tests, group diagnostic reading tests, criterion referenced assessment programs and appropriate teacher constructed tests. Will include the selection, administration, scoring and interpretation of group reading tests. Contains a diagnostic practicum. Prerequisite: IS 705, D 21 802 0 0830

804. Research in Reading. (3). Designed to allow students to explore areas of interest and concern in reading through the examination, review and sharing of pertinent reading research. Prerequisites: IS 705 and any other graduate reading course. D 21 804 9 0830

806. Introduction to Graduate Study in Elementary Education. (3). The field of elementary education is explored; its history and trends, reasons for teaching, criteria of professionalism, program orientation and requirements and options for the student pursuing a degree are delineated. D 21 806 0 0802

821. Classroom Reading Practicum. (3). Designed to provide a practicum experience in an experimental and corrective reading instruction in the classroom setting. Prerequisites: IS 705 and 846, or 802, or equivalent. D 21 821 0 0830

842. Remedial Reading Practicum. (3). Emphasis upon individual corrective treatment of diagnosed reading difficulties. A laboratory practicum in remedial reading instruction is required. Prerequisites: IS 705 and 846 or equivalent. D 21 842 0 0830

845. Elementary School Curriculum. (3). Study of the elementary school curriculum includes all of the experiences of children for which the school will assume responsibility. Thorough study of standards and content of the curriculum is explored as a means of developing desired elementary learning characteristics. Prerequisite: IS 806. D 21 845 0 0829

846. Remedial Reading Diagnosis. (3). Emphasis upon individual diagnosis. The use of standardized instruments, teacher-made instruments, corrective treatment of reading difficulties; a diagnostic practicum is included. Prerequisite: IS 705 or equivalent. D 21 846 2 0830

849. Seminar in Reading Organization. (3). Designed to examine the organization and administration of reading programs. Additional time is spent investigating pertinent research in the area of reading instruction. Prerequisite: IS 705 or equivalent. D 21 849 9 0830

852. Improvement of Instruction in Language Arts. (3). Recent developments in the teaching of language arts in all educational levels and in elementary and middle school grades, problems, concerns, methods, materials and research related to reading and writing. Written and verbal communication, including "school" writing and creative writing. Students can select particular concepts and related skills for special attention. Excellent for teachers who want to review and apply developments during the past few years. Prerequisite: IS 319. D 21 852 0 0829

854. Improvement of Instruction in Social Studies. (3). A study of recent changes in social studies curriculum and instruction designed to investigate strengths and limitations of various approaches. Competency in teaching for concept development, dealing with value-laden issues and teaching for inquiry are stressed. An inquiry-centered learning environment emphasizes personalizing the social studies curriculum for children. Alternative teaching strategies and complementary evaluative techniques are reviewed and practiced. Prerequisite: IS 406 or equivalent. D 21 854 0 0829

855. Improvement of Instruction in Mathematics. (3). For teachers in service. Consideration of recent trends in subject matter content and teaching guides to improve understanding of meanings, vocabulary and mathematical concepts. Instructional methods and materials are included. Prerequisite: IS 444 or equivalent. D 21 855 0 0833

856. Improvement of Instruction in Science. (3). For teachers in service. Designed to identify and explore the principles of science that teachers should recognize, understand and consider from kindergarten through grade eight. Prerequisite: IS 321 or equivalent. D 21 856 2 0834

Instructional Services—

859. Seminar in Elementary Education. (3). Prerequisite: IS 806. D 21 859 9 0802

863. Trends in Theories of Instruction. (3). Instructional theory is considered through models of teaching. Study of each model covers theoretical orientation, instructional procedures and effects. Practice of models in classroom settings is required. Prerequisite: IS 806. D 21 863 0 0829

Lower-Division Course

234. Philosophy and History of Education. (2). A study of the major contemporary educational philosophies and the development of American education. Some emphasis is placed on the students' examination of their philosophies of education. Prerequisite: IS 232 and entry into the teacher education program. D 21 234 0 0821

Upper-Division Course

428. Social and Cultural Foundations of Education. (2). Attention is given to the contributions of sociology and anthropology to the development of educational philosophy and its position in relation to contemporary school problems. Prerequisites: IS 232 and entry into the teacher education program. D 21 428 0 0821

Courses for Graduate/Undergraduate Credit

701. Foundations of Education. (3). A survey of the various foundations areas, including philosophical, historical, social and comparative. This course is prerequisite to subsequent foundations courses. D 21 701 0 0821

777. Selected Topics in Foundations. (3). Explorations into current problems and also less familiar areas of foundations. (A) cultural pluralism, (B) religion and morality, (C) film and fiction, (D) economics and politics, (E) classics in education, (F) other. Enrollment may be repeated for several offerings. Prerequisite: IS 701 or instructor's consent. D 21 777 0 0821

Courses for Graduate Students Only

807. Philosophy of Education. (3). Introduction to the study of the history of thought with regard to education and the development of the educational movement. Prerequisite: IS 701 or instructor's consent. D 21 807 0 0821

808. Sociology of Education. (3). An exploration of the relationship between education and society. Prerequisite: IS 701 or instructor's consent. D 21 808 0 0821

817. Comparative Education. (3). Educational systems of selected nations in terms of their unique structures and problems. Prerequisite: IS 701 or instructor's consent. D 21 817 0 0821

818. Anthropology of Education. (3). A cross-cultural examination of the educational process utilizing some of the basic concepts and perspectives of anthropology. Prerequisite: IS 701 or instructor's consent. D 21 818 0 0821

824. History of Education in the United States. (3). A study of education's relationship to great social and political events. Prerequisite: IS 701 or instructor's consent. D 21 824 0 0821

825. History of World Education. (3). A study of the role of education in world civilizations; major educational trends and developments in history; antecedents of current educational practices and problems. Prerequisite: IS 701 or instructor's consent. D 21 825 0 0821

855. Advanced Studies in Foundations. (3). A course designed for the predoctoral student in any foundational specialty. Prerequisite: nine graduate hours of foundations of education. D 21 855 0 0821

Instructional Services—

Library Science

Students wishing to become school librarians in Kansas must have valid teaching certificates plus specific courses in basic reading courses, which may be taken either at the upper-division or graduate level.

Courses for Graduate/Undergraduate Credit

707. School Library Media Center Cataloging and Classification. (3). The principles of cataloging and classification are studied, and students learn how to apply the Dewey Decimal classification system and Sears Subject Headings. Descriptive cataloging, types of entry and filing rules also are covered. D 21 707 0 1601

708. School Library Media Center Book Collection. (3). Basic resources for the de-
401. Secondary Reading Foundations. (3). A course designed to provide prospective secondary teachers with an understanding of the development of reading skills and to explore instructional approaches for guiding secondary students in those skills and their use in secondary content areas. Prerequisite: instructor's consent. D 21 401 0 0830

442. Special Methods in Teaching. (4). Prerequisites: IS 232 and 333. B—Field and Laboratory Methods in Biology. F—The Teaching of Foreign Languages: Methods of teaching foreign languages, based on the audio-lingual approach and applied linguistics contrasted with traditional methods. Laboratory techniques, transition into reading and writing and planning and evaluation of student progress are included. This course is required of all foreign language majors or minors expecting to teach in junior and senior high schools. I—Methods of Teaching Industrial Education. Selection and arrangement of teaching content, methods of teaching, lesson planning, courses of study, testing and grading shop work, evaluating pupil progress, securing industrial education positions and professional responsibility of the shop teacher. M—Methods of Teaching Music. S—Special methods of Business Education. Prerequisites: Bus. Ed. 234 or data processing Bus. Ed. 237 and Acctg. 210 and 220. D 21 442 0 0829

454. General Methods of Secondary Teaching. (3). A—Art (may be taken as Art Ed. 516) D—Speech and Dramatic Art E—English J—Social Studies M—Mathematics S—Science Prepararion for teaching in secondary schools. Develops skills in lesson planning, methods of teaching and organizing classroom activities. Some public school classroom teaching will be incorporated into this course. Prerequisites: IS 433, 234 and 428. D 21 454 0 0829

455. Advanced Methods of Secondary Teaching. (1). A—Art (may be taken as Art Ed. 516) D—Speech and Dramatic Art E—English J—Social Studies M—Mathematics S—Science Continuation of IS 454. Prerequisite: IS 454. D 21 455 0 0829

*Student Teaching—Secondary School. The student teaching semester is required of all students working toward a secondary certificate and is a full-time assignment. Application for approval to enroll in the program must be made to the coordinator of laboratory experiences by February 15 for the fall semester or by September 15 for the spring semester. In addition, students must obtain approval from the representative of the subject area in which they wish to determine if placement can be considered. It is expected that students will teach in their field of major interest. However, individuals who are well prepared in more than one field may apply to student teach in a second field, but they must take the special methods course in the second field before entering the student teaching semester. The assignment for student teaching begins with the opening of the public school semester, and enrollees must arrange to meet from 8 a.m. to 5 p.m. daily and to be available for selected evening programs throughout the semester. Prerequisites: senior standing, IS 231, 232, 333 and departmental consent.

462. Student Teaching—Art. (4 and 7). Prerequisite: IS 231. D 21 462 0 0829

463. Student Teaching—Biology. (7). Prerequisite: IS 231. D 21 463 0 0829

464. Student Teaching—Speech and Dramatic Art. (7). Prerequisite: IS 231. D 21 464 2 0829

465. Student Teaching—English. (7). Prerequisite: IS 231. D 21 465 0 0829

466. Student Teaching—Foreign Language. (7). Prerequisite: IS 231. D 21 466 2 0829

467. Student Teaching—Industrial Education. (7). Prerequisite: IS 231. D 21 467 2 0829

468. Student Teaching—Social Studies. (7). Prerequisite: IS 231. D 21 468 2 0829

469. Student Teaching—Music. (3). Prerequisite: IS 231. D 21 469 2 0829

470. Student Teaching—Physical Education. (7). Prerequisite: IS 231. D 21 470 2 0829

471M. Student Teaching—Mathematics. (7). Prerequisite: IS 231. D 21 471M 2 0829

471S. Student Teaching—Science. (7). Prerequisite: IS 231. D 21 471S 2 0829

472. Student Teaching—Business Education. (7). Prerequisite: IS 231. D 21 472 2 0829

Courses for Graduate/Undergraduate Credit

616. Literature for Adolescents. (3). Extensive reading of literature in all genres consistent with studies of adolescents' reading interests, abilities and responses to literature. Prerequisite: junior standing. D 21 616 2 0829

771. Teaching Reading in the Content Areas. (3). Emphasis is placed on the teaching of reading in the content areas. Prerequisite: secondary teaching experience or departmental consent. D 21 771 2 0830

Courses for Graduate Students Only

803. Secondary Reading Practicum. (3). Designed to offer reading practicum experience to reading teachers in a secondary school setting. Prerequisites: IS 705 or 770, and 802 or equivalent. D 21 803 0 0830

804. Research in Reading. (3). Designed to allow students to explore areas of interest and concern in reading through the examination, review and sharing of pertinent reading research. Prerequisites: IS 705 and any other graduate reading course. D 21 804 9 0830

831. Creating an Effective Classroom. (3). Designed to create an awareness of classroom management systems which include a variety of management tools and formats. D 21 831 0 0829

Instructional Services—Secondary Education

Lower-Division Course

310. Methods in Physical Education. (3). Presentation and participation in methods of teaching physical education, with emphasis on techniques, skills, organization of activities and classroom procedures. Prerequisites: IS 532 and 333 concurrently. D 21 310 2 0829

Upper-Division Courses

400. Basic Reading Skill Practicum. (3). A course designed to provide prospective secondary and/or elementary teachers with supervised practicum experiences in the delivery of one-to-one basic reading instruction to older youth and adults with severe reading deficiencies. Prerequisite: instructor's consent. D 21 400 2 0830
832. Secondary School Curriculum. (3). Designed to develop the student's ability to describe, analyze and evaluate curriculum models and programs. Particular attention is paid to the social, psychological and philosophical foundations of curriculum as well as to current trends in curriculum design. D 21 832 0 0829

834. The Teaching of English. (3). Recent developments in teaching of English: problems, concerns, methods, materials and research. Excellent for teachers who want an extensive review of developments during the past five years. D 21 834 0 0830

835. The Instructional Process. (3). Focuses on the process of instruction in order to develop skill in systematic instructional planning. Includes instructional theory, systems approach and other recent approaches to instruction. D 21 835 0 0829

836. The Teaching of Social Studies. (3). Recent developments in the teaching of social studies: problems, concerns, methods, materials and research. Excellent for teachers who want an extensive review of developments during the past five years. D 21 836 0 0829

837. The Teaching of Science. (3). Recent developments in the teaching of science: problems, concerns, methods, materials and research. Excellent for teachers who want an extensive review of developments during the past five years. D 21 837 0 0830

850. Seminar in Secondary Education. (3). D 21 850 9 0803

Instructional Services—Special Education

Courses for Graduate/Undergraduate Credit

601. Introduction to Exceptional Children. (3). This course is designed as a survey of the field of special education, including the handicapped and the gifted. Service delivery models and current practices are presented. This course fulfills recertification requirements for teachers and serves as an introductory course in exceptional education for special education majors, administrators and school psychologists. Prerequisite: IS 233 or 333. D 21 601 0 0811

602. Introduction to the Gifted. (3). Emphasis on recognition and education of the gifted child. Prerequisite: IS 233 or 333. D 21 602 0 0811

604. Understanding of the Mentally Retarded. (3). Current research and historical approaches to the education of the mentally retarded and survey of the literature in this field. Prerequisite: IS 601. D 21 604 0 0810

702. Reading for Teachers of Exceptional Children. (3). Designed to survey the developmental reading skill needs, diagnostic techniques and teaching approaches pertinent to the exceptional learners, particularly LD and EMR. Prerequisite: instructor's consent. D 21 702 0 0830

740. Introduction to Early Childhood Special Education: Infancy and Preschool. (3). A basic introduction to the emerging field of early intervention for handicapped children and their families. Prerequisites: IS 728, 840 (or 601), 761 or permission of instructor. D 21 740 0 0820

742. Learning and Behavior Disorders. (3). A study of incidence, classification, etiology and intellectual, social and developmental characteristics of the learning disabled child. Current research, parental concerns and historical development of the educational approaches to learning and behavioral disorders are examined. Prerequisite: instructor's consent. D 21 742 0 0810

744. Curriculum/Methods for the Mentally Retarded. (3). Adaptations of the standard curriculum and innovative methods that have proven effective for the benefit of the mentally retarded child. D 21 744 0 0811

745. The Emotionally Disturbed. (3). A study of the incidence, classification, etiology and emotional characteristics of the emotionally disturbed. Current research, parental concerns and development of educational approaches are examined. D 21 745 0 0810

Courses for Graduate Students Only

805. Seminar for Reading and LD Teachers. (3). Designed to provide a forum for practicing reading and LD teachers in which to explore common interests, concerns, research and teaching related to research and teaching related to reading, Prerequisite: certification in reading or LD. D 21 805 9 0830

840. Psychology of Exceptional Children. (3). A study of the conceptual and theoretical formulations, empirical evidence and research concerning behavioral characteristics of exceptional children. D 21 840 0 0838

841. Program Development in Special Education. (3). Emphasis in classroom organization and management that affect the establishment and operation of programs for exceptional children. Prerequisite: IS 601 or 640. D 21 841 0 0810

844. Occupational Aspects in Mental Retardation. (3). Designed to study in-depth occupational information, curriculum and methods employed by teachers of the mentally retarded in secondary schools. Prerequisite: IS 604 or departmental consent. D 21 844 0 0810

847E and F. Practicum and Internship in Education: Learning Disabilities. (3-6). Prerequisite: instructor's consent. D 21 847E and F 2 0808

847I and J. Practicum and Internship in Education: Mental Retardation. (3-6). Prerequisite: instructor's consent. D 21 847I and J 2 0808

847K and L. Practicum and Internship in Education: Emotional Disturbance. (3-6). Full-time participation in a class for emotionally disturbed children/adolescents supervised by a master teacher and University professor. Emphasis is on applied teaching methods for the mildly and severely disturbed, formal-informal psycho-educational assessment, development of curriculums and assessment, behavior management and prescriptive remediation for academic deficits. Prerequisites: instructor's consent, IS 749 and 888. D 21 847K and L 2 0808

847M. Practicum and Internship in Education: Gifted. (3). Supervised teaching experience for exceptional students who are intellectually gifted. Prerequisites: permission of instructor. D 21 847M 0 0808

847N. Practicum and Internship in Education: Physically Disabled. (3). Supervised teaching experience for exceptional students who are physically disabled. Prerequisites: permission of instructor. D 21 847N 0 0808

847Q. Practicum and Internship in Education: Paleoforensics. (3). Practicum and internship experience for exceptional students who are in the field of paleoforensics. Prerequisites: permission of instructor. D 21 847Q 0 0808

847R. Practicum and Internship in Education: Psychotherapy. (3). Practicum and internship experience for exceptional students who are in the field of psychotherapy. Prerequisites: permission of instructor. D 21 847R 0 0808

850. Seminar in Secondary Education. (3). D 21 850 9 0803

864. Practicum Seminar: Learning Disabilities. (1). A seminar designed to examine trends and issues related to the learning disabled individual, adaptation of materials for specific needs and critical examination of incidents related to the practicum experience. D 21 864 2 0808

865. Practicum Seminar: Mental Retardation. (1). A seminar designed to examine trends and issues related to the learning disabled individual, adaptation of materials for specific needs and critical examination of incidents related to the practicum experience. D 21 865 2 0808

866. Practicum Seminar: Emotional Disturbance. (1). A seminar designed to examine trends and issues related to the emotionally disturbed individual, adaptation of materials for specific needs and critical examination of incidents related to the practicum experience. Prerequisite: concurrent enrollment in IS 847K and L. D 21 866 2 0808

868. Methods for Teaching the Emotionally Disturbed. (3). Emphasis is on the theoretical and practical aspects of prescriptive instructional techniques and materials for the education of the emotionally disturbed in the self-contained and resource classroom. D 21 868 0 0808

893. Methods for Teaching the Gifted. (3). Planning for a qualitatively differentiated curriculum to meet the unique needs of the gifted learner. Requirements include mastery of specified competencies (reading instruction, behavior management, etc.) at both the elementary andsecondary levels. Prerequisites: ISSP 742 and 888. D 21 895 0 0808

885. Curriculum for the Learning Disabled. (3). A basic introduction to curriculum development specific to the disabled learner. Requirements include mastery of specified competencies (reading instruction, behavior management, etc.) at both the elementary and secondary levels. Prerequisites: ISSP 742 and 888. D 21 885 0 0808
Military Science

Army ROTC

The United States Army Reserve Officers' Training Corps (ROTC) develops citizen officers for the United States Army, Army Reserve and National Guard. It enables a student to prepare for a position of leadership in either a civilian or military career by earning an army commission while acquiring a baccalaureate degree. Outstanding students are designated Distinguished Military Students and have the opportunity to acquire a Regular Army commission. Completion of the ROTC program, coupled with courses in a prescribed field of study, enables college graduates to qualify for various active duty, reserve or National Guard programs in the army.

Students enrolled at nearby colleges not offering United States Army ROTC may enroll in the ROTC program at The Wichita State University as special students and thereby qualify for a commission.

Students enrolled in ROTC may be eligible for scholarships which pay tuition, fees, books and supplies. Also, students who are enrolled in upper-division courses receive $100 per month during the academic year.

Information on these scholarships may be obtained from the Department of Military Science or the Wichita State Office of Financial Aid.

Programs

The Wichita State University offers two elective ROTC programs: the four-year program and the two-year program.

Four-Year Program

The four-year program has a basic course for freshmen and sophomores and an advanced course for juniors and seniors. The basic course consists of one conference hour each week plus a leadership laboratory. Basic course enrollment is limited to students with less than 75 credit hours.

The advanced course requires juniors to attend two conference hours per week in the fall and three conference hours per week in the spring; seniors attend three hours per week in the fall and two conference hours per week in the spring. Juniors and seniors must also attend the equivalent of 24 hours of leadership laboratory each semester. Advanced course students attend a six-week advanced camp between their junior and senior years.

To qualify for enrollment in the advanced course, students must:

1. Complete the basic course, have armed forces active duty service credit or have three years Junior ROTC (high school)
2. Be physically qualified
3. Have a scholastic grade point average of 2.000 or above
4. Successfully complete survey and general screening tests.

The testing and physical examinations are scheduled and arranged by the military science department.

Advanced course students receive $100 per month for approximately 20 months. Attendance at advanced camp is reimbursed by approximately $600, plus travel expenses. Pay and allowances received by an advanced course student total approximately $2,500.

Departmental extracurricular activities are available to students on a voluntary basis. They include intramural athletics, Drill Team and Rifle Team.

Two-Year Program

Although designed basically for transfer students from junior colleges and colleges and universities not offering ROTC, the two-year program enables students who have four semesters of school remaining before qualifying for a degree to enroll in a basic six-week summer camp. This camp is designed to educate students in the basic military skills they would have acquired during their first two years of the four-year program. Pay for this camp is approximately $500.

Beginning with the junior year, the two-year program students complete the same advanced course as the four-year program students. Prerequisites are the same as those for entry into the four-year program.

Lower-Division Courses

101. Introduction to Marksmanship. (1). 1R; 1½ L. A military approach to leadership and controlling as a basis for an understanding of small units. Offensive and defensive operations, patrolling and controlling, legal considerations and responsibilities are included. D 15 223 5 1801

244. Introduction to Tactics. (1). 1R; 1½ L. The mission, organization and capabilities of small units. Offensive and defensive operations, patrolling and controlling, as a basis for understanding of small units. D 15 224 5 1801

Upper-Division Courses

333. Advanced Leadership Development. (2). 2R; 1½ L. A military approach to lead-
ership training. Decision making at the small unit level, problem solving within the military framework and functions and responsibilities of military leaders. Prerequisites: completion of all lower-division courses or service credit and departmental consent. D 18 333 5 1801

334. Advanced Military Tactics. (3). 3R; 1½ L. Organization and capabilities of military units and advanced military tactics; existing communications systems and their use in tactical situations. Prerequisites: MS 333 and departmental consent. D 18 334 5 1804

400. ROTC Advanced Camp. (3). A six-week training period of classes and field work. Subjects include signal communications, land navigation, tactics, weapons, Leader's Reaction Course and field problems test. The course provides leadership opportunities in the form of problem analysis, decision making and management experiences. Prerequisites: MS 333 and departmental consent. D 18 400 5 1801

443. Introduction to Military Law, Correspondence and Training. (3). 3R; 1½ L. An introduction to the principles and history of military law enforcement and identifying multiple facets of the administration of justice in the military today. Additionally, the student becomes familiar with the process of military writing by writing, revising and evaluating the work of others and how to prepare, conduct and evaluate military training. Prerequisites: MS 333 and 334 and departmental consent. D 18 443 5 1801

Music Education

Mus. Ed. 351, 352, 501, 506, 610, 611 and 706 are specifically available for students in the College of Education. Service courses in special music education also are available. The full description of courses offered in music education is given in the College of Fine Arts, Division of Music section.

Personnel Services

Counseling and School Psychology

Lower Division Courses

150. Workshops in Education. (1-2). D 18 150 2 0826

152. Special Studies in Education. (1-4). This course is designed for undergraduates with an interest in issues related to counseling, guidance and student development. Different preselected areas may be emphasized during a semester. Repeatable with adviser’s consent. D 18 152 2 0826

Upper-Division Courses

450. Workshops in Education. (1-4). This course is designed to accommodate a variety of topics related to counseling, guidance and issues in helping relationships. Different preselected topics may be emphasized during a semester. Repeatable for credit. D 18 450 2 0826

452. Special Studies in Education. (1-4). This course is designed for upper-division students with an interest in issues related to counseling, guidance and student development. Different preselected areas may be emphasized during a semester. Repeatable with adviser’s consent. D 18 452 2 0826

455. Family Crucible. (3). An exploration of issues involved in understanding, marriage and family life with an experiential and interdisciplinary focus utilizing developmental, cultural and family systems perspectives. The course will provide opportunities to examine personal values, experiences and expectations in connection with the personal growth dimensions of family life. Prerequisite: upper-division standing. D 18 455 0 0826

Courses for Graduate/Undergraduate Credit

552. Student Development. (3). Training for students involved as small-group leaders. Prerequisite: DARE student leader. D 18 552 9 0826

653. Studies in Student Development. (1-2). Designed as a supervised experience for students participating as peer group leaders and researchers in developing activities for students entering or assigned to University Counseling. Prerequisites: MS 333 and 334 and departmental consent. D 18 653 9 0826

655. Studies in Student Services. (1-6). Provides students with training in basic helping skills for paraprofessional counseling. The course involves training and periodic seminars. May be repeated for a maximum of six hours credit, departmental consent. D 18 655 0 0826

732. Counseling: Child Abuse and Neglect. (2). The etiology, symptoms and indicators of physical abuse and neglect, emotional abuse and neglect and sexual abuse. D 18 732 2 0826

750. Workshop in Education. (1-4). D 18 750 2 0826

752. Special Studies in Education. (1-5). The course is designed for students with personnel and guidance interests. Different preselected areas may be emphasized during a semester. Repeatable with adviser’s consent. Prerequisite: instructor’s consent. D 18 752 2 0826

756. Guidance Services for the Preschool Child. (3). A study of the social and emotional needs of the preschool child, including an exploration of theory, techniques and materials useful to professionals providing guidance services for preschool children and their significant adults. D 18 756 0 0826

Courses for Graduate Students Only

801. Principles and Philosophy of Guidance. (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. D 18 801 0 0826

802. Introduction to Interaction Process. (1). S/U grade only. A laboratory approach to an examination of the counselor’s role in the counseling process. Prerequisite: CSP 801 or concurrent enrollment. D 18 802 0 0826

803. Counseling Theory. (3). A study of selected theories of counseling. Prerequisite: CSP 801 or concurrent enrollment. D 18 803 0 0826

805. Educating the Poorly Adjusted Individual. (3). Perceptual approach to the problems of emotionally disturbed or delinquent children and youth in both elementary and secondary schools. D 18 805 0 0816

806. Children of Poverty. (3). A perceptual approach to children and youth whose adjustment problems are related to poverty in the affluent society. D 18 806 0 0813

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. Prerequisite: CSP 824. D 18 810 0 0826

820. Occupational Information. (2). The classification, collection, evaluation, and use of informational materials in a guidance program. Study of current trends and developments in the field of occupational guidance. Prerequisite: CSP 801 or concurrent enrollment. D 18 820 0 0826

823. Psychometric Procedures in Counseling. (3). Survey and study of standardized tests and their application in counseling, with an emphasis on their selection, use and interpretation. Study is made of 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: CSP 801, IS 801 or concurrent enrollment. D 18 823 0 0825

824. Techniques of Counseling. (3). Through simulated counseling situations and extensive examination of counseling case studies, techniques of counseling are examined and practiced. Prerequisite: CSP 803. D 18 824 0 0826

825. Group Techniques in Guidance. (2). S/U grade only. Laboratory approach to the study of group formation, process and communication as a tool for guidance services. Prerequisite: CSP 801 or concurrent enrollment. D 18 825 2 0820

830. Introduction to Marriage and Family Counseling. (3). A survey course on marriage and family counseling, including theories, techniques and research in the field. Prerequisite: CSP 803 or departmental consent. D 18 830 0 0826

833. Administration of Guidance Services. (3). Administration theory, with emphasis for the CSP major on relating theory to the problem of administration of guidance services. Prerequisite: 15 hours of CSP courses. D 18 833 0 0826

852. Special Studies. (1-4). A course covering specific topics identified by the department in consultation with institutions or groups of graduate students. Course pro-
855. Individual Intelligence Assessment. (3). Use of individual tests for appraisal of perceptual, language, and academic achievement. Concurrent enrollment in CSP 870 is recommended. Prerequisites: CSP 825 or concurrent enrollment in instructor's consent. D 18 865 0 0825

856. Practicum in Individual Counseling. (3). Supervised practice in individual counseling. Course requirements include at least 60 hours applied experience. Repeatable for credit. Prerequisites: CSP 824, admission to the CSP program and instructor's consent. D 18 866 2 0826

857. Seminar in Guidance. (2). Prerequisite: 15 hours in CSP sequence. D 18 867 9 0826

858. Diagnostic Testing. (2). Use of individual tests, rating procedures and behavioral techniques for appraisal of perceptual development, language development, classification of learning, and academic achievement. Concurrent enrollment in CSP 870 is required. Prerequisites: CSP 823 and instructor's consent. D 18 868 2 0826

862. Presentation of Research. (1-2). A paper to be presented in the form a research proposal. Prerequisites: CSP 830, 30 graduate hours or departmental consent. D 18 864 4 0826

866. Practicum in Guidance Services. (2-3). Supervised practice in administration, test interpretation, group counseling and other activities of the guidance department. Prerequisites: CSP 856 and instructor's consent. D 18 866 2 0826

867. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and counseling. Repeatable for a maximum of three hours each. Prerequisites: CSP 825 and CSP 856 and concurrent enrollment in appropriate lecture-discussion course. D 18 870 2 0826

875-876. Master's Thesis. (2-3). A seminar in the administration, scoring and interpreting of individual assessment. Prerequisites: CSP 856 and concurrent enrollment in an appropriate lecture-discussion course. D 18 876 4 0826

881. Seminar in School Psychology. (1). Current trends and issues within the area of school psychology will be examined. Prerequisites: CSP 856 and concurrent enrollment in appropriate lecture-discussion course. D 18 876 4 0826

893. Counseling Theory II. (3). In-depth critical review of research and applicability of major areas of counseling. Concurrent enrollment in CSP 803 recommended. Prerequisites: CSP 825 and CSP 856 and concurrent enrollment in an appropriate lecture-discussion course. D 18 893 0 0826

914. Consultation Techniques. (3). Intensive study of the literature in counseling, social psychology, and administration that provides an introduction to the evaluation and selection of consultation techniques and the interpersonal context of school and social work settings. D 18 914 0 0826

915. Intervention Design. (2). Designed to give the student further experience and skill in the utilization of interpersonal relations in creating consultation models. Course is designed for individuals and groups experiencing dysfunctional situations. Individual and organizational effectiveness assessment skills are stressed. D 18 915 0 0826

926. Seminar: Selected Topics. (2). Intensive study of current issues: theories, 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. D 18 926 4 0826

946. Practicum in School Psychology. (3). Supervised practice in administration, test interpretation, group counseling and other activities of the guidance department. Prerequisites: CSP 825 and admission to the CSP program and instructor's consent. D 18 946 2 0825

947. Internship: Internal or External. (6-8). The Internship 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 set of unpaid experiences in a variety of settings designed to develop expertise in interpersonal counseling, 24 units. D 18 947 7 0826

948. Practicum in Marriage and Family Counseling. (3). Prerequisites: CSP 300, graduate-student status, and departmental consent. D 18 948 4 0826

977. Internship: School Psychology. (2). Supervised experience as a school psychologist in a school setting. Requires at least 500 hours of applied experience. Repeatable for a maximum of four hours. Prerequisites: CSP 948 and departmental consent. D 18 977 2 0825

990. Special Problems in Counseling and School Psychology. (1-4). Directed problems in research for specialist degree students under supervision of a graduate instructor. Prerequisites: IS 901 and instructor's consent. D 18 990 4 0826

Educational Administration and Supervision

Courses for Graduate/Undergraduate Credit

715. Administration of the Community College. (3). Administration and supervision of the organizational structure of the college and its related areas. Includes study of issues, theories, and related topics. Prerequisite: IS 801. D 18 715 0 0827

725. Administration and Supervision. (1-3). Administration and supervision in the area of educational administration. Prerequisites: IS 801 and instructor's consent. D 18 725 0 0827

736. Medical Administration and Supervision. (2). Administration and supervision of the health services of the community. Prerequisites: IS 801 and instructor's consent. D 18 736 0 0827

750. Experienced Administrator's Workshop. (1-2). A seminar in which selected topics are presented by administrators for review and discussion. Prerequisite: departmental consent. D 18 750 2 0827

752. Supervised Practice. (6). Supervised practice in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 752 4 0827

753. Educational Administration and Supervision I. (3). Administration and supervision in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 753 0 0827

759. Educational Administration and Supervision I. (3). Administration and supervision in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 759 0 0827

765. Educational Administration and Supervision II. (3). Administration and supervision in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 765 0 0827

775. Educational Administration and Supervision III. (3). Administration and supervision in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 775 0 0827

776. Educational Administration and Supervision IV. (3). Administration and supervision in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 776 0 0827

777. Educational Administration and Supervision V. (3). Administration and supervision in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 777 0 0827

778. Educational Administration and Supervision VI. (3). Administration and supervision in the area of educational administration. Prerequisites: IS 801, 30 graduate hours or departmental consent. D 18 778 0 0827

801. Educational Administration Theory. (3). An introduction to the major theories of educational administration. Prerequisites: IS 801 and instructor's consent. D 18 801 0 0827

804. Supervision and the Improvement of Instruction. (3). The application of curricular theory to instructional practice. Prerequisites: IS 801 and instructor's consent. D 18 804 0 0827

810. The Principalship. (3). Developmental programs designed to prepare individuals for administrative positions in the elementary, middle, and high school levels. Prerequisites: IS 801 and instructor's consent. D 18 810 0 0827

814. Instructional Management: Hunter Model. (3). Development of the skills required to assess and assist teachers in improving classroom instruction. Prerequisites: IS 801 and instructor's consent. D 18 814 0 0827
stressed to improve teacher time utilization, pupil motivation and pupil productivity. Prerequisite: EAS 804 or instructor’s consent. D 16 814 0 0829

826. Curriculum Management. (3). A study of curriculum philosophies, theories and development processes. Included are the following topics: examination of recent programs and proposals, curriculum development, mandated school curriculum levels and techniques of program evaluation. Prerequisite: EAS 804. D 16 826 0 0828

828. Management and Evaluation of Alternative Programs. (3). A study of the management of organizational patterns appropriate to continuous learning, nongradedness, individualized instruction, flexible scheduling, team teaching, large group instruction, independent study and other current trends in education. Includes evaluation of children’s learning progress and evaluation of accountability for school administrators, supervisors and teachers. Prerequisite: graduate standing. D 16 828 0 0827

836. School Personnel Management. (3). A concentrated study of staff problems, selection and recruitment, certification, orientation, in-service training, evaluation, transfer and dismissal and retirement. Prerequisite: master’s degree or instructor’s consent. D 16 836 0 0827

842. School Law. (3). General concepts of law, interpretation of statutes and court decisions affecting education and legal responsibilities of school personnel. D 16 942 0 0827

843. Kansas School Law. (3). An examination of specific Kansas legislation and court decisions, their application to educational problems and/or national and state issues in school law. Prerequisite: graduate standing. D 16 843 0 0827

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. D 16 852 0 0827

853. School Business Management. (3). School budgeting processes, accounting, risk management, purchasing and data management procedures. Management of custodial personnel, food practicing administrative services. Prerequisite: EAS 801 and 804 or instructor’s consent. D 16 853 0 0827

860. Research Seminar in Educational Administration and Supervision. (3). Designed primarily for students in advanced study in educational administration. Course content and emphasis are varied according to the needs of students as research proposals and studies are developed, conducted and examined. Prerequisite: completion of master’s degree or advisor’s consent. D 16 860 9 0824

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum two hours of credit. Prerequisite: EAS 860. D 16 862 4 0828

871. Group Process for Administrators and Supervisors. (3). A laboratory-based course in which the various aspects of group processing are experienced by class members in a group setting and activities. These experiences are based upon the assumption that professional administrators and supervisors have carry-over application to their present and future job responsibilities in an organizational setting. D 16 871 0 0828

872. Conflict Management. (3). This course is designed to study the effect of language, attitudes, belief systems, and interpersonal communication and relationships which lead to the types and sources of organizational role and personality conflict. Approaches to interpersonal and organizational conflict resolution will be emphasized. D 16 872 0 0827

875-876. Master’s Thesis. (2-2). D 16 875 4 0827, D 16 876 4 0827

878. Strategies for School Improvement. (3). An examination of organization/structural characteristics of schools as determinants of their effectiveness (i.e., pupil academic achievement). Various school improvement models are considered, 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. D 16 878 0 0827

884. School Plant Design and Operation. (3). Planning new educational facilities based upon educational programs. The evaluation of existing models and operation and maintenance of present school plant are included. Prerequisite: master’s degree or instructor’s consent. D 16 884 0 0827

888. Data Management for School Administrators. (3). An advanced course for microcomputer literacy students in extending administrative data processing skills and concepts of management information systems. Hands-on experience in machine language, and data base management, word processing and spreadsheet programs, using Apple computers. D 16 888 0 0827

890. Special Problems in Administration. (1-4). Directed problems in research for master’s students primarily under supervision of a graduate instructor or instructor’s consent. Prerequisite: departmental consent. D 16 890 3 0827

891. Preservice Building Administrator Practicum. (3). The practicum is designed as a preservice experience for persons seeking building-level administrative certification in Kansas. Emphasis is on the acquisition of knowledge and skill in administrative practices and procedures through a building-level field experience. The student must file an application for the practicum, approved by the supervising EAS faculty member, the cooperating building administrator and the school district coordinator. Prerequisites: EAS 810 or equivalency or concurrent enrollment. D 16 891 0 0827

904. Clinical Supervision for Administrators/Supervisors. (3). An examination of theories of clinical supervision and their application by administrators in the supervisory process. Emphasis is on improving learning experiences for students by facilitating improved or alternative instructional solutions to student, classroom and program learning problems. Prerequisites: EAS 804. D 16 904 0 0827

909. Planning in Educational Administration. (3). Seeking out, analyzing and making appropriate use of information in effective school planning. Examines systems analysis, management information systems in schools, planning and evaluation, and short-range planning. Prerequisites: EAS 801 and EAS 804. D 16 909 0 0827

946, 947, 948, 949. The Internship. (2, 3, 4, 5). Administrative assignment in educational institutions. S/U grading only. Prerequisites: nine semester hours of post-master’s graduate courses in educational administration and supervision and 3.00 graduate point average. Arranged on an individual basis. D 16 946 2 0827, D 16 947 2 0827, D 16 948 2 0827, D 16 949 2 0827

953. Financial Support of Education. (3). Concepts of the financial support of education at local, state and national levels. Emphasis is on methods of taxation, budget preparation and efficient expenditures. Prerequisite: EAS 801 and 804 or instructor’s consent. D 16 953 0 0827

955. Field Projects in Administration and Supervision. (2-6). Field projects are planned to meet a legitimate need in an educational setting in which the student, under professional guidance, can become directly involved. The project may fulfill a community need, a departmental concern or an added investigation or inquiry. Acceptable projects are developmental or must include an appropriate research design. A useful, well-documented report of the project is required with the plan, format and style approved by the student’s committee. Prerequisite: completion of master’s degree. D 16 955 2 0827

960. Seminar in the Process of Administration. (1-3). Concurrent enrollment in the internship is required. S/U grading only. Arranged on an individual basis. D 16 960 9 0827

963. Politics and Power in Education. (3). An examination of the interaction of society and the school as it relates to the administrative processes. Systems of control, social class, power structure, human relations and group dynamics are studied. D 16 963 0 0827

965. School and Community. (3). A study of the relationships between a school and its community and the administrative responses that show promise of improving relationships between students, staff and sponsors. Students analyze data related to a particular school community to further assess the educational needs of both students and non-students and develop more appropriate organizational responses to those needs. D 16 965 0 0827

990. Special Problems in Administration. (1-4). Directed problems in research for master’s and doctoral degree students under supervision of a graduate instructor. Prerequisite: instructor’s consent. D 16 990 3 0827

991. Practicum in Educational Administration and Supervision. (1-2). This course is designed for persons who have been employed in their first administrative position and are seeking certification in Kansas. The course of study is individually designed by an EAS faculty member with the student and his school district. The course addresses the needs of the student and the district. The thrust is to assist the student to extend baccalaureate skills relevant to a particular administrative assignment. The student must register for three hours of credit in EAS 991 to meet certification requirements. S/U grading only. Prerequisites: completion of master’s degree and departmental consent. D 16 991 2 0827

The following abbreviations are used in the course descriptions: S stands for seminar and L for laboratory. For example, 2P 2E means two hours of lecture and two hours of lab.
Physical Education, Health and Recreation

Physical Education

Physical education majors may select the elementary, secondary or field option specialization. They may select both the elementary and secondary specializations by completing the required hours in both specializations and by student teaching in both areas. Students majoring in physical education must meet all College of Education entrance requirements.

Core requirements. Each major student in the elementary or secondary specialization must complete 35 hours in the physical education core, which includes PE 201A, 201B, 201C, 201D, 105, 107, 111, 117, 229, 270, 328, 360, 530, 533 and 544.

Elementary Specialization. All majors in this specialization must complete the core requirements listed above. Fifteen additional hours must be completed by taking the following courses: PE 200, 325, 326, 327, 515 and IE 170.

Secondary Specialization. All majors in this specialization must complete the core requirements listed above. Fifteen additional hours must be completed by taking the following courses: PE 206, 254, 311, 312, 337 and two hours within the area of rhythmic activities (PE 515, aerobics, ballroom dance or folk dance of many countries). Individuals in this program must complete a grade point average of 2.500 for all hours taken and in the major field before being admitted to the student teaching block.

Field Option Specialization. Candidates may select one of the approved options: fitness or sport business management. Individuals in this program must complete a grade point average of 2.500 for all hours taken and in their major area before being admitted to the field option internship.

Fitness: Required courses are PE 105, 106, 107, 111, 115, 117, 229, 270, 326, 331, 360, 481, 530, 533, 544, 547, HS 331, plus at least 29 hours of approved electives.

Sport Business Management. Required courses are PE 111, 117, 210, 229, 280G, 328, 360, 481, 530, 533, 544 and 547, plus at least 31 hours of approved electives.

Recreation

Students majoring in recreation must meet all College of Education entrance requirements and fulfill the following program requirements:

- Complete the core courses—PER 112, 126, 226 and 426.
- Complete the career program—PER 427 and 481.
- Complete 12 hours approved by the recreation coordinator in two of the following areas: physical education, music, art, dance or theater.
- Complete 18 hours of integrated studies courses beyond the requirements of the General Education Program and approved by the recreation coordinator. Ten of these hours must be in upper-division courses. Individuals in this program must complete a grade point average of 2.500 for all hours taken and in their major area before being admitted to the recreation internship.

Areas of Certification

State certification—Drivers' Education. (18 hours.) Required are Psych. 111 and PE 210, 300 and 301. Electives consist of six semester hours in the following areas: visual education, auto mechanics, sociology or courses dealing with human relations, such as American democracy, law enforcement, traffic problems, motorcycle safety or court procedures.

State certification—Health. The courses listed must be included in any program which provides state certification endorsement in health: PE 115, Personal and Community Health (3); PE 117, First Aid (2); PE 210, Safety Education (3); PE 229, Applied Human Anatomy (3); PE 280G, Fitness for Life (2); PE 500, Health Education (2-3); PE 502, Applied Health I (2); PE 504, Applied Health II (2); PE 530, Physiology of Exercise (3); PE 752, Special Studies in Health, Physical Education and Recreation (1-3); Biol. 120Q, Introduction to Microbiology (4); Chem. 111Q, General Chemistry (5); HS 331Q, Principles of Dietetics and Nutrition (3); Psych. 111Q, General Psychology (3); Soc. 211Q, Introduction to Sociology (3); ISSE 310, Methods of Physical Education (3); ISSE 470, Student Teaching—Physical Education (3).

The Wichita State University certification—Coaching. The courses listed must be included in any program which provides Wichita State certification in coaching: PE 220, Officiating Techniques (3); PE 331, Athletic Injuries (2); PE 336, Theory and Organization of Basketball (2); PE 337, Theory and Organization of Track and Field (2); PE 530, Physiology of Exercise (3); PE 570, Psychology of Sport (3). Men must add PE 345, Theory and Organization of Football (2).

All students must have at least three hours from the following electives—PE 206, Aquatics (2); PE 254, Body Mechanics and Gymnastics (3); PE 311, Methods and Techniques I (3); PE 312, Methods and Techniques II (3).

All students also must have at least four hours from the following: PE 201A, PE 201B, PE 201C, PE 201D, Introduction to Activities (2 hours each).

Service Program

Physical education activity courses carry one hour of credit. They fall into nine areas.

Lower-Division Courses

Physical Education Activity Courses.

101. Team Activities. (1). D 13 101 5 0835
102. Individual Activities. (1). D 13 102 5 0835
103. Combatives. (1). D 13 103 5 0835
105. Gymnastics. (1). D 13 105 5 0835
106. Fitness Activities. (1). D 13 106 5 0835
107. Aquatics. (1). D 13 107 5 0835
108. Combined Activities. (1). D 13 108 5 0835
110. Varsity Activities. (1). D 13 110 5 0835

Professional Courses

Professional courses for physical education, health and recreation are offered in the College of Education and, unless otherwise indicated, are open to both men and women.

Lower-Division Courses

111. Introduction to Physical Education. (2). A survey study of health, physical education and recreation as to their identification, purpose and interrelationship in the total field of education. D 13 111 0 0835
112. Introduction to Recreation and Leisure. (3). Introduces students to the basic philosophical and historical foundations of recreation and leisure, considering economic, political and social change. D 13 112 0 0835
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. D 13 115 0 0837
117. First Aid. (2). Steward and/or advanced first aid with certification by the American Red Cross. D 13 117 0 0837
126. Introduction to Therapeutic Recreation. (3). Introduces students to the field of therapeutic recreation. Content areas include history, philosophy, perspectives and concepts, characteristics of populations, types and locations of services and roles and functions of therapeutic recreation professionals. Prerequisite: PER 112. D 13 126 0 0835
150. Workshop. (1-3). D 13 150 2 0835
Upper-Division Courses

300. Basic Driver Education and Traing I. (3). D 13 300 0 0836

301. Advanced Driver Training II. (3). D 13 301 2 0836

202. Recreation for Special Populations. (3). Designed to increase sensitivity to recreational needs of handicapped or other special groups. Cultural and personal attitudes will be explored. Physiological, psychological, and social characteristics are discussed. Implications for providing recreation services are emphasized (including leadership, supervision, and program design). Prerequisites: PER 112, 126, 226, 491(1). D 13 302 0 0836

310. Methods and Techniques I. (3). Emphasis upon methods, techniques, teaching progression, analysis, and skill development. Activities covered include badminton, tennis, flag football, fencing, golf, bowling, archery, and combatives. Prerequisites: PER 201B, PE 270, 310, 311A or departmental consent. D 13 311 1 0835

312. Methods and Techniques II. (3). Emphasis upon methods, techniques, teaching progression, analysis, and skill development. Activities covered include softball, volleyball, handball, racquetball, table tennis, soccer, basketball, and swimming. Prerequisites: PER 201C, PE 270, 300, 301 or departmental consent. D 13 312 1 0835

325. Preschool Physical Education. (3). Designed to introduce preschool children to the world of physical activity. Prerequisites: PE 201C, PE 270, 300 or departmental consent. D 13 325 1 0835

326. Physical Education in the Primary Grades. (3). 2L. The second in the series designed for a major in physical education with an emphasis in elementary school physical education. Focuses on development of motor skills for children in grades K-3. The course includes 15 hours of laboratory experiences with primary school children. D 13 326 0 0836

327. Physical Education in the Intermediate Grades. (3). 3R; 2L. The final course in the series designed for an emphasis in elementary school physical education. The course assists students in developing the necessary skills to teach physical education in grades four, five, and six. The course includes 15 hours in laboratory experiences with intermediate grade school children. D 13 327 1 0835

328. Kinesiology and Biomechanics. (3). Designed to introduce students to the kinesthetics and mechanics of human motion, with emphasis on performance of sport activities. D 13 328 0 0836

331. Athletic Injuries and Training Techniques. (2R; 1L). Designed to assist the student 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, the students participate in at least two hours per week in a physical activity with persons impaired, disabled or handicapped. Prerequisites: E 229 or departmental consent. D 13 331 0 0836

336. Theory and Organization of Basketball. (2). Designed to increase sensitivity to recreational needs of handicapped or other special groups. Cultural and personal attitudes will be explored. Physiological, psychological, and social characteristics are discussed. Implications for providing recreation services are emphasized (including leadership, supervision, and program design). Prerequisites: PER 112, 126, 226, 491(1). D 13 336 0 0836

345. Theory and Organization of Football. (2). Designed to increase sensitivity to recreational needs of handicapped or other special groups. Cultural and personal attitudes will be explored. Physiological, psychological, and social characteristics are discussed. Implications for providing recreation services are emphasized (including leadership, supervision, and program design). Prerequisites: PER 112, 126, 226, 491(1). D 13 345 0 0836

346. Administration of Recreation and Leisure Services. (3). Designed to increase sensitivity to recreational needs of handicapped or other special groups. Cultural and personal attitudes will be explored. Physiological, psychological, and social characteristics are discussed. Implications for providing recreation services are emphasized (including leadership, supervision, and program design). Prerequisites: PER 112, 126, 226, 491(1). D 13 346 0 0836

427. Internship in Recreation. (8). Designed to increase sensitivity to recreational needs of handicapped or other special groups. Cultural and personal attitudes will be explored. Physiological, psychological, and social characteristics are discussed. Implications for providing recreation services are emphasized (including leadership, supervision, and program design). Prerequisites: PER 112, 126, 226, 491(1). D 13 427 0 0836
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. Prerequisite: PE 530 or equivalent. D 13 440 1 0835

481. Cooperative Education. (1-18). A course designed to allow students to participate in the Cooperative Education program. Offered Cr/NrC only. D 13 481 2 0835

Courses for Graduate/Undergraduate Credit

500. Health Education. (2-3). Health problems and organization of materials for health instruction. Individual projects are required for graduate students. D 13 500 2 0837

502. Applied Health I. (2). Introduction to public health problems and practices. Field excursions are arranged. Prerequisite: departmental consent. D 13 502 2 0837

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. D 13 504 2 0837

515. Rhythmic Activities in the Elementary School. (2). This course is designed to teach methodology and curricular content of rhythmic activities appropriate for elementary school children. D 13 515 1 0835

530. Physiology of Exercise. (3). 3R. To provide the student with a working knowledge of human physiology as it relates to exercise. D 13 530 1 0835

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. D 13 533 0 0835

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. D 13 544 2 0835

547. Field Option Internship. (8). Culminating activity for students in fitness, sports business, safety or athletic training. Students spend the equivalent of full-time employment in the appropriate agency for one full semester. Prerequisites: senior standing and departmental consent, PE 481, 2.500 overall GPA, 2.500 major GPA. D 13 547 2 0835

570. Psychology of Sport. (3). An in-depth examination of the psychology of motor learning and its implications for the teacher-coach. D 13 570 0 0835

593. Independent Study. (1.3). Prerequisite: departmental consent. D 13 593 0 0835

750. Workshop in Education. (1.4). D 13 750 2 0835

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. D 13 752 0 0835

781. Cooperative Education Field Study. (1-8). The goal of this course is to provide 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/NrC only. D 13 781 2 0835

Courses for Graduate Students Only

800. Recent Literature in Health, Physical Education and Recreation. (3). Survey and critical analysis of research and other pertinent materials in the field. D 13 800 0 0835

801. Seminar in Sports Administration. (3). This course is designed to provide the student with a comprehensive over-view of problems relating to sports administration programs. A sample of topics covered include: public relations, promotion, personnel management, finance, accounting, contest management and travel. D 13 801 0 0835

810. Adapted Physical Education. (3). Philosophy, principles and methods of adapting physical education and recreational activities to the needs of the handicapped and the exceptional individual. Laboratory experience is provided. Prerequisite: PE 328 or departmental consent. D 13 810 1 0819

812. Advanced Techniques in Physical Education. (3). Comprehensive coverage of selected physical activities, with special emphasis on class procedures. Laboratory experiences are included. D 13 812 1 0835

815. Fitness Assessment and Exercise Prescription. (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. Prerequisites: PE 530 or equivalent and graduate standing. D 13 815 0 0835

825. Physical Education in Elementary Schools. (2). New concepts, recent trends, methodology, programming and supervision. This course is designed for the elementary teacher and physical education specialist. D 13 825 0 0835

826. Movement Education I. (3). This course is designed to introduce instructional techniques and curricular content utilized in the teaching of movement exploration (educational gymnastics and creative rhythms). The measurable aspects of weight, space, time and flow will be studied to provide insight into the noncompetitive instruction of children when teaching movement skills. D 13 826 2 0835

840. Seminar in Advanced Methods. (2). An examination and discussion of the factors that affect the teaching-learning process applicable to physical education. Emphasis is on individual understanding and improvement as students analyze their own teaching effectiveness. D 13 840 9 0835

847. Internship. (6-12). Internship in selected areas of specialization in exercise science or sports administration. Prerequisite: departmental consent. D 13 847 2 0835

860. Research Methods in Health, Physical Education and Recreation. (3). An introduction to research in health, physical education and recreation. Included in the course content are: (1) importance and meaning of research, (2) a literature survey, (3) laboratory and non-laboratory studies and (4) the research report. D 13 860 0 0835

875. Thesis. (2). Prerequisites: IS 704 and PE 860. D 13 875 4 0835

876. Thesis. (2). Prerequisites: IS 704 and PE 860. D 13 876 4 0835

880. Analysis of Motor Skills. (3). Movement and sport skills analyzed in terms of mechanical principles by means of films and experimentation. D 13 880 0 0835

890. Problems in Health, Physical Education and Recreation. (1-4). Directed reading and research under supervision of a graduate instructor. D 13 890 3 0835

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 2R, 2L means 2 hours of lecture and 2 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 The Wichita State University. The curriculum provides a rigorous, 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 bachelor's degree or allows them to continue in graduate studies for a more active participation in research and advanced study.

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.

The undergraduate curricula of the aeronautical, electrical, industrial, and mechanical engineering departments are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Degrees Offered

Undergraduate

The College of Engineering is organized into several degree-granting departments: aeronautical, electrical, industrial, and mechanical. Undergraduate programs in these departments lead to the Bachelor of Science in each of these areas. A degree program for the Bachelor of Science in Engineering (BS) also allows students to pursue in-depth studies in additional fields, such as computer science, bioengineering, and engineering management, as well as other interdisciplinary programs.

The college cooperates with Kansas Newman College in a dual degree program in electrical engineering and mathematics. Inquiries regarding the program should be addressed to the chair of the electrical engineering department.

Graduate

A Master of Science (MS) is offered in aeronautical, electrical, and mechanical engineering, and a Master of Science in Engineering Management Science (MSEMS) is offered by the industrial engineering department.

A Doctor of Philosophy (PhD) in engineering is offered by the four departments of specialization, including analytical and computational fluid mechanics, applied statistical methods, avionics, biomechanics, communications, computers, flight control systems, engineering management, science, engineering materials, electromagnetic fields, ergonomics, rehabilitation, failure analysis, heat transfer, information systems, manufacturing, mechanical design, production processes, productivity enhancement, propulsion, signal processing, structural dynamics, structures, and thermodynamics. See The Wichita State University Graduation Bulletin for more information about the graduate program.

Policies

Admission

Students requesting a transfer to the College of Engineering must satisfy the following admission requirements:

1. An overall 2.000 grade point average and a WSU 2.000 grade point average.
2. Completion of 24 semester credit hours of college-level work.
3. Declaration of a specific engineering major.
4. Completion of each of the following courses with a grade of C or better: (a) English 101; (b) English 102, Speech 111 or Speech 112; (c) Math. 2420 or its equivalent; and (d) one required basic science course.

Engineering students who have not had high school physics are permitted to register for Phys. 3130 if the mathematics prerequisite has been fulfilled. Since most students in Phys. 3130 have had some preparatory physics, students without this background should plan for extra study time in this course. Engineering students who have not had high school physics are permitted to register for Phys. 2130. These students are then required to take Phys. 3140 when they have fulfilled prerequisites for this course, which are: Math. 243 with a grade of C or better and Phys. 2130 with consent of the physics department.

Probation

Students are placed on academic probation if one or more of the following three grade point averages is less than 2.000 and if they have attempted at least 12 hours in that grade point average at The Wichita State University: (1) overall grade point average, (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, P, W, Cr, NCr, I, S, or U. Academic probation is not removed until all three grade point averages are at least 2.000.

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 adviser with the approval of the student's department chairperson.

Academic Dismissal

Students are subject to academic dismissal from the College of Engineering when they are on academic probation because of their overall grade point average, WSU grade point average and/or engineering major grade point average and they fail to receive a 2.000 grade point average in the next 12 hours attempted in the affected grade point average(s) after being placed on academic probation.

Other Policies

Students must file an application for degree card in the engineering dean's office two semesters preceding their final semester.

Students are not allowed credit toward graduation for work in excess of one-quarter of their total hours. At midterm, reports of unsatisfactory grades are sent to the students.

Students enrolled in the College of Engineering may not enroll in more than 20 semester hours of work 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 adviser, reduce their enrollments to a level appropriate to their work load.

In order to insure an equitable distribution of class cards and to aid each
student's timely progress toward a degree, a student who drops a course taught by the College of Engineering any time after the first day of classes will not be permitted to preregister for the same course during the semester in which the drop occurs or during the next regular registration period. During the late registration period, class cards will only be issued as available with departmental consent. A student may petition the chairperson of the engineering department where the course is taught for an exception to this rule.

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, unless the course is designated a general studies course by the University. Because there are legitimate reasons for qualified nonengineering students to enroll in an engineering course at the 300 level or above, the chairperson of the department offering the course will consider petitions for exceptions to the preceding statement.

Graduation Requirements

University Requirements

For new freshmen entering the University, requirements for the College of Engineering are:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic skills</td>
<td>12</td>
</tr>
<tr>
<td>Humanities and fine arts*</td>
<td>9</td>
</tr>
<tr>
<td>Social and behavioral sciences**</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics and natural sciences Satisfied by college requirements</td>
<td></td>
</tr>
</tbody>
</table>

Elective distribution courses . Satisfied by college requirements.

To qualify for graduation, all engineering students must complete each of the following courses with a grade of C or better: English 101, English 102, Speech 111 or 112.

A minimum of 17 hours of humanities and fine arts and social and behavioral sciences is required by the Engineering Accrediting Board. In addition, at least two courses are required in one of the departments in humanities and fine arts or social and behavioral sciences. The two-course sequence must include at least one course numbered 200 and above.

At least nine hours of general studies courses must be taken to satisfy University requirements.

For a complete explanation of the General Education Program, see the Academic Information section of the Catalog.

General Engineering Requirements

All engineering students follow the same general curriculum for the first two years. For administrative purposes, students are requested to choose a departmental curriculum in which to study, but they may change to another curriculum during this period without losing credit toward graduation. All engineering programs are designed to meet ABET accreditation criteria and must include:

1. The equivalent of approximately 2½ years of study in the area of mathematics, science and engineering. The course work should include at least one year of mathematics beyond trigonometry and basic sciences, one year of engineering sciences and one-half year of engineering design.

2. The equivalent of one-half year as the minimum content in the area of the humanities and social sciences. While the objective of a broad, liberal education is served through independent humanities and social science courses, courses treating such subjects as accounting, industrial management, finance, personnel administration and ROTC studies do not fulfill this objective. Likewise, skills, theory and technical courses in fields such as musicology, linguistics and speech do not fulfill the humanities/social science objective. If there are questions regarding the selection of specific courses, contact the engineering records office for assistance and interpretation.

Each of the engineering curricula consists of three parts: (1) the general education requirements of the University, (2) an engineering core program and (3) specialized departmental courses.

To satisfy the general education requirements of the University, the student must complete courses in the following two divisions: (1) Division A, Humanities and Fine Arts and (2) Division B, Social and Behavioral Sciences. A minimum of six hours is required in the social and behavioral sciences and a minimum of nine hours in humanities and fine arts. At least nine hours of General Studies courses must be taken to satisfy University requirements. For a more detailed description of general education requirements, see the Academic Information—General Education Program section of the Catalog.

Every engineering student is required to complete a total of 19 hours of courses from the following engineering core courses. Some of these courses are required as prerequisites for the departmental offerings; the remainder of courses should be selected in consultation with a faculty adviser.

Engineering Core (13 Hours Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>IE 355, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ME 398, Thermodynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to the engineering core requirements, students must complete:

1. A minimum of 33-34 hours of engineering science, depending upon curriculum.

2. A minimum of 17 hours of design, synthesis or systems engineering.

3. A minimum of 24 hours of engineering courses taken outside their major department.

4. 26 hours of University requirements as described earlier.

5. A minimum of 17 hours of mathematics and 17 hours of natural sciences.

6. A minimum of 17 hours of humanities and social sciences.

7. Three to four hours of a natural science elective chosen from the following list in consultation with the departmental adviser: Biol 203Q, Botany 309G; Chem. 112Q, 546; Geol. 1110, 3020; Phys. 551, 555, 621, 714.

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 in the minimum time and can satisfy all University course requirements and prerequisites for engineering students. Students should discuss any desired deviation from this sequence with an engineering faculty adviser.

Students who have a 2.500 overall grade point average may elect to enroll under the A/Pass/Fail option in a total of three regularly graded courses outside their major or supporting courses. Under this option the grade for the course is recorded as A if class performance is at this level and P if performance is at the B, C or D level. Failures are recorded as F. Students enrolled before Fall 1973 who have not used up the maximum number of 24 semester hours in the Credit/No Credit option may enroll in a maximum of three courses under the A/Pass/Fail option provided that the total...
number of hours they have taken under both options does not exceed 24 hours.

Interdisciplinary Fields (Bachelor of Science in Engineering)

The College of Engineering offers special 132- to 135-hour programs designed to help students who wish to pursue studies in interdisciplinary fields. The Bachelor of Science in Engineering (BSE) program permits the development of combinations of specialties while providing for other fields of knowledge and expertise.

The BSE program is designed to meet the needs of students who wish to pursue studies in specific fields, such as computer science, premedical/biomedical engineering, engineering management, engineering analysis or other special engineering areas. Students in this program meet essentially the same basic requirements as other engineers do in three years of study and then complete courses—either inside or outside of the College of Engineering—for their specialized interests.

The BSE program is administered by a committee with the dean of engineering as chairperson. All applicants for the BSE are referred to this committee, which assigns an engineering faculty adviser for each student. All student programs must be approved by the committee. The Office of Engineering Records has the details for student advising.

The University requirements and engineering course requirements selected must be consistent with the following requirements. The specialty field must have a focus (depth) and consist of a select number of courses for specified areas. All students, in satisfying the academic guidelines, are expected to undertake a senior project during their last year of study. The project should be in the student's chosen field and be co-sponsored by an engineering adviser and an adviser from the student's specialty field.

Students can major in computer science while pursuing either the Bachelor of Science in Engineering (BSE) in the College of Engineering or the Bachelor of Science (BS) or the Bachelor of Arts (BA) in Fairmount College of Liberal Arts and Sciences.

For the BSE, the University requirements and general engineering requirements are the same as described in the two previous sections. Specific program and course requirements for the BSE may be obtained from a check sheet upon request from an engineering faculty adviser.

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 alternates paid professional work periods with classroom periods between the freshman and senior years. The two most typical plans are illustrated in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Semester</td>
<td>FS Su</td>
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<tr>
<td>Plan A</td>
<td>C CC</td>
<td>C WC</td>
<td>W CC</td>
<td>W CC</td>
<td>C C</td>
</tr>
<tr>
<td>Plan B</td>
<td>C CC</td>
<td>W CC</td>
<td>W CC</td>
<td>C C</td>
<td>C C</td>
</tr>
</tbody>
</table>

C indicates in college; W indicates at work.

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B.

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 character and personality must be acceptable to the cooperating employer. Transfer students with the above qualifications will be accepted after one semester of academic residence at WSU. To continue in the program, a student must maintain a satisfactory academic standing.

Students interested in participating in the program should contact the College of Engineering co-op coordinator who will provide the necessary application information. Upon acceptance into the program, the coordinator will assist the student in arranging interviews with cooperating industries.

Engineering—General Education

The following courses explore general education engineering topics.

Lower-Division Course

125. Introduction to Engineering Concepts. (2). 4L. An introduction to the orderly approach to problem solving used in engineering by guiding the student through a comprehensive design project. Emphasis is put on problem formulation and solution techniques as they are required in the design project. Corequisites: Math 2420 and English 101. Not open for enrollment to students with more than 48 hours of credit. E 10 125 1 0901

Upper-Division Courses

300G. Technology and Society. (3). A course to demonstrate and explain—in depth but without technical jargon—developments in technology. Emphasis is placed on conceptual understanding of relationships between technology and the user. Responsibility of nonengineers to be familiar with technical development is stressed. Guest lecturers and demonstrations are used extensively. For nontechnical majors, no credit is given toward any major in engineering. Prerequisite: upper-division standing. E 10 300G 0 0901

400. System Modeling. (3). A consideration of interdisciplinary subjects to analytically develop simple models of real systems. These models are then fully exploited to show similarities between systems performance and analysis techniques. Examples are taken from engineering, sociology, economics and technology. Prerequisite: senior standing recommended. E 10 400 0 0901

Courses for Graduate/Undergraduate Credit

510. Topics in Engineering. (3). This course demonstrates the relationship between engineering and mathematics and the natural and physical sciences. The role of these disciplines in the practice of engineering will be shown through specific examples. Prerequisites: Math. 112 and two semesters of natural science (a semester of physics preferred). E 10 510 0 0901

565. Computer Graphics. (3). 2R; 2L. Forms of computer graphics, input-output devices, generation of points, vectors, etc. Included are interactive versus passive graphics and the mathematics of three dimensions, projections and the hidden line problem. Animated movies, computer-aided design and instruction are included as well as applications. Prerequisites: Math. 344, EE 199 or EE 327 or equivalent. E 10 565 1 0901

600. Integration of Engineering Concepts. (3). A course designed for senior students to integrate their coursework into a coherent concept of the major principles, tools and techniques of engineering. Prerequisites: senior standing, preferably taken last semester of undergraduate work. E 11 600 0 0901

Courses for Graduate Students Only

960. Advanced Selected Topics in Engineering. (1-3). New or specialized advanced topics in engineering are presented under this listing. Repeatable for credit when subject material warrants. Prerequisite: instructor's consent. E 10 960 0 0901

976. PhD Dissertation. (1-16). Repeatable up to a maximum of 36 hours. Prerequisite: admission to doctoral aspirant status. E 10 976 4 0901

990. Advanced Independent Study in Engineering. (1-3). Arranged individual, inde-
Aeronautical Engineering

Aeronautical engineering students at Wichita State acquire competence in professional fields such as aerodynamics, flight mechanics, propulsion, control systems and structures. The aeronautical engineering curriculum offers students opportunity to develop strong fundamental knowledge in mathematics, physics and general engineering sciences. Engineers educated in this field also find challenging careers in other industries where the emphasis is in such areas as engines and propulsion, structures and fluid mechanics.

Both the educational and research programs of the aeronautical engineering department specialize in the study of winged vehicles for flight in the atmosphere. With Wichita a major center of aviation, many upper-division students receive valuable experience working during the summer at the local plants of Beech Aircraft Corporation, Boeing Military Airplane Company, Cessna Aircraft Company and Gates Learjet Corporation.

Many graduate and undergraduate students also work with professors on research projects supported by such sponsors as NASA or one of the local aviation industries. The well-equipped aeronautical laboratories include the Walter H. Beech Wind Tunnel, which is one of the largest and most modern on any campus in the world.

Bachelor of Science Degree in Aeronautical Engineering

Sequence of Courses

The undergraduate program requires the completion of 133 semester hours for graduation, minus advanced placement credit. The suggested course of study for aeronautical engineering students is given in the accompanying table.

Model Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Eng. 101 and 102</td>
<td>College English I and II</td>
<td></td>
</tr>
<tr>
<td>Chem. 1113</td>
<td>General Chemistry</td>
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<tr>
<td>Math. 242Q and 243</td>
<td>Calculus I and II</td>
<td></td>
</tr>
<tr>
<td>Phys. 313Q and 315Q</td>
<td>University Physics I</td>
<td></td>
</tr>
<tr>
<td>IE 222, Engineering Graphics</td>
<td>AE 327, Engineering Digital Computation</td>
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Sophomore

<table>
<thead>
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<tbody>
<tr>
<td>Speech 111</td>
<td>Basic Public Speaking</td>
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<tr>
<td>Math. 311, Introduction to Linear Algebra</td>
<td></td>
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</tr>
<tr>
<td>Math. 344, Calculus III</td>
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<tr>
<td>Math. 550, Ordinary Differential Equations</td>
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<tr>
<td>Phys. 314Q, University Physics II</td>
<td>AE 323, Engineering Mechanics: Statics</td>
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<tr>
<td>AE 324, Introduction to Aeronautical Engineering</td>
<td>AE 333, Mechanics of Deformable Solids I</td>
<td></td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics</td>
<td>ME 398, Thermodynamics I</td>
<td></td>
</tr>
<tr>
<td>ME 306, Materials Engineering</td>
<td>AE 424, Aerodynamic Theory</td>
<td></td>
</tr>
<tr>
<td>ME 400, Fluid and Heat Flow</td>
<td>AE 532, Propulsion</td>
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<tr>
<td>Engi. 565, Computer Graphics</td>
<td>EE 382, Electrical Dynamics</td>
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</tr>
<tr>
<td>AE 327, Engineering Digital Computation</td>
<td>Natural sciences electives</td>
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</tr>
<tr>
<td>AE 512 Experimental Methods in Aerodynamics</td>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
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</tr>
<tr>
<td>AE 514, Flight Mechanics</td>
<td>AE 525 and 625, Flight Structures I and II</td>
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<tr>
<td>AE 608, Systems Dynamics</td>
<td>AE 628, Airplane Design</td>
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<tr>
<td>AE 608B, Airplane Design</td>
<td>Humanities and fine arts or social and behavioral sciences electives**</td>
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<tr>
<td>AE 512 Experimental Methods in Aerodynamics</td>
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Junior

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<tr>
<td>ME 360, Materials Engineering</td>
<td>AE 424, Aerodynamic Theory</td>
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<tr>
<td>ME 400, Fluid and Heat Flow</td>
<td>AE 532, Propulsion</td>
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<tr>
<td>AE 327, Engineering Digital Computation</td>
<td>Natural sciences electives</td>
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<tr>
<td>ME 400, Fluid and Heat Flow</td>
<td>Humanities and fine arts or social and behavioral sciences electives**</td>
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Senior

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AE 327, Engineering Digital Computation</td>
<td>Natural sciences electives</td>
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</tr>
<tr>
<td>AE 512 Experimental Methods in Aerodynamics</td>
<td>Humanities and fine arts or social and behavioral sciences electives**</td>
<td></td>
</tr>
</tbody>
</table>

Lower-Division Courses

281A. Co-op Education, (1). This course 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. Prerequisite: Approval by appropriate faculty sponsor. E 10 281A 2 0901

281P. Co-op Education, (1). This course 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. This course is 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 only). Offered 30 hours toward a bachelor of science in aeronautical engineering degree and approval by appropriate faculty sponsor. E 10 281P 2 0901

Upper-Division Courses


324. Introduction to Aircraft Aerodynamics. Prerequisites: AE 323 and Math. 344. E 11 324 0 0921

324. Introduction to Aeronautical Engineering. Prerequisites: AE 323 and Math. 344. E 11 324 0 0921

325. Introduction to Aeronautical Engineering. Prerequisites: AE 323 and Math. 344. E 11 325 0 0921

328. Aircraft Design. Prerequisites: AE 323 and Math. 344. E 11 328 0 0921


420. Aircraft Aerodynamics I, Qualitative Aspects. Prerequisites: AE 327 and Math. 344. E 11 420 0 0921

420. Aircraft Aerodynamics I, Qualitative Aspects. Prerequisites: AE 327 and Math. 344. E 11 420 0 0921
Graduate/Undergraduate Credit


481A. Co-op Education. (1). This course 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. This course is intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Grade is S/U unless student has received permission for course to be used as a technical elective. Prerequisites: junior standing and approval by the appropriate faculty sponsor. May be repeated. E 10 481 A 2 090 1

481P. Co-op Education. (1). This course 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. This course is intended for students who will be working full time on their co-op assignment and need not be enrolled in any other course. Grade is S/U. Prerequisites: junior standing and approval by appropriate faculty sponsor. May be repeated. E 10 481 P 2 090 1

Courses for Graduate/Undergraduate Credit

508. Systems Dynamics. (3). Lumped parameter modeling; classical, numerical, transform and state model methods of solution; introduction to systems with feedback, analog experiment design. Prerequisites: AE 373 and Math. 550. E 11 508 1 090 1


525. Flight Structures I. (3). Stress analysis of flight vehicle components. Prerequisites: AE 324, AE 333, Math. 550 and ME 350 with which may be taken concurrently. E 11 525 0 090 2


532. Propulsion. (3). Turbomechanical and turbomachines engines; cycle analysis and performance prediction, study of inlet and exhaust problems, and integration with airframe. Pressure elements, turbines and propellers—theory and performance. Prerequisites: AE 327 and AE 424, may be taken concurrently. E 11 532 0 090 2

560. Selected Topics in Aeronautical Engineering. (1-3). Prerequisites: departmental consent. E 11 560 0 090 2

625. Flight Structures II. (3). 2R; 2L. Structural analysis of flight vehicle components. Prerequisites: AE 420, AE 424, AE 508. E 11 625 0 090 2


633. Mechanics of Deformable Solids II. (3). The course is an extension of AE 333. Typical topics studied are transformation of stress, strain and displacement components, torsional torsional members, curved beams, beams with unsymmetric cross sections, energy methods and the finite element method of analysis, stress concentration, theories of large deflections, finite element methods, etc. Prerequisite: AE 333. E 11 633 0 092 1

653. Basic Composite Material Technologies. (3). An introduction to the basic composite material technologies including mechanical behavior, material classification, testing for mechanical properties, manufacturing methods, nondestructive inspection and design. Prerequisite: AE 333. E 11 653 0 092 1

664. Field Analysis. (3). Potential theory: applications of the equations of Poisson and Helmholtz and of the diffusion and wave equations to various field and flow phenomena. Analysis of representative problems is also made. Prerequisites: ME 400. E 11 664 0 092 1

675. Selected Topics in Aeronautical Engineering. (1-3). Prerequisite: departmental consent. E 11 675 0 090 2

678. Selected Topics in Engineering Mechanics. (1-3). Prerequisite: departmental consent. E 11 678 0 090 2

677. 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 for multidegree of freedom systems. An introduction to continuous systems is given. Prerequisites: Math. 550 and AE 373. E 11 677 0 090 2

700. Structural Dynamics I. (3). Matrix methods for the analysis of the free and forced vibrations of multiple degree of freedom structures. Prerequisite: AE 677. E 11 700 0 090 2

709. Flight Stability and Control. (3). Comprehensive analysis of flight dynamic stability and control and an introduction to the analysis of closed-loop flight systems. Prerequisite: AE 514. E 11 709 0 090 2

711. Aerodynamics of Nonviscous Fluids. (3). A study of equations of motion, potential flow, conformal transformations, finite wing theory and nonsteady airfoil theory. Prerequisite: AE 424 or 420 or ME 621. E 11 711 0 090 2

716. Aerodynamics of Compressible Fluids I. (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 functions, method of characteristics, conical shocks and subsonic similarity laws. Prerequisite: AE 424, AE 420, AE 508 or equivalent. E 11 716 0 090 2

731. Analysis of Elastic Solids I. (3). The equations of elasticity are developed and used to design and analyze deformations in two dimensional (plane stress and plane strain) problems. Additional typical topics are: analysis of isotropic, orthotropic and composite plates; energy methods of analysis; and numerical methods of analysis such as finite elements, finite differences and collocation. Credit will not be granted for both AE 730 (no longer offered) and 731. Prerequisite: instructor's consent. E 11 731 0 090 2

753. Mechanics of Fiber Composites. (3). An introduction to generalized Hook's Law for deformable solids; two-dimensional orthotropic and anisotropic stress-strain relations applicable to a lamina of fiber composite; stiffness and strength of laminates made of unidirectional and simple laminae and laminated constructions; Simple laminate and filament wound composite products made of advanced fibrous composites such as graphite-epoxy, kevlar-epoxy, boron-epoxy, etc., are designed and analyzed. Prerequisites: AE 333 and Math. 311 or instructor's consent. E 11 753 0 090 2

760. Selected Topics in Engineering Mechanics. (1-3). New or special courses are
presented under this listing on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 11 760 0 0921

761. Selected Topics in Aerodynamics and Fluid Mechanics. (1-3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 11 761 0 0921

762. Selected Topics in Propulsion. (1-3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 11 762 0 0920

773. Engineering Mechanics: Dynamics II. (3). A study of kinematics and kinetics of particles and rigid bodies for two- and three-dimensional motion, with an introduction to vibratory motion. Lagrange's equations are included. Prerequisite: AE 373 or equivalent. E 11 773 0 0921

Courses for Graduate Students Only

801. Structural Dynamics II. (3). A study of vibration of strings and membranes, longitudinal, torsional, and lateral vibration of bars, lateral vibration of plates and shells; classical, numerical, and energy solutions; and an introduction to problems of aerelasticity. Prerequisite: AE 677. E 11 801 0 0920

812. Aerodynamics of Viscous Fluids. (3). Viscous flow, boundary layers. Prerequisite: AE 424 or 420 or ME 621. E 11 812 0 0920

817. Transonic Aerodynamics. (2). Experimental and analytical difficulties in flow and flight near Mach one. Basic equations and solution methods; linearized potential equation shock-impulse; criteria on wings; Transonic Area Rule; nozzle throat design; detached shock wave computations; computational methods. Prerequisites: AE 424, 420 or equivalent; and AE 711 or 716. E 11 817 0 0902

822. Finite Element Analysis of Structures. (3). Analysis of structures by the direct stiffness method and comparison of methods and selected topics in finite element analysis. Prerequisite: AE 333 and instructor's consent. E 11 822 0 0920

831. Analysis of Elastic Solids II. (3). The course is a continuation of AE 731 with topics taken from elasticity, fracture mechanics, etc. Methods of analysis include energy methods and numerical methods such as finite elements and collocation. E 11 831 0 0921

838. Random Vibration. (3). Includes characterization, transmission and failure of mechanical systems subjected to random vibration. Analysis and measurement methods for random data are included. Prerequisite: instructor's consent. E 11 838 0 0921

860. Selected Topics in Aeronautical Engineering. (1-3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 11 860 0 0902

876. MS Thesis. (1-6). E 11 876 4 0902

878. Directed Studies. (1-2). A course involving directed study under the supervision of a graduate faculty member. A written report is required. Repeatable toward an MS directed study project up to three hours. Prerequisite: graduate standing. E 11 878 4 0902

913. Aerodynamics of Aeroelasticity. (3). A study of thin airfoils and finite wings in steady flow and thin airfoils oscillating in incompressible flow. Extension to compressible three-dimensional airfoils and modern methods for low aspect ratio lifting surfaces are included. Prerequisites: AE 711 and 677 or instructor's consent. E 11 913 0 0920

916. Aerodynamics of Compressible Fluids II. (3). An exploration of perfect gas flows past bodies of revolution. Also included are axisymmetric method of characteristics, hyperbolic and transonic similarity, Newtonian theory, high temperature gases in equilibrium and frozen flows and on- and two-dimensional moving shock waves. An introduction is made to separated flows and jet mixing. Prerequisite: AE 716. E 11 916 0 0920

936. Theory of Plasticity. (3). Includes criteria of yielding, including plastic stress-strain relationships and stress and deformation in thick-walled shells, rotating discs and cylinders; bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Two-dimensional and axially symmetric problems of finite deformation and variational and extremum principles are included. Prerequisite: AE 731. E 11 936 0 0921

976. PhD Dissertation. (1-16). Repeatable up to a maximum of 36 hours. Prerequisite: admission to doctoral aspirant status. E 11 976 4 0902

990. Advanced Independent Studies in Aeronautical Engineering. (1-3). Prerequisite: instructor's consent. E 11 990 3 0920

Electrical Engineering

In the electrical engineering department emphasis is placed on the intensive study of physical laws appropriate to the study of modern electrical devices; including electrical machines. Courses stress the laws governing the individual behavior of electrical devices and the interconnection of devices. Analysis and synthesis of electrical networks or systems are of particular concern in specialized courses. The undergraduate program in electrical engineering is flexible enough to allow students to concentrate their electives in communications and signal processing, control systems, computer science, electric power systems, digital systems, electromagnetics and electronics.

Bachelor of Science Degree in Electrical Engineering

Sequence of Courses

Electrical engineering students must have a strong interest in mathematics and physics. As part of the curriculum, 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. This program requires the completion of 132 semester hours for graduation, minus hours commensurate with advanced placement credit.

Specific requirements and a suggested semester breakdown for the electrical engineering program are given in the accompanying table.

Model Program

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
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<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, University Physics I*</td>
<td>4</td>
</tr>
<tr>
<td>EE 199, Engineering Computing Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts electives</td>
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Sophomore

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<tr>
<td>Math. 344, Calculus III</td>
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<td>Math. 550, Ordinary Differential Equations</td>
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<td>Phys. 314Q, University Physics II</td>
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<td>AE 323, Engineering Mechanics Statics</td>
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<tr>
<td>IE 355, Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
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<tr>
<td>ME 398, Thermodynamics</td>
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<td>Humanities and fine arts or social and behavioral sciences electives</td>
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Junior

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>EE 363, Electromagnetic Field Theory I</td>
<td>3</td>
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<tr>
<td>EE 498, Electromechanical Energy Converters</td>
<td>4</td>
</tr>
<tr>
<td>EE 492, Electronic Circuits I</td>
<td>3</td>
</tr>
<tr>
<td>EE 580, Transient and Frequency Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Math. 671, Probabilistic Models and Statistical Methods</td>
<td>3</td>
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<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
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<td>Technical electives **</td>
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### Senior Courses

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<tbody>
<tr>
<td>EE 586</td>
<td>1 and 2</td>
<td>Electrical Design Projects</td>
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<tr>
<td>EE 661</td>
<td>4</td>
<td>Electronic Circuits II</td>
</tr>
<tr>
<td>EE 682</td>
<td>4</td>
<td>Energy and Information Transmission</td>
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<tr>
<td>EE 688</td>
<td>4</td>
<td>Information Processing</td>
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<tr>
<td>EE 668</td>
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<td>Electrical Laboratory 2</td>
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### Lower-Division Courses

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</thead>
<tbody>
<tr>
<td>EE 199</td>
<td>1 and 2</td>
<td>Assembly Language Programming for Engineers</td>
</tr>
</tbody>
</table>

**Electrical Engineering Core Requirements**

1. In every case the program of engineering courses selected must include 33 hours of engineering science, 17 hours of engineering design, and 24 hours of engineering courses outside the electrical engineering department. The student is responsible for seeing that these requirements are met.

2. A minimum of nine credit hours must be taken within the electrical engineering department. These courses must include any two of EE 594, EE 588, EE 638, and EE 684.

### Upper-Division Courses

**Electrical Engineering Majors**

- **EE 681. Electromagnetic Fields Theory.** (3). 3R; 3L.
- **EE 682. Energy and Information Transmission.** (3).

**Electrical Engineering Majors and Minors**

- **EE 688. Advanced Electromechanical Energy Conversion.** (3). A continuation of EE 488, including solid-state control. Computer applications are stressed. Prerequisites: EE 492 and 488. E 12 588 1 0909

**Graduate/Undergraduate Credit**

- **EE 580. Advanced Electromechanical Engineering.** (3). A study of radiation and transmission of electromagnetic waves. Topics include plane wave propagation in various media, normal and oblique reflections, dielectric windows, transmission through waveguides and introductory antenna theory. Prerequisite: EE 363 and EE 682. E 12 663 0 0909

- **EE 682. Information Processing.** (3). A study of classical frequency analysis and Fourier transforms with emphasis on network response, complex frequency concepts and signal spectra. Prerequisite: EE 363. Cannot be counted for credit toward a graduate electrical major. E 12 580 3 0909

**Upper-Division Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EE 228</td>
<td>1</td>
<td>Assembly Language Programming for Engineers</td>
</tr>
</tbody>
</table>

**Courses for Graduate/Undergraduate Credit**

- **EE 580. Transient and Frequency Analysis.** (3). A study of classical frequency analysis and Fourier transforms with emphasis on network response, complex frequency concepts and signal spectra. Prerequisite: EE 363. Cannot be counted for credit toward a graduate electrical major. E 12 580 3 0909

**Electrical Engineering Majors**

- **EE 681. Electromagnetic Fields Theory.** (3). 3R; 3L.
- **EE 682. Energy and Information Transmission.** (3).

**Electrical Engineering Minors**

- **EE 767. Selected Topics in Electrical Engineering.** (1-4). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 12 677 0 0909
An in­

New or specialized advanced

Training in fundamental experimental

presentation on the study made. Prerequisite:

are included. Software and hardware imple­

mentation and coding; detection theory, including

filter design methods. Both IIR and FIR filters

state-space representations; pole placement

space analysis, difference equations and

and discrete minimum principle; linear state

and observer design; dynamic programming

884. Discrete-Time Control Systems.


4. A study of the theory and ap­

lication of transmission lines. Both pulsed

and steady state transmission lines are treated. Topics include line parameters and

equations, signal propagation, effects of ter­

minations and resonant lines and stubs. Pre­

requisites: corequisites EE 590. May not be

counted toward a graduate electrical

ejor. E 12 682 0 0909


works. Formulation of network equations for computer solution is stressed. Survey of

computer-aided analysis and design. Prere­

quisite: EE 580. E 12 683 0 0909

684. Introductory Control System Concepts. (3). An introduction to system

modeling and simulation, dynamic response, feedback theory, stability criteria and com­

ensation design. Prerequisite: EE 580. E 12 684 0 0909

686. Information Processing. (4). 3R; 3L. Properties of signals and noise; intro­
duction to information theory; and AM, FM and pulse modulation and detection. Prin­
ciples of sampling, coding and multiplexing, and the organization of analog and digital

systems for information processing are in­
duced. May not be counted toward a gradu­
ejor. E 12 686 0 0909

689. Electrical Laboratory. (2). 4L. This course provides training in laboratory

methods and in experimental design methods. It consists of selected experiments related to EE 682 and several of the other

prerequisites. Corequisites EE 582 and any

two of EE 594, 586, 638, 663 and 684. E 12 689 0 0909

694. Digital Computer Design Fundamen­
tals. (3). An introduction to the design of digital computers. Assumed knowledge is a

computer hardware/software approach. Consideration is given to computer

logic, digital arithmetic units and operations, large capacity storage systems, input-output

units and systems integration. Prerequisites: EE 594 or departmental consent. E 12 694 0 0909

754. Probabilistic Methods in Systems. (3). This is a course in random processes

which is designed to prepare the student for work in communications, controls, comp­

puter systems, information theory and signal proc­

essing. The course covers basic concepts and

useful analytical tools for engineering problems involving discrete and continuous-time random processes. Applications to sys­

tem analysis, error identification, analog and
digital signal processing, data communication, parameter estimation and related discipli­

es will be discussed. Prerequisites: EE 580 and

EE 584 or IE 354 or departmental consent. E 12 754 0 0909

756. Analog Filters. (3). A detailed study of analog filter design methods. Both passive

and active filters are included. Analog filter approximations are discussed; sensitivity and

noise analyses are covered. Prerequisite: EE

681, E 12 761 0 0909

872. Methods of Discrete Systems Analy­
sis. (3). A study of methods of analysis of
discrete-time signals and systems. Time­
domain techniques include difference equa­
tions and discrete convolution. Z-transform

methods, frequency response of discrete

system linear systems are covered. Prerequisites: EE 580 or
departmental consent. E 12 792 0 0909


New or specialized advanced

58. A study of methods of analysis of
discrete-time signals and systems. Time­
domain techniques include difference equa­
tions and discrete convolution. Z-transform

methods, frequency response of discrete

system linear systems are covered. Prerequisites: EE 580 or
departmental consent. E 12 792 0 0909


58. A study of methods of analysis of
discrete-time signals and systems. Time­
domain techniques include difference equa­
tions and discrete convolution. Z-transform

methods, frequency response of discrete

system linear systems are covered. Prerequisites: EE 580 or
departmental consent. E 12 792 0 0909


New or specialized advanced

68. A study of methods of analysis of
discrete-time signals and systems. Time­
domain techniques include difference equa­
tions and discrete convolution. Z-transform

methods, frequency response of discrete

system linear systems are covered. Prerequisites: EE 580 or
departmental consent. E 12 792 0 0909


New or specialized advanced

58. A study of methods of analysis of
discrete-time signals and systems. Time­
domain techniques include difference equa­
tions and discrete convolution. Z-transform

methods, frequency response of discrete

system linear systems are covered. Prerequisites: EE 580 or
departmental consent. E 12 792 0 0909


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discrete-time signals and systems. Time­
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tions and discrete convolution. Z-transform

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Industrial Engineering

The industrial engineering department is concerned with instruction and research in design, analysis and operation of integrated systems of men, material, equipment and money

Students may select 11 hours of technical electives to emphasize their study of operations research, human factors or manufacturing systems. This allows students to specialize in a specific area of industrial engineering, and students' programs are determined by their own interests in consultation with their faculty advisors.

Modern, well-equipped laboratories are available to supplement classroom theory in human factors engineering, manufacturing processes and computer analysis. The industrial engineering department also has modern computer graphics facilities.

Bachelor of Science Degree in Industrial Engineering

Sequence of Courses

The industrial engineering program requires the completion of 134 semester hours for graduation, minus hours commensurate with advanced placement credit. Specific requirements and a suggested semester breakdown for the industrial engineering program are given in the accompanying table.

Model Program

Junior

Course Name and Title

Chem. 111Q, General Chemistry
Math. 242Q and 243, Calculus I and II
Phys. 313Q, University Physics I
Phys. 315Q, University Physics II
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication
Social and behavioral science elective

Sophomore

Course Name and Title

Math. 311, Introduction to Linear Algebra
Math. 344, Calculus III
Math. 550, Ordinary Differential Equations
Phys. 314Q, Classical Physics Lectures I and II
AE 323, Engineering Mechanics
Statics *
EE 199, Engineering Computing Fundamentals
AE 373, Engineering Mechanics: Dynamics I *
EE 382, Electrical Dynamics *
IE 222, Engineering Graphics
ME 398, Thermodynamics I *
Econ. 210Q, Principles of Economics I
Econ. 2020, Principles of Economics II

Senior

Course Name and Title

IE 553, Production Control
IE 554, Statistical Quality Control
IE 556, Introduction to Information Systems
IE 558, Manufacturing Methods and Materials
IE 580, Senior Projects in Industrial Engineering
IE 665, Management Systems Simulation
Technical electives §

Lower-Division Courses

222. Engineering Graphics. (3). 2R; 3L. The use of computer graphics to produce technical drawings and to solve engineering design problems. A study of basic spatial relationships involving orthographic projections, auxiliary views and pictorial projections. Aspects of design implementation include dimensioning, tolerancing, sectional views, thread fasteners and working drawings. Course also uses descriptive geometry to find true lengths of lines, spatial relationships between points, lines and planes, and intersections of solids, surfaces and conic sections. Prerequisite: Math 123 or equivalent. E 13 222 1 0901

250. Topics in Engineering Graphics. (2). 1R; 3L. The application of engineering graphics to the study of special problems and to methods of conveying information. Prerequisite: IE 213. E 13 250 1 0901

261P. Co-op Education. (1). This course introduces the student to engineering practice by working in industry in an engineering-related job and provides a 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. This course is 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 C/NCR only. Prerequisite: 30 hours toward bachelor of science in industrial engineering degree and approval by appropriate faculty sponsor. E 13 281P 2 0901

Upper-Division Courses

354. Engineering Probability and Statistics. (3). Basic theory of probability and statistics with emphasis on applications to engineering. Prerequisite: EE 190, IE 327. Prerequisite or corequisite: Math. 344. E 13 354 1 0901

355. Engineering Economy. (3). Economic comparisons of engineering alternatives considering the time value of money, taxes and depreciation. Prerequisites: Math. 243 and EE 199 or AE 327. E 13 355 0 0913

356. Introduction to Numerical Control. (2). A study of the concepts and techniques of the operation of machine tools from numerical data. Prerequisites: Math. 123 and EE 199 or AE 327. E 13 356 1 0913

357. Safety Engineering. (3). Environmental aspects of accident prevention, industrial compensation and safety legislation. Fundamental concepts of occupational health and hygiene. Prerequisite: IE 354. E 13 357 0 0913

§ Out-of-department engineering courses.
* Refer to preliminary engineering requirements at beginning of this section for list of approved courses.
‡ Out of calculus-based courses, otherwise course approved by the industrial engineering department.
• At least nine hours must be taken in at least three departments in Division A. At least three additional hours must be taken in Division B outside of the Department of Economics. At least nine hours of general studies courses designated "C" must be included within Divisions A and B. At least two courses are required in one department of Division A or B. The two-course sequence must include at least one course numbered 200 or above.
5 Chosen from approved list. (A minimum of six hours must be taken within the Department of Industrial Engineering and at least one hour from another engineering department)
452. Work Measurement. (3). Work measurement, motion and time study, methods simplification, work sampling, predetermined time standards and time formula derivation. Prerequisites: IE 354 and 356. E 13 452 1 0913


480. Selected Topics in Industrial Engineering. (1-4). New or special course material is presented under this listing based upon sufficient student demand. Repealable for credit. Prerequisite: departmental consent. E 13 480 0 0913

481P. Co-op Education. (1). This course 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. Prerequisite: junior standing and approval by appropriate faculty sponsor. E 12 481P 2 0901

Courses for Graduate/Undergraduate Credit

549. The Human Factor in Engineering Design. (3). A systematic approach to the optimization of man-environment interaction. Topics include human information processing, work space design and environmental factors. Prerequisite: IE 354. E 13 549 0 0913


554. Statistical Quality Control. (3). Measurement and control of product quality using process control and acceptance sampling techniques. Prerequisites: IE 354, E 13 554 1 0913

556. Introduction to Information Systems. (3). A study of the design, implementation and economic analysis of computer-based information systems. Prerequisite: IE 355. E 13 556 0 0913

558. Manufacturing Methods and Materials. (3). A study of modern manufacturing and fabrication techniques employed in industry. Prerequisites: IE 355, E 13 558 0 0913

570. Manufacturing Process Control. (3). A study of techniques and applications employing microcomputers to monitor and control industrial processes. Included topics are control characteristics and applications, control techniques, and programming considerations. Prerequisite: EE 199. Corequisite: EE 382. E 13 570 0 0913

580. Advanced Linear Programming. (3). An advanced study of the principles and quantitative measures of linear programming and integer programming. Prerequisite: IE 654. E 13 750 0 0913

585. Management Systems Simulation. (3). The design of simulation methods and techniques for use in management decision models, engineering evaluations and other systems too complex to be solved analytically. Emphasis is on general purpose computer simulation languages. Prerequisites: IE 199 and IE 354. E 13 665 1 0913

670. Industrial Robotics I. (3). A study of principles and applications of industrial robots in modern manufacturing systems. Topics include programming, sensor systems, actuators, actuators, control systems, robot sensors and control configuration. Prerequisite: E 199 or equivalent. E 13 670 0 0913

701. Probabilistic Methods in Operations Research. (3). A development of the probabilistic techniques necessary for the study of queues, inventory systems, decision theory and spread models and solutions. Computer techniques are developed in class as necessary. Prerequisite: departmental consent. E 13 720 0 0913

722. Simulation of Social and Administrative Systems. (3). Designed primarily for nonmathematically trained persons working in the social and administrative areas who desire a working knowledge of simulation estimation and faculty in one simulation language is developed. Prerequisite: departmental consent. E 13 722 1 0913

730. Advanced Likelihood Programming. (3). A detailed study of IE 650. Included topics are the mathematical development of the simplex method, solved examples, decomposition, bounded variables, parametric programming and integer programming. Prerequisite: IE 650. E 13 730 0 0913

732. Queuing and Inventory Systems. (3). An analysis of the behavior of queuing and inventory systems and their interrelationships. Prerequisite: IE 730. Prerequisites: Markov chain and queue modeling are discussed. Includes the development of single and multiple item constrained inventory models and periodic and continuous review policies. Prerequisites: IE 650, E 13 732 0 0913

735. Applied Forecasting Methods. (3). Analysis of prediction techniques in forecasting and scheduling by time series and probability models, smoothing techniques and error analysis. Prerequisite: IE 654. E 13 735 0 0913

740. Analysis of Decision Processes. (3). A study of the nature of decision problems, economics of decision-making, decision-making models and replacement, and decision-making models and periodic and continuous review policies. Prerequisites: IE 354 and 355. E 13 740 0 0913

743. Applied Operations Research. (4). A study of various techniques used in operational research and planning, including mathematical programming, queueing theory, inventory models and simulation. Prerequisites: IE 354 and IE 199. E 13 743 0 0913

745. Production Engineering Cases. (3). The organization, design and control of production and production processes. Prerequisites: IE 354 and 355. E 13 745 0 0913

749. Advanced Human Factors. (3). A continuation of IE 549. Topics include principles and application of human factors to the design of the workplace, displays and control systems, hand tools and video display terminals. Prerequisite: IE 549. E 13 749 0 0913

750. Industrial Engineering Workshops. (1-4). Various topics in industrial engineering. Prerequisite: departmental consent. E 13 750 2 0913

754. Reliability and Maintainability Engineering. (3). Intended to acquaint students with the evolving methodology of reliability which is a design parameter. Problems of quantifying, analyzing reliability are studied. Various factors that determine the stress and strength of components with emphasis on practical applications are presented. Topics include computer control, systems and components: covering a broad range of engineering fields, such as mechanical, electrical, industrial, aeronautical, metalurgical, computer, control, automatic control systems. Prerequisite: IE 354. E 13 754 0 0913

756. Decision Support Systems. (3). A study of various decision support systems techniques from the conceptual analysis and design and development, and system test and evaluation. Operational feasibility, reliability, maintainability, supportability and economic feasibility are studied. Prerequisites: IE 354 and IE 355. E 13 756 0 0913

780. Topics in Industrial Engineering. (3). New or special courses are presented
under this listing. Repeatable for credit when subject matter warrants. E 13 780 0 0913

Courses for Graduate
Students Only

831. Classical Optimization Techniques. (3). An extensive treatment of those optimization techniques that do not require the use of linear programming. A development of variational methods, direct search and numerically based techniques is given. Prerequisite: IE 550. E 13 831 0 0913

842. System Simulation with Digital Computers. (3). Advanced development of the techniques and methods for simulating complex systems. Emphasis is on the design of simulation experiments and on the statistical analysis of results. Prerequisite: IE 665. E 13 842 1 0913

843. Operations Research. (3). A study of the theory and application of nonlinear model-building techniques for the problems found in industry. Included topics are the Jacobian method; Lagrange multipliers; and separable, convex, quadratic, geometric and stochastic programming. Prerequisites: IE 550 and IE 665. E 13 843 1 0913


860. Engineering Management Communications. (3). This course is a study of the design of technical communications for specific audiences, the team writing process, the editing of your own and others' technical writing, formal presentation of technical material and the design of visual aids. E 13 860 0 913

870. Flexible Manufacturing Systems. (3). Advanced study of modern, computer integrated manufacturing systems. Topics include integrated CAD/CAM systems, data bases, manufacturing resource planning, project management, and design and measuring devices. Prerequisite: IE 570 or equivalent. E 13 870 0 0913


879. Seminar in Management Science. (3). Application of management science methods and models to real problems. A special project, including original case research, supervised internships or field research, is assigned. Prerequisite: departmental consent. E 13 879 9 0913

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. E 13 880 0 0913

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. Prerequisites: IE 550 or IE 743. E 13 930 0 0913

956. Knowledge-Based Systems. (3). Introduction to the concepts and techniques in knowledge-based systems or expert systems. Includes design and development of simple knowledge-based systems using microcomputer-based software. Prerequisite: EE 199. E 13 956 0 0913

970. Industrial Robotics II. (3). An advanced study of modern robotics systems. The course emphasizes the design of the robotic cell for manufacturing industry. Topics include artificial intelligence in robotics; vision systems; smart robot applications; automation with robots and flexible assembly. Prerequisite: IE 670 or departmental consent. E 13 970 1 0913

976. PhD Dissertation. (1-16). Repeatable up to a maximum of 36 hours. Prerequisite: admission to doctoral aspirant status. E 13 976 4 0913

990. Advanced Independent Study in Engineering. (1-3). Arranged individual, independent study in specialized content areas. Repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent. E 13 990 3 0913

Mechanical Engineering

The Mechanical Engineering Department provides students with a comprehensive engineering education. Graduates of the program are found in all phases of engineering activity: research, development, design, production and technical management. Graduates are employed or self-employed in such diverse fields as mechanical engineering design; analysis of thermodynamic and transport processes; instrumentation, controls and automation; engineering materials properties and failure modes; and bioenvironmental engineering, including heating, ventilating and air conditioning. Practicing mechanical engineers are found in virtually every sector of every activity in the developed and developing nations of the world.

Students are prepared to accept these challenges through an integrated course of study which emphasizes the professional practice of engineering. The program has several components: a basic series of courses in mathematics and natural science, communications, humanities and social sciences; a core of engineering science subjects; a set of required design and application courses; and a group of technical electives. The electives, which are taken during the senior year, permit further study in the fields of specialization enumerated in the introductory paragraph.

Bachelor of Science Degree in Mechanical Engineering

Sequence of Courses

The program requires the completion of 134 semester hours for graduation, minus hours commensurate with advanced placement credit. Specific requirements and a suggested semester breakdown for the mechanical engineering program are given in the table.

Model Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 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, University Physics I **</td>
<td>4</td>
</tr>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences elective*</td>
<td>3</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Math. 311, Introduction to Linear Algebra †</td>
<td>1</td>
</tr>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Math. 550, Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 314Q, University Physics II **</td>
<td>4</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
</tr>
<tr>
<td>AE 327, Engineering Digital Computers</td>
<td>2</td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics I</td>
<td>3</td>
</tr>
<tr>
<td>IE 722, Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ME 339, Elements of Mechanical Engineering Design</td>
<td>3</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>Science elective**</td>
<td>4</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>AE 333, Mechanics of Deformable Solids I</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ME 350, Materials Engineering</td>
<td>4</td>
</tr>
<tr>
<td>ME 400, Fluid and Heat Flow</td>
<td>4</td>
</tr>
<tr>
<td>ME 402, Mechanical Engineering Measurements</td>
<td>3</td>
</tr>
<tr>
<td>ME 439, Mechanical Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>ME 502, Thermodynamics II</td>
<td>3</td>
</tr>
<tr>
<td>ME 621, Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives*</td>
<td>7</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>ME 503, Mechanical Engineering Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>ME 541, Mechanical Engineering Design II</td>
<td>3</td>
</tr>
<tr>
<td>ME 622, Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>ME 659, Mechanical Control</td>
<td>3</td>
</tr>
</tbody>
</table>
ME 662. Mechanical Engineering Practice  

2

Engineering electives §  

14

Humanities and fine arts or social and behavioral sciences electives *  

7

* Nine hours of General Studies must be included and at least two courses must be taken in one department. The two-course sequence must include at least one course numbered 200 or above.

§ Or any calculus-based mathematics course approved by the mechanical engineering department.

§ Qualified students may substitute ME 670 and 671.

The following requirements concern engineering electives (14 hours required):

1. A minimum of three hours must be selected from the following courses: E 585, AE 608, 633, 677, EE 488, 492, IE 254, 255, 508.

2. A minimum of six hours must be selected from the following courses: ME 450, 469, 504, 544, 630, 705, 741, 744, 749, 751, 753, 788.

** A four- or more-hour course from the basic science elective list or a three-hour course from that list and Physics 3102 or Physics 3106 must be included.

Upper-Division Courses

339. Elements of Mechanical Engineering Design. (3). Introduction to engineering design process; design, analysis and optimization. Basic kinematics; motion and force analysis in mechanisms such as plane linkages, gears and cams. Synthesis of plane linkages and single cam systems. Computer applications. Prerequisites: IE 213 and AE 337 with a grade of 'C' or better and AE 373, which may be taken concurrently. E 13930 0 0910

350. Materials Engineering. (4), 3R; 3L. Study of important structural materials used in engineering, including metals, polymers and composites, primarily from a phenomenological viewpoint. Prerequisites: AE 333 and Chem 1110, both with 'C' or better grade. E 14350 0 0910

398. Thermodynamics I. (3). A study of the first and second laws. Thermodynamic analysis is applied to thermal, mechanical and fluid systems. Prerequisites: Math. 243 and Phys. 3110, both with 'C' or better grade, and AE 327 or EE 199, which may be taken concurrently. E 14398 0 0910

400. Fluid and Heat Flow. (4), 3R; 3L. A study of pressure and velocity fields; kinematics of perfect and real fluids; similarity; temperature fields and heat transfer, conduction, convection and radiation, as well as an introduction to gas dynamics. Prerequisites: Phys. 314Q and ME 398, both with 'C' or better grades, and Math. 550, which may be taken concurrently. E 14400 0 0910

402. Mechanical Engineering Measurements. (3), 2R; 3L. An introduction to modern measurement techniques in mechanical engineering. Prerequisites: ME 339 and 400 and EE 382, all with 'C' or better grades. E 14402 0 0910

439. Mechanical Engineering Design I. (3). Principles of mechanical design, with emphasis on practical application in the design of many mechanical components - shafts, bearings, gears, clutches, thread fasteners, etc. Topics include machine elements design, material selection, fatigue, stress concentration, statistical concepts and cost standardization. Innovative practical applications demanding integration of machine elements into a practical device. Prerequisites: ME 339, AE 333 and Math. 550. E 14439 0 0910

450. Topics in Mechanical Engineering. (1-3). An investigation of selected phases of mechanical engineering. Prerequisite: departmental consent. E 14450 0 0910

469. Energy Conversion. (3). Energy conversion principles and their implementation in engineering devices including thermal-mechanical, nuclear and direct energy conversion processes. Prerequisite: ME 398. E 14469 0 0910

Courses for Graduate/Undergraduate Credit

The courses numbered 502 through 767 are not automatically applicable toward an advanced degree in engineering. They must be approved by the student's adviser, the graduate coordinator and the chairperson of the department.

502. Thermodynamics II. (3). Continuation of ME 398, with emphasis on availability, irreversibility, Maxwell's equation and thermodynamic property relations. Prerequisite: ME 398. E 14502 0 0910

503. Mechanical Engineering Laboratory. (3), 2L. Selected experiments designed to illustrate the methodology of experimentation as applied to mechanical and thermal systems. Experiments include the measurement of temperature, pressure, temperature and properties of parameters and evaluation of performance of typical systems and evaluation of physical properties and parameters of systems. Prerequisites: ME 402, 541, 622, E 14503 1 0910

504. Instrumentation. (3), 2R; 3L. A more complete treatment of the measurement problem with careful examination of modern instrumentation systems, including dynamic behavior and nonlinearities. Criteria for design, synthesis and selection of instrumentation systems are included. Prerequisite: ME 402, E 14504 1 0910

541. Mechanical Engineering Design II. (3), 2R; 3L. An introduction to design principles to the creative design of mechanical equipment. Problem definition, conceptual design, feasibility studies, design calculations to obtain creative solutions of current real engineering problems. Introduction to human factors, economics and reliability theory. Group and individual design projects. Prerequisites: ME 350 and 439 with a grade of 'C' or above in both. E 14541 0 0910

544. Environmental Engineering. (3). Theory, analysis and design of heating, ventilating and air-conditioning systems based on psychometrics, thermodynamics and heat transfer fundamentals. Emphasis is on design. Prerequisites: AE 327 or EE 199, both with 'C' or better grade. E 14544 0 0910

548. Mechanical Engineering Projects. (1). A design, analysis or research project under faculty supervision. Prerequisites: ME 541 and 641, which may be taken concurrently, and departmental consent. E 14548 0 0910

602. Mechanical Engineering Practice. (2). An in-service exercise in the practice of mechanical engineering in which students engage in a comprehensive design project requiring the integration of knowledge and skills learned in undergraduate and graduate engineering science and design courses. Open only to mechanical engineering students in their last semester of study. Prerequisite: ME 541 and 641. E 14602 0 0910

670. Senior Thesis I. (1). A design, analysis or research project performed under faculty supervision. Enrollment is limited to mechanical engineering students who are in the last two semesters of their studies and requires recommendation by a member of the department faculty and approval of the department chairperson. Prerequisites: ME 541 and 641, which may be taken concurrently, and departmental consent. E 14670 0 0910

671. Senior Thesis II. (1). A continuation of ME 670. Prerequisite: ME 670. E 14671 3 0910

705. Design of Engineering Experiments. (3). Study of the theoretical, analytical and statistical aspects of basic engineering experiments. Theories of test planning, data checking, analysis and synthesis and evaluation are considered. Prerequisite: departmental consent. E 14705 0 0910

Prerequisite: ME 400 or departmental consent. E 14 734 0 0910

741. Nuclear Engineering. (3). Study of the fundamental aspects of nuclear physics and its application in energy production, including nuclear reaction, neutron interaction, reactor core physics, nuclear heat transfer and nuclear reactors. Prerequisites: ME 400 and Math. 550. E 14 741 0 0910

744. Advanced Environmental Engineering. (3). A continuation of ME 544 with an emphasis on building energy systems related to the design and selection of heating, ventilating and air-conditioning equipment and distribution sub-systems. Prerequisite: ME 544 or departmental consent. E 14 744 0 0910

749. Kinematics and Dynamics of Machines. (3). Analysis and synthesis of mechanisms; force analysis of machines. Prerequisite: ME 439. E 14 749 0 0910

751. Special Topics in Mechanical Engineering. (1-3). New or special courses are presented under this listing. This course may be repeated for credit when subject matter warrants. Prerequisite: departmental consent. E 14 751 0 0910

755. Intermediate Thermodynamics. (3). Laws of thermodynamics, introduction to statistical concepts of thermodynamics, thermodynamic properties, chemical thermodynamics, Maxwell's relations. Prerequisite: ME 502 or departmental consent. E 14 755 0 0910


767. Theory of Rational Design. (3). Design decision techniques, including frequency, axiomatic and Bayesian formulation, statistical inference techniques, Jaynes' maximum entropy principle and error analysis. Prerequisite: departmental consent. E 14 767 0 0910

Courses for Graduate Students Only

701. Boundary Layer Theory. (3). Development of the Navier-Stokes equation, laminar boundary layers, transition to turbulence, turbulent boundary layers and an introduction to homogeneous turbulence. Prerequisite: Math. 651 or departmental consent. E 14 801 0 0910

845. Fracture. (3). Ductile and brittle fracture phenomena and mechanisms, linear elastic fracture mechanics, transition temperature approaches, tests for fracture resistance and design methods. Prerequisites: departmental consent. E 14 845 0 0910

846. Fatigue and Wear. (3). Fatigue of metals and nonmetals: phenomena, fatigue testing procedures and design methods. Survey of wear problems in engineering. Prerequisite: departmental consent. E 14 846 0 0910

851. Heat Transfer-Conduction. (3). Theory and measurement, Fourier's equation, steady and unsteady state with and without heat sources and sinks and numerical methods. Prerequisites: ME 622, Math 651 or departmental consent. E 14 851 0 0910

852. Heat Transfer-Convection. (3). Free and forced convection in laminar and turbulent flow. Analysis and synthesis of heat transfer equipment are included. Prerequisite: ME 622 or departmental consent. E 14 852 0 0910

853. Heat Transfer-Radiation. (3). Radiative properties of real surfaces, configuration factor analysis, radiative transfer in participating media, exchange factor analysis, Monte Carlo methods. Prerequisite: ME 622 or departmental consent. E 14 853 0 0910

856. Advanced Thermodynamics. (3). Statistical thermodynamics, Boltzmann's distribution and Fermi-Dirac statistics, calculation of thermodynamics properties, elementary kinetic theory, introduction to irreversible thermodynamics. Prerequisite: ME 502 or departmental consent. E 14 856 0 0910

859. 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 758 or equivalent. E 14 859 0 0910

860. Electromechanical Control Systems. (3). Description, analysis and design of electromechanical control systems, with an emphasis on actual devices. Prerequisite: ME 659 or departmental consent. E 14 860 0 0910

861. Similitude in Engineering. (2). Critical analysis of models and analogues as aids to engineering design. Prerequisite: departmental consent. E 14 861 0 0910

868. Rational Design Methods. (3). The principles of creativity, decision theory, modeling, optimization and reliability as applied to problems of engineering design. Prerequisite: departmental consent. E 14 868 0 0910

976. PhD Dissertation. (1-6). Repeatable as approved in the Graduate School plan of study. The student must write a paper. Students selecting the directed study option to fulfill the degree requirements need also to take an oral examination on the study made. Prerequisite: departmental consent. E 14 876 0 0910

978. Directed Studies. (1-4). Repeatable as approved in the Graduate School plan of study. The student must write a paper. Students selecting the directed study option to fulfill the degree requirements need also to take an oral examination on the study made. Prerequisite: departmental consent. E 14 878 4 0910

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 Fine Arts

Rhoda-Gale Pollack, PhD, Dean

The College of Fine Arts is responsible for instruction and education, creative activity, scholarly inquiry, performance and practice in music, dance and visual arts. The Division of Art and Design and the Division of Music offer professional training programs at both the undergraduate and graduate levels. The divisions of dance and theater joined the College of Fine Arts in 1978 and 1986, respectively. Both disciplines offer performance programs at the undergraduate level.

Students are offered a complete spectrum of artistic endeavors, whether they are interested in professional activities, teaching careers, graduate study or increased knowledge about the arts. Students have the opportunity to explore various art forms with an open mind, thus developing their ability to respond to changes, developments and challenges within the art world of the future. The college strives to develop the new techniques, historical research and information necessary to achieve these ends.

The Division of Music is an accredited member of the National Association of Schools of Music and its requirements for entrance and graduation are in accordance with the association's published regulations.

Degrees Offered

Undergraduate

The College of Fine Arts offers four undergraduate degrees: 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 division programs.

Graduate

The Graduate School offers a program leading to the Master of Fine Arts (MFA) with emphases in ceramics, painting, printmaking and sculpture; the Master of Arts (MA) in art education and communication/theater; a Master of Music Education (MME) with emphases in elementary music, instrumental music, choral music and music in special education and a Master of Music (MM) with emphases in history-literature, performance, piano pedagogy and theory-composition.

For information concerning requirements for entrance and curricula, consult The Wichita State University Graduate School 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 and complete 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 are enrolled in University College. Upon completing 24 semester hours of specified courses with a minimum grade point average of 2.000, students are eligible to enroll in the divisions of art and design, dance, music or theater.

Transfer students may enroll in the College of Fine Arts if their transcripts indicate they have completed a minimum of 24 semester hours with a minimum grade point average of 2.000 (C). Students with a grade average of at least 1.700, but less than 2.000, may petition for admittance. Transfer students who do not meet the minimum requirements of 24 semester hours and a grade point average of 2.000 are enrolled in University College.

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 grade point average of at least 2.000. Students enrolled in either the music education or art education programs must have a cumulative grade point average of 2.500 prior to enrolling in student teaching.

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 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 failing to maintain a current average of 2.000 in each semester in which they are on probation will be dismissed from the University, unless they have not attempted 12 semester hours since the beginning of the probationary period.

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 Curriculum and Policy Committee of their major division in the College of Fine Arts and by the University's Committee on Admissions and Exceptions.

Division of Art and Design

The Division of Art and Design, a part of the College of Fine Arts, is divided into four departments: art education, art history, graphic design and studio arts—with its four areas of drawing-painting, printmaking, ceramics and sculpture. The departments offer professional courses designed to train and educate art students who are planning careers in the arts and to allow students in other colleges to gain an understanding and appreciation of art.

Art students have excellent facilities in the McKnight Art Center and renovated Hennon Annex. The center provides extensive space for exhibiting student work. The Clayton Staples Gallery is designed specifically for undergraduate and graduate students and invitational shows under the auspices of the Edwin A. Ulrich Museum of Art in McKnight Art Center. Students can view a wide range of exhibitions and hear a variety of visiting artists and guest lecturers. The Lewis and Selma Miller Fund also provides programs of guest artists and lecturers of regional, national and international interest.
Policies
Students are not allowed credit toward graduation for D grade work in excess of one-fourth of the total hours. A grade average of 2.000 or better must be earned on all work taken at Wichita State that can be applied to a student's degree.

The division will accept the transfer of only one credit hour per semester of nontresidential studio work (such as extension or correspondence courses from accredited institutions); totaling no more than six hours of the last 30 or ten hours of the total number of hours required for graduation.

The University's general education requirements can be satisfied by all art history courses except Art Hist 426.

The division controls all art work or essays submitted for credit by students and reserves the right to select certain pieces for its permanent collection.

All art materials, with the exception of certain nonexpendable equipment, must be furnished by the students.

Graduation Requirements

Bachelor of Fine Arts
The Division of Art and Design offers a Bachelor of Fine Arts degree (BFA) in art history, graphic design, ceramics, painting, printmaking and sculpture. In addition to the University's scholastic, residence and general education requirements (outlined in the Requirements for Graduation section), candidates for the BFA must complete the specific requirements of the appropriate department. Specific programs for each of the above areas of specialization are described under the appropriate department's heading in the following pages.

Bachelor of Art Education
In addition to meeting the University's scholastic, residence and general education requirements for graduation, candidates for the BAE must complete a minimum of 134 semester hours, with 42 hours in the General Education Program, 64 in the art curriculum and 28 in education. The General Education Program is described in detail in the Academic Information—Requirements for Graduation section in the beginning of the Catalog. Electives must be selected in consultation with an advisor.

The art education program fulfills 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.

Departmental Requirements and Course Listings

Foundation
The following courses will be required of all undergraduate art major students effective the fall 1987 semester.

Lower-Division Courses

110Q. Foundation Visual Arts. (3). A general orientation to the visual arts including the studio arts, graphic arts, art historical-cultural study, and art education. Lectures and experiential modes of learning will be employed. Course studies the techniques, processes and approaches used in various arts professions as well as methods of determining meaning and value as an audience to the works of arts professionals. Prerequisite: Foundation Design I. F 14 110Q 0.0831

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 form, Gestalt and conceptual organization of the two-dimensional surface. Areas of focus include elements of line, shape, space, texture and value. Instructional process includes lecture, critique and supervised studio practice. Prerequisite: Foundation Design I. F 17 136 1 1009

137. Foundation Design II. (3). A continuation of Foundation Design I with an emphasis on the study of color including vocabulary, pigments mixing, color organization and a review of the psychological effects of color as used in visual communications. Instructional process includes lecture, critique and supervised studio practice. Prerequisite: Foundation Design I. F 17 137 1 1009

145. Foundation Drawing I. (3). Introduction to visual arts concepts, vocabulary, tools, materials, basic drawing skills and attitudes through the drawing experience. It will teach students 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 will be given. F 16 145 1 1002

146. Foundation Drawing II. (3). Reinforcement and elaboration of the concepts studied in Foundation Drawing I through introduction of abstraction, use of color, visualization and other strategies for manipulating imagery. Students will apply concepts to problems associated with composition, imaginative reconstructions and idea generation. Structured sketchbook assignments will be given. Prerequisite: Foundation Drawing I. F 16 146 1 1002

189. Foundation 3-D Design. (3). Lectures, research and studio methods on the evolutionary role of three-dimensional design in contemporary society utilizing a variety of combination of materials, techniques, forms and concepts. Emphasis also will be placed on learning to handle equipment and tools properly. F 16 189 1 1002

240. Foundation Life Drawing. (3). Introduction to drawing the human form with emphasis on critical inquiry and analytical observation. The study of skeletal and muscular structure is included. Students will 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 will be given. Lab fee. Prerequisites: Foundation Drawing I and II. F 16 240 1 1002

Art Education
The art education department offers a professional program for students interested in teaching art. The art education structured program prepares majors to teach and supervise at various educational levels and all majors are required to specialize in a studio arts, graphic design or art history program.

Outline of Program
A total of 134 hours is required as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Art Curriculum</td>
<td>64</td>
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<tr>
<td>Two-dimensional, introductory</td>
<td>15</td>
</tr>
<tr>
<td>Three-dimensional, introductory</td>
<td>12</td>
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<tr>
<td>Art education</td>
<td>22</td>
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<tr>
<td>Art specialization</td>
<td>12</td>
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<tr>
<td>Art history</td>
<td>3</td>
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<tr>
<td>General Education Program</td>
<td>42</td>
</tr>
</tbody>
</table>

Student Teaching
Admission into the student teaching semester 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 English composition (Eng. 101 and 102 or its equivalent); a grade of C or better in oral communication, completion of instructional services and art education prerequisites; satisfactory physical examination; and recommendation by the Department of Art Education 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 mid-term of the spring semester prior to the student teaching year. By the end of the first semester in the student teaching year, the student must have completed Art Ed 516 and IS 433. Concurrent enrollment in Art Ed 516 and IS 433 is recommended.

A survey course about exceptional children, reading for secondary students and a multicultural course are included in the teacher certification requirements. Departmental review of course content is required in all education courses.
Art Minor Outside the College of Fine Arts

Students in the College of Education who wish to minor in art need to complete 18 hours of art. These hours must be distributed as follows: Foundation 110Q and 145, Art Ed. 210 and 313; one elected studio course; and three hours of Art Hist. 121G or 122G. This sequence of courses does not constitute requirements for certification in art.

Lower-Division Courses

115. Human Experience and the Arts. (3). Telecourse. Sculpture, architecture, film, drama, music, literature and painting are surveyed. Each art form is examined from four perspectives: historical context, elements of the art form, meaning and criticism/evaluation. The course contains 30 one-half hour video programs which are coordinated and integrated with the text and study guide. Attendance at periodic Saturday sessions is required. F 14 115 0 0831

150. Art Workshop. (1-3). Repeatable for credit. (The area to be covered is determined at the time the course is offered.) F 14 150 2 0831

210. Visual Arts for the Child. (3). For students without previous art background who plan to teach in the elementary school classroom. Fundamental methods, materials and concepts used to develop art knowledge and skills in the elementary-age levels are studied. F 14 210 0 0831

211. Art Education in the Elementary School. (3). A study of philosophy, psychology, and sensory growth of the elementary-age student, with emphasis on the development of the art program for this level. Prerequisite: art education major, Art Ed. 210 or instructor's consent. F 14 211 0 0831

212. Jewelry Design/Construction. (3). Jewelry design and construction with an emphasis on metalworking processes (forging, forming, casting, sawing, cutting, fusing, soldering) with emphasis on soft jewelry and ceramic processes applicable to jewelry. F 14 212 1 0831

281. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education Program. Offered Cr/NCR only. F 14 281 1 0831

Upper-Division Courses

311. Art Education Curriculum in the Elementary School. (3). A study of developmental characteristics of the elementary-age student and the development of the art program with respect to materials, skills and knowledge content. F 14 311 0 0831

313. Fiber Exploration for the Classroom. (3). The course will focus on fiber experiences appropriate for the classroom on the intermediate or secondary level. Weaving, braiding and twisting techniques that result in a fabric or web will be explored on various kinds of looms. F 14 313 1 0831

413. Independent Study. (1-4). Directed independent study in art education not normally covered in other course work. Prerequisite: instructor's consent. F 14 413 0 0831

414. Art Education in the Secondary School. (3). A study in the philosophy, objectives and classroom procedures related to the teaching of art at the secondary level. F 14 414 0 0831

481. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Offered Cr/NCR only. F 14 481 2 0831

Courses for Graduate/Undergraduate Credit

510Q. Stimulating Creative Behavior. (3). Topics include theories of creativity, strategies for problem-solving and creativity. Course emphasizes methods to elicit creative behavior. Repeatable once for credit. F 14 510Q 0 0831

512. Metal Processes for Jewelry Construction. (3). The emphasis in this course is on analysis of techniques, design, form, meaning and function of jewelry designed and produced by students and acknowledged craftsmen. Repeatable once for credit. Prerequisite: Art Ed. 212 or instructor's consent. F 14 512 0 0831

514Q. Aesthetic Inquiry. (3). The course will focus on contemporary trends in aesthetics as related to the visual arts. Students will be expected to write critical observations and interpretations in response to art work. Prerequisite: upper-division art major. F 14 514Q 0 0831

515. Developing Visual Materials for Art Education. (3). A production laboratory that concentrates on the use of technological equipment for making multimedia experiences (films, slides, tapes, projector, etc.) for art education major. Prerequisites: Art Ed. 210 and departmental approval for student teaching. F 14 515 0 0831

517. Student Teaching Seminar in Art. (1). The objective is to analyze problems encountered in the art classroom during student teaching. Concurrent enrollment in seven hours of student teaching is required. Prerequisites: Art Ed. 210 and departmental approval for student teaching. F 14 517 0 0831

518. Art for the Exceptional Child. (3). Follows regular art education principles with appropriate adaptations and teaching methods for exceptional children in school settings. Among the exceptionalities considered will be types of mental retardation, neurological impairment, and emotional, visual, auditory and physical handicaps. F 14 518 0 0831

711. Seminar in Art Education: Topic to be Announced. (1-3). Supervised study and research of contemporary issues in art education. Prerequisite: instructor's consent. F 14 711 0 0831

712. Development of Art Understanding in the Elementary Program. (3). Readings, observation and evaluative techniques in the development of art concepts and materials for art understanding. Repeatable once for credit. Prerequisite: instructor's consent. F 14 712 0 0831

713. Fiber and Fabric Processes. (1-3). Fiber processes and structuring in traditional and experimental processes in woven forms and other structural techniques using natural and man-made fibers. Repeatable once for credit. Prerequisite: instructor's consent. F 14 713 0 0831

715. Research Problems in Art Education. (3). Orientation in 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. F 14 715 0 0831

750. Art Workshop. (1-3). Repeatable for credit. (The area to be covered is determined at the time the course is offered.) F 14 750 2 0831

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. F 14 815 0 0831

816-817. Thesis—Art Education. (1-3; 1-3). F 14 816 3 0831

818-819. Terminal Project—Art Education. (1-3; 1-3). F 14 818 3 0831

Art History

The art history program prepares students for activities related to the art of the past: criticism, both college- and secondary-level teaching and conservation. Students are exposed to a view of art from the earliest times to the present. The language of art, as well as the historical framework, is emphasized.

Requirements: A total of 124 hours is required for a major as distributed below.

Area
Art curriculum: 83
Art history: 33
Foreign language: 13
Elective: 57
General Education Program: 4

Model Program

Freshman

Course
Eng. 101 and 102, College English I and II (6)
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication (3)
Art Hist. 121G, Survey of Western Art: Paleolithic Through Early Christian (3)

College of Fine Arts/Art History
### Upper-Division Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
<th>FSC</th>
<th>CSC</th>
<th>TC</th>
<th>CR/CrNCR</th>
<th>Consent Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>281. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Offered Cr/Ncr only.</td>
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</table>

### Courses for Graduate/Undergraduate Credit

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<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
<th>FSC</th>
<th>CSC</th>
<th>TC</th>
<th>CR/CrNCR</th>
<th>Consent Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>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. Prerequisite: three hours of art history or departmental consent.</td>
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<tr>
<td>521Q. Italian Renaissance. (3). A study of the architecture, sculpture and painting from the 13th to the 16th century. Emphasis is given to the development of Florence and Siena and late developments in Rome.</td>
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<tr>
<td>522. Roman Art. (3). An introduction to the art of Rome from the age of Augustus to the age of Constantine.</td>
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### Lower-Division Courses

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<tr>
<th>Course Title</th>
<th>Hours</th>
<th>FSC</th>
<th>CSC</th>
<th>TC</th>
<th>CR/CrNCR</th>
<th>Consent Required</th>
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<tbody>
<tr>
<td>121G. Survey of Western Art: Paleolithic Through Early Christian. (3). A historical survey of art from prehistoric origins to the Middle Ages.</td>
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<tr>
<td>122G. Survey of Western Art: Renaissance and Baroque. (3). A historical survey of art from the Renaissance to the 16th century.</td>
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<tr>
<td>123. Survey of Western Art: Medieval. (3). A historical survey of early Christian and Gothic art and architecture from the 5th through 14th centuries.</td>
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<tr>
<td>124. Survey of Western Art: Modern. (3). 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.</td>
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<tr>
<td>221Q. Greek Art. (3). An introductory study of Greek art from the Archaic to Hellenistic periods. The course covers architecture, sculpture, and vase painting with emphasis on the art of Pericles' Athens.</td>
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<tr>
<td>222. Roman Art. (3). An introduction to the art of Rome from the age of Augustus to the age of Constantine.</td>
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### Senior

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<tr>
<th>Course Title</th>
<th>Hours</th>
<th>FSC</th>
<th>CSC</th>
<th>TC</th>
<th>CR/CrNCR</th>
<th>Consent Required</th>
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</thead>
<tbody>
<tr>
<td>426. Seminar: Techniques of Art History. (3). A course that allows students to participate in the Cooperative Education program.</td>
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### Junior

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<tr>
<th>Course Title</th>
<th>Hours</th>
<th>FSC</th>
<th>CSC</th>
<th>TC</th>
<th>CR/CrNCR</th>
<th>Consent Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>322. Medieval Art I. (3). A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. Emphasis is on style and iconography as it develops in mosaics and illustrated manuscripts.</td>
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<tr>
<td>323. Medieval Art II. (3). A study of Romanesque and Gothic architecture and sculpture with special attention being given to the developments in France.</td>
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<tr>
<td>324. Northern Baroque. (3). A study of the art of Flanders and Holland during the 17th century. While a variety of artistic expressions is shown, with examples from a great many artists, the discussion culminates in an extensive study of the two dominant figures, Peter Paul Rubens and Rembrandt van Rijn.</td>
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<tr>
<td>325. Art of the Ancient Near East. (3). A broad survey of art produced by cultures of sub-Saharan Africa, Melanesia, Micronesia, Polynesia and pre-Columbian Americas.</td>
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<tr>
<td>326. Seminar: Techniques of Art History. (3). A culminating study for seniors majoring in art history in which the history of the discipline, its research methods and theory are considered. Extensive readings and reports are required. Prerequisite: instructor's consent.</td>
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<tr>
<td>327. Art of Africa, Oceania and the Americas. (3). A broad survey of art produced by cultures of sub-Saharan Africa, Melanesia, Micronesia, Polynesia and pre-Columbian Americas.</td>
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<tr>
<td>328. Museum Techniques I. (3). A course that allows students to participate in the Cooperative Education program. Offered Cr/Ncr only.</td>
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<tr>
<td>329. Modern Architecture. (3). A course designed to offer an overview of the development of modern architecture from its inception in the early 20th century until today. Theoretical connections between architecture and the arts of painting and sculpture as they developed in the United States and Europe are stressed.</td>
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<tr>
<td>330. The Art of Classical Greece. (3). A study of painting, sculpture and architecture of Greece during the 5th and 4th centuries b.c.</td>
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<td>331. The Art of Hellenistic Greece. (3). A study of the art of Hellenistic Greece during the Hellenistic period, 4th to 1st centuries B.C.</td>
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<td>332. Independent Study in Art History. (1-3). Work in a specialized area of study. Prerequisite: instructor's consent.</td>
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<tr>
<td>333. Seminar: Topics in Modern Art. (3). Selected readings and problems in art of the modern era. Course content varies but individual areas are not repeatable for credit. Prerequisite: instructor's consent.</td>
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<tr>
<td>362. Bibliography and Information Retrieval in Art History. (3). A course to prepare art history majors for research on the graduate school level. The student is introduced to the various research resources, such as bibliographies, indexes, collections, concordances and compilations. Practical assignments for information retrieval provide the experience necessary for mastering research techniques. Prerequisite: instructor's consent.</td>
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</table>
Graphic Design—Commercial Art

The graphic design department offers a professional program for students interested in a career in the field of visual communication. The courses emphasize conceptual and practical problem solving in various media—photography, typography, design and drawing—to develop design skills for communication.

Requirements: A minimum total of 126 hours is required for a major as distributed below.

Students with junior standing participate in a Junior Portfolio Review prior to counseling for their senior year.

The following are the specific requirements for the art curriculum section.

1. Students must fulfill requirements of the foundation program (24 hours): ADF 110Q, Foundation Visual Arts; ADF 136, Foundation Design I; ADF 137, Foundation Design II; ADF 145, Foundation Drawing I; ADF 146, Foundation Drawing II; ADF 189, Foundation 3D Design; ADF 240, Foundation Life Drawing; AH 124, Art History Survey—Modern.

2. Students must fulfill requirements of the graphic design core as specified (36 hours): GD 233, Basic Typography; GD 234, Layout and Production Techniques; GD 239, Design Structure; GD 330, Design Media Studio I; GD 331, Design Media Studio II; GD 334, Graphic Design—Production; GD 335, Graphic Design Studio I; Ind. Ed. 390F, Offset Lithography; GD 430, Design Media Studio III; GD 435, Graphic Design Studio II; GD 445, Senior Terminal Project; upper division art history course (Art Hist. 523, 524, 525 or 526); Art Hist. 121G and 122G (counted under general education requirements).

3. Students must elect six hours of lower-division art electives from the following: SA 160, Printmaking I; SA 240, Life Drawing (may be repeated for credit); SA 251, Watercolor Painting.

4. A program of 24 hours upper-division concentration must be developed from the courses listed under graphic design or graphic design-related electives. The program is developed in consultation with the graphic design faculty.

5. All entering freshmen are enrolled in University: To enter the graphic design department, the student must have a minimum overall grade point average of 2.000 and have completed the graphic design foundation courses with an average grade of 3.000.

6. Students must participate in the Junior Portfolio Review during the second semester of their junior year.

7. Students must participate in the Senior Terminal Project during their final two semesters.

Transfer Students

Advanced Standing

Transfer students who have earned fewer than nine semester hours in studio courses equivalent to the graphic design foundation courses will be enrolled in appropriate foundation courses.

Students who wish to transfer nine or more semester credit hours in art and design studio courses are required to:

1. Submit transcripts of all previous college enrollments.

2. Submit a portfolio of examples of their work to the chairperson of the graphic design department for faculty evaluation prior to enrollment. The portfolio should represent all college-level studio experiences and must contain original examples. Three-dimensional work should be submitted as slides. Part but not all of the two-dimensional work can be in slide form.

Deadlines for the receipt of transcripts and portfolios are June 20 for the fall semester, December 1 for the spring semester and May 1 for the summer session. Personal interviews with the department chairperson are suggested.

Model Program

Freshman

Course

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<tr>
<th>Area</th>
<th>Hrs.</th>
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<tr>
<td>Area</td>
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<tr>
<td>Art Curriculum (minimum)</td>
<td>65</td>
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<tr>
<td>Foundation program</td>
<td>24</td>
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<td>Graphic design core</td>
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<td>24</td>
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<tr>
<td>General Education Program</td>
<td>42</td>
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The following are the specific requirements for the art curriculum section:

1. Students must fulfill requirements of the foundation program (24 hours): ADF 110Q, Foundation Visual Arts; ADF 136, Foundation Design I; ADF 137, Foundation Design II; ADF 145, Foundation Drawing I; ADF 146, Foundation Drawing II; ADF 189, Foundation 3D Design; ADF 240, Foundation Life Drawing; AH 124, Art History Survey—Modern.

2. Students must fulfill requirements of the graphic design core as specified (36 hours): GD 233, Basic Typography; GD 234, Layout and Production Techniques; GD 239, Design Structure; GD 330, Design Media Studio I; GD 331, Design Media Studio II; GD 334, Graphic Design—Production; GD 335, Graphic Design Studio I; Ind. Ed. 390F, Offset Lithography; GD 430, Design Media Studio III; GD 435, Graphic Design Studio II; GD 445, Senior Terminal Project; upper division art history course (Art Hist. 523, 524, 525 or 526); Art Hist. 121G and 122G (counted under general education requirements).

3. Students must elect six hours of lower-division art electives from the following: SA 160, Printmaking I; SA 240, Life Drawing (may be repeated for credit); SA 251, Watercolor Painting.

4. A program of 24 hours upper-division concentration must be developed from the courses listed under graphic design or graphic design-related electives. The program is developed in consultation with the graphic design faculty.

5. All entering freshmen are enrolled in University: To enter the graphic design department, the student must have a minimum overall grade point average of 2.000 and have completed the graphic design foundation courses with an average grade of 3.000.

6. Students must participate in the Junior Portfolio Review during the second semester of their junior year.

7. Students must participate in the Senior Terminal Project during their final two semesters.

Transfer Students

Advanced Standing

Transfer students who have earned fewer than nine semester hours in studio courses equivalent to the graphic design foundation courses will be enrolled in appropriate foundation courses.

Students who wish to transfer nine or more semester credit hours in art and design studio courses are required to:

1. Submit transcripts of all previous college enrollments.

2. Submit a portfolio of examples of their work to the chairperson of the graphic design department for faculty evaluation prior to enrollment. The portfolio should represent all college-level studio experiences and must contain original examples. Three-dimensional work should be submitted as slides. Part but not all of the two-dimensional work can be in slide form.

Deadlines for the receipt of transcripts and portfolios are June 20 for the fall semester, December 1 for the spring semester and May 1 for the summer session. Personal interviews with the department chairperson are suggested.

Model Program

Freshman

Course

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1. Students must fulfill requirements of the foundation program (24 hours): ADF 110Q, Foundation Visual Arts; ADF 136, Foundation Design I; ADF 137, Foundation Design II; ADF 145, Foundation Drawing I; ADF 146, Foundation Drawing II; ADF 189, Foundation 3D Design; ADF 240, Foundation Life Drawing; AH 124, Art History Survey—Modern.

2. Students must fulfill requirements of the graphic design core as specified (36 hours): GD 233, Basic Typography; GD 234, Layout and Production Techniques; GD 239, Design Structure; GD 330, Design Media Studio I; GD 331, Design Media Studio II; GD 334, Graphic Design—Production; GD 335, Graphic Design Studio I; Ind. Ed. 390F, Offset Lithography; GD 430, Design Media Studio III; GD 435, Graphic Design Studio II; GD 445, Senior Terminal Project; upper division art history course (Art Hist. 523, 524, 525 or 526); Art Hist. 121G and 122G (counted under general education requirements).

3. Students must elect six hours of lower-division art electives from the following: SA 160, Printmaking I; SA 240, Life Drawing (may be repeated for credit); SA 251, Watercolor Painting.

4. A program of 24 hours upper-division concentration must be developed from the courses listed under graphic design or graphic design-related electives. The program is developed in consultation with the graphic design faculty.

5. All entering freshmen are enrolled in University: To enter the graphic design department, the student must have a minimum overall grade point average of 2.000 and have completed the graphic design foundation courses with an average grade of 3.000.

6. Students must participate in the Junior Portfolio Review during the second semester of their junior year.

7. Students must participate in the Senior Terminal Project during their final two semesters.
Lower-Division Courses

231. Basic Photography (Motion Picture), (3). Introductory course in film production. Lab fee. Nonmajors may be required to furnish their own cameras. F 17 231 1 1009

233. Basic Typography, (3). A study of type and its application in layout and design. Prerequisites: Foundation 156 and 145. F 17 233 1 1009

234. Layout and Production Techniques, (3). Introduction to advertising theory and visual communication. Fundamentals of respective functions of purpose, copy, art, plans and media in advertising. A study is made of studio practices and art production problems. Prerequisites: GD 233. F 17 234 1 1009

236. Drawing for Commercial Art, (3). Directed practice in drawing in various media, with emphasis on its application to commercial art. Prerequisite: graphic design major or instructor's consent. F 17 236 1 1009

237. Drawing for Commercial Art II, (3). Directed practice in drawing in the figure for editorial and fashion illustration. Prerequisites: GD 236, F 17 237 1 1009

239. Design Structure, (3). Application of three-dimensional design as a form of visual communication, with emphasis on drawing systems, construction techniques, graphic art processes and the manipulation of paper as a primary medium. Prerequisites: GD 136 and SA 158. F 17 239 1 1009

281. Cooperative Education, (1-8). A course that allows students to participate in the Cooperative Education program. Graded Cr/NCr only. F 17 281 2 1009

Upper-Division Courses

300. Advanced Typography, (3). An investigation of typography and its relationship and application to visual communication. Prerequisites: GD 239 and 234. F 17 300 1 1009

330. Design Media Studio, (3). Introductory course in still photography with a design emphasis. Lab fee. Nonmajors may be required to furnish their own cameras. Prerequisites: Foundation 190 or instructor's consent. F 17 330 1 1009

331. Design Media Studio II, (3). Introductory course in film theory and video with a design emphasis. Lab fee. Nonmajors may be required to furnish their own cameras. Prerequisites: GD 137 and 330 or instructor's consent. F 17 331 1 1009

333. Fashion Illustration, (3). Fashion drawings of costumed models for newspaper and magazine layouts. Merchandising and fashion elements are analyzed for black and white reproduction. Repeatable for credit. Prerequisite: GD 257. F 17 333 1 1009

334. Graphic Design—Production, (3). Development of skills necessary to execute finished art for various printing processes. F 17 334 1 1009

335. Graphic Design Studio I, (3). Development of skills necessary to execute finished art for various printing processes. F 17 335 1 1009

337. Advertising Illustration, (3). Development of skills in pictorial graphics and their application to the needs of advertising and product illustration with an emphasis in black and white media. Media and technique suitable for newspaper/magazine reproduction will be examined. Repeatable for credit. Prerequisites: completion of foundation program. F 17 337 1 1009

339. Advanced Design Structure, (3). Advanced study of three-dimensional design concepts as applicable to visual communication. Lectures, class work and projects will deal with areas of model-making, package design, signage systems, and exhibition design. Repeatable for credit. Prerequisites: GD 233 and 239. F 17 339 1 1009

340. Design Media Studio III, (3). Application of design media in the applied arts and television studio. Repeatable for credit. Prerequisites: GD 330, 331 and instructor's consent. F 17 340 1 1009

431. Design Media Topics, (3). Advanced study of photography, cinematography or television with a design emphasis. Repeatable for credit. Prerequisites: GD 330, 331 or instructor's consent. F 17 431 1 1009

434. Graphic Design Intern, (3). On-the-job internship in an art studio or advertising agency. Instruction time is divided between arranged location observations and the apprenticeship and weekly seminar period. Written reports of individual research are required in addition to a portfolio of samples produced as an intern. Repeatable for credit. Grade for the course is Cr/NCr. Prerequisites: F 17 434 2 1009

435. Graphic Design Studio II, (3). A programmatic approach to problem-solving. Topics include concept, layout approaches for various projects and skill development for producing portfolio quality work. Prerequisites: GD 334, 335 and senior standing in graphic design. F 17 435 1 1009

437. Advanced Advertising Illustration, (3). Concentration in editorial illustration with an emphasis in imaginative and creative problem-solving. A variety of color media and technique will be employed. Repeatable for credit. Prerequisite: GD 337. F 17 437 1 1009

438. Color and Design, (3). A study of color use in communication design and printing reproduction. Prerequisite: GD 234. F 17 438 1 1009

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. F 17 445 3 1009

481. Cooperative Education, (1-8). A course that allows students to participate in the Cooperative Education program. Grade for the course is Cr/NCr. F 17 481 2 1009

493. Book Design and Production, (3). A laboratory course encompassing all facets of the book. Topics of study include: design, type composition, proofreading, illustration, manufacturing, binding materials, line, leather, paper and board, distribution, copyright, royalties and remuneration. Students will be responsible for the development and publication of a limited edition book. Prerequisites: GD 334, GD 337 or consent of instructor. F 17 493 1 1009

Course for Graduate/Undergraduate Credit

530. Seminar in Graphic Design, (3). Supervised study and research. Weekly consultation and reports are required. Repeatable for credit. Prerequisite: departmental consent. F 17 530 9 1009

Studio Arts

Students from the Fairmont College of Liberal Arts and Sciences who wish to major in studio arts must complete 39 hours of art. These hours must include Art Hist. 121G, 122G, nine hours elected from art history courses and 24 hours elected from studio courses. Liberal arts students wishing to minor in studio arts must complete 21 hours of art, including Art Hist. 121G, 122G and 15 hours of electives.

General

Course for Graduate/Undergraduate Credit

500. Topics in Visual Arts and Design, (3). A coverage of topics of special interest and significance to faculty and students in Studio Art and Design. Content varies in subject matter from one semester to another. Repeatable for credit with departmental consent. F 17 500 1 1002

Ceramics

Through their course work, ceramics majors are exposed to their tools: building, throwing, clays and glazes. Students investigate problems of glaze formulation, firing the kiln and characteristics of clays and production.

Requirements. A total of 124 hours is required for the major as distributed below.
A total of 124 hours is required for the major as distributed below.

### Lower-Division Courses

**Course**
- General education: 12
- SA 240, Life Drawing: 3
- SA 364, Printmaking III: 3
- SA 370, Ceramics Studio: 3
- SA 345, Intermediate Drawing: 6
- SA 570, Advanced Ceramics Studio: 3
- Art electives: 15

### Upper-Division Courses

**Course**
- General education: 12
- SA 240, Life Drawing: 3
- SA 364, Printmaking III: 3
- SA 370, Ceramics Studio: 3
- SA 374, Kiln Methods: 3
- SA 570, Advanced Ceramics Studio: 3
- Art electives: 15

### Courses for Graduate/Undergraduate Credit

**Course**
- SA 345, Intermediate Drawing: 6
- SA 570, Advanced Ceramics Studio: 3
- Art electives: 15

### Requirements

A total of 124 hours is required for the major, as distributed below.

**Area**
- Art Curriculum: 81
- Foundation: 9
- Art history: 6
- Drawing: 27
- Painting: 9
- Printmaking: 6
- Art electives: 15

### Model Program

**Freshman**
- General Education: 18
- SA Foundation (SA 145, 146, 189): 9
- SA 171, Beginning Ceramics: 3
- SA 272, Handbuilding with Clay: 3

**Sophomore**
- General education: 12
- SA 240, Life Drawing: 3
- SA 364, Printmaking III: 3
- SA 370, Ceramics Studio: 3
- SA 374, Kiln Methods: 3
- SA 380, Sculpture Studio: 3
- SA 370, Ceramics Studio: 3
- Art electives: 15

**Junior**
- General education: 12
- SA 345, Intermediate Drawing: 6
- SA 570, Advanced Ceramics Studio: 3
- Art electives: 15

**Senior**
- General education: 12
- SA 345, Intermediate Drawing: 6
- SA 570, Advanced Ceramics Studio: 3
- Art electives: 15

**Model Program**

**Freshman**
- General Education: 18
- SA Foundation (SA 145, 146, 189): 9
- SA 171, Beginning Ceramics: 3
- SA 272, Handbuilding with Clay: 3

**Sophomore**
- General education: 12
- SA 240, Life Drawing: 3
- SA 364, Printmaking III: 3
- SA 370, Ceramics Studio: 3
- SA 374, Kiln Methods: 3
- SA 380, Sculpture Studio: 3
- SA 370, Ceramics Studio: 3
- Art electives: 15

**General Education Program**
- General Education: 42

### General Education Program

**Course**
- Area: 81
- Foundation: 9
- Art history: 6
- Drawing: 27
- Painting: 6
- Printmaking: 6
- Ceramics: 3
- Sculpture: 3
- Art electives: 15

### Model Program

**Freshman**
- General Education: 18
- SA Foundation (SA 145, 146, 189): 9
- SA 171, Beginning Ceramics: 3
- SA 272, Handbuilding with Clay: 3

**Sophomore**
- General education: 12
- SA 240, Life Drawing: 3
- SA 364, Printmaking III: 3
- SA 370, Ceramics Studio: 3
- SA 374, Kiln Methods: 3
- SA 380, Sculpture Studio: 3
- SA 370, Ceramics Studio: 3
- Art electives: 15

**General Education Program**
- General Education: 42
Drawing

Drawing serves the four major areas of the studio arts department—painting, printmaking, sculpture and ceramics—as well as the departments of graphic design and art education.

Lower-Division Courses

145. Basic Drawing I. (3). Basic Drawing I focuses on the perception and the representation of space, light, forms and their proportions and surface topology. The course also deals with media techniques, eye-hand coordination and perspective. F 16 145 1 1002

146. Drawing II. (3). Drawing skills and knowledge acquired in SA 145 will be applied to projects. The course will focus on processes of abstraction, creative and experimental use of media, design and composition, and basic color theory and usage. Both nonobjective and objective imagery will be explored, including drawing from the figure. Prerequisite: SA 145. F 16 146 1 1002

240. Life Drawing. (3). Lab fee. Drawing from life with emphasis on figure construction. Anatomy sketchbooks and/or portfolios are required. Repeatable once for credit. Prerequisite: SA 145. F 16 240 1 1002

Upper-Division Courses

340. Life Drawing Studio. (3). Lab fee. Emphasis on individual development, figurative observation and interpretation. Repeatable for credit. Prerequisite: completion of foundation program. F 16 340 1 1002

345. Intermediate Drawing. (3). Drawing projects, nonfigurative. Included are problems of style, suites of related works and history of drawing techniques and materials. Repeatable once for credit. Prerequisite: completion of foundation program. F 16 345 1 1002

Courses for Graduate/Undergraduate Credit

545. Advanced Drawing Studio. (1-3). Drawing with a variety of media. Graphic problems relative to individual technical and aesthetic development are used. Critiques are given. Repeatable for credit. Prerequisites: SA 340 and 345. F 16 545 1 1002

549. Independent Study in Drawing. (3). A professional emphasis on technical or aesthetic research in the drawing area. Available only for the advanced drawing student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. Prerequisites: SA 340, 345 and instructor's consent. F 16 549 1 1009

Courses for Graduate Students Only

800. Seminar in Art Topics. (3). Designed to explore areas of common interest in the arts. Supervised study, research and discussion. Repeatable for credit. F 16 800 9 1009

840. Special Problems in Life Drawing. (1 or 3). Drawing from life. Sketchbooks and/or portfolio required. Repeatable for credit. F 16 840 3 1002

845. Special Problems in Drawing. (1-3). Advanced drawing in various media with emphasis on independent work and the development of personal expression. Repeatable for credit. F 16 845 3 1002

Painting

Lower-Division Courses

250. Oil Painting. (3). An introduction to oil painting, emphasizing studio practices, fundamental principles and techniques. Prerequisites: SA 145, GO 136 and 137, or departmental consent for nonmajors. F 16 250 1 1002

251. Watercolor Painting. (3). An introduction to transparent watercolor painting. Sketchbooks and/or portfolio required. Prerequisite: SA 145, GO 136 and 137, or departmental consent for nonmajors. F 16 251 1 1002

252. Acrylic Painting. (3). An introduction to acrylic painting on various supports, such as canvas, masonite and paper. Prerequisite: SA 145, GO 136, GO 137, or departmental consent for nonmajors. F 16 252 1 1002

255. Introduction to Methods and Media of Painting. (3). Survey of painting methods from the 12th to the 20th centuries. History and nature of materials are studied, including encaustic, tempera, oil, oil-resin, synthetic media, grounds, supports and surface protection. Prerequisite: instructor's consent. F 16 255 1 1002

Upper-Division Course

350. Painting Studio. (3). Emphasis on individual development, personal interpretation and creativity. Repeatable for credit. Prerequisites: completion of foundation program and SA 250 and 251 or 252. F 16 350 1 1002

Courses for Graduate/Undergraduate Credit

550. Advanced Painting Studio. (1-3). Designed for the professionally oriented student. Emphasis is on independent study. Repeatable for credit. Prerequisites: four semesters of SA 350 and interview with instructor. F 16 550 1 1002

551. Advanced Watercolor Studio. (3). Sketchbooks and/or portfolio required. Prerequisites: completion of foundation program and SA 251. F 16 551 1 1002

553. Independent Study in Painting. (3). A professional emphasis on technical or aesthetic research in the painting area. Available only for the advanced painting student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent. F 16 553 1 1009

Courses for Graduate Students Only

800. Seminar in Art Topics. (3). Designed to explore areas of common interest in the arts. Supervised study, research and discussion. Repeatable for credit. F 16 800 9 1009

850. Special Problems in Painting. (1-5). Professional and experimental painting with emphasis on 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. F 16 850 3 1002

855. Methods and Media of Painting. (3). Painting methods from the 12th to the 20th centuries. History and nature of materials are studied, including encaustic, tempera, oil, oil-resin, synthetic media, grounds, supports and surface protection. Prerequisite: instructor's consent. F 16 855 1 1002

856-859. Terminal Project—Painting. (3 or 5). F 16 856 4 1002; F 16 859 4 1002

Printmaking

The printmaking program gives students a broad base of experience in printmaking. Students encounter two primary disciplines, intaglio and lithographic techniques. Supplementing these areas are relief, collagraph, serigraphy and combined techniques in both black and white and color. Emphasis is placed upon creativity and students are encouraged to investigate new or traditional methods.

Requirements. A total of 124 hours is required for the major as distributed below:

Area Hrs.
Art Curriculum 81
Foundation 9
Art history electives 6
Printmaking 24
Drawing 12
A total of 124 hours is required for the major as distributed below:

### General Education Program
- 42 hours

### Model Program

#### Freshman
- General Education 18 hours
- SA Foundation (SA 145, 146, 189) 9 hours
- SA 160, Printmaking I 6 hours
- SA 250, Oil Painting 3 hours

#### Sophomore
- General Education 12 hours
- SA 240, Life Drawing 3 hours
- SA 272, Handbuilding with Clay 3 hours
- SA 340, Life Drawing Studio 3 hours
- SA 364, Printmaking II 3 hours
- SA 561, Advanced Printmaking Studio 3 hours
- Art elective 3 hours

#### Senior
- Art History electives 6 hours
- SA 545, Advanced Drawing Studio 3 hours
- SA 561, Advanced Printmaking Studio 3 hours
- Art electives 15 hours

### Lower-Division Courses

161. Printmaking for Non-Art Majors. (3) Involves basic intaglio and mixed techniques, as well as linoleum or wood block techniques, and provides an introduction to printmaking. F 16 161 1 1002

260. Printmaking I. (3) Introduction to intaglio, collagraph, and relief techniques. F 16 160 1 1002

262. Printmaking II. (1-3) Basic intaglio techniques (etching, engraving, soft ground, aquatint, and mixed techniques). Special art research project required in addition to assigned reading and reports. F 16 262 4 1002

265. The Techniques and Materials of Printmaking. (2-3) Involves both letterpress and gravure methods. Includes techniques of intaglio, relief, and woodcut. F 16 265 6 1002

### Upper-Division Courses

364. Printmaking III—Lithography. (3) Introduces lithography, including color printing. F 16 364 1 1002

365. Basic Screenprinting and Papermaking I. (3) Part I introduces basic screenprinting techniques and their application to both commercial and fine arts projects. F 16 365 1 1002

366. Advanced Screenprinting and Papermaking II. (3) Part II introduces advanced techniques and their application to both fine arts and commercial projects. F 16 366 1 1002

367. Independent Study in Printmaking. (3) An independent study in printmaking is available for credit. F 16 367 1 1002

### Courses for Graduate/Undergraduate Credit

560. Advanced Printmaking Studio—Intaglio. (1-3) Introduces advanced intaglio techniques. F 16 560 1 1002

561. Advanced Printmaking Studio—Collagraph. (1-3) Introduces advanced collagraph techniques. F 16 561 1 1002

565. Independent Study in Printmaking. (3) A student may pursue an independent study in printmaking area. F 16 565 1 1002

### Courses for Graduate Students Only

800. Seminar in Art Topics. (3) Designed to explore areas of common interest in the arts. F 16 800 1 1002

860. Special Problems in Printmaking—Intaglio. (1, 3, 6 or 5) Advanced printmaking on an individual basis. F 16 860 1 1002

862 & 863. Special Problems in Printmaking—Lithography. (1, 3, 6 or 5) Advanced printmaking on an individual basis. F 16 862 3 1002

### Sculpture

The sculpture program is designed for students with a solid grounding in basic techniques and materials and exposes them to the past and present directions in sculpture. A strong professional emphasis is emphasized, with traditional and experimental methods and media being explored.

### Requirements

A total of 124 hours is required for the major as distributed below:

Area
- Art Curriculum 81
- Art History electives 6
- Foundation 24
- Sculpture 12
- Drawing 6
- Ceramics 3
- Painting 3
- Printmaking 6
- Art electives 15

### General Education Program
- 42 hours

### Model Program

#### Freshman
- General Education 18 hours
- SA Foundation (SA 145, 146, 189) 9 hours
- SA 160, Printmaking I 6 hours
- SA 260, Sculpture 3 hours

#### Sophomore
- General Education 12 hours
- SA 240, Life Drawing 3 hours
- SA 272, Handbuilding with Clay 3 hours
- SA 340, Life Drawing Studio 3 hours
- SA 364, Printmaking II 3 hours
- SA 561, Advanced Printmaking Studio 3 hours

#### Junior
- Art History electives 6 hours
- SA 545, Advanced Drawing Studio 3 hours
- SA 561, Advanced Printmaking Studio 3 hours
- Art electives 15 hours

#### Senior
- Art History electives 6 hours
- SA 545, Advanced Drawing Studio 3 hours
- SA 561, Advanced Printmaking Studio 3 hours
- Art electives 15 hours
Courses for Graduate Students Only

800. Seminar in Art Topics. (1, 3 or 5). Designed to explore areas of common interest in the arts. Supervised study, research, and discussion. Repeatable for credit. F 16 800 9 1009

880. Special Problems in Sculpture. (3 or 5). Advanced sculpture with emphasis on experimentation and high quality work on an individual basis. Special projects in casting, architectural sculpture, mixed media or new materials and techniques are stressed. Repeatable for credit. F 16 880 3 1002

888-889. Terminal Project—Sculpture. (3 or 5; 3 or 5). F 16 888 4 1002; F 16 889 4 1002

Division of Dance

The Division of Dance offers a Bachelor of Fine Arts degree in dance performance. Major emphasis is placed on modern dance technique with strong supportive classes in ballet. Major course offerings include study in modern dance technique, ballet technique, choreography, dance history, performance and production, music for dance, repertory, lighting, make-up, costume, methods of teaching and practice teaching. Additional courses are offered in jazz, tap, ballroom and other dance forms.

The Mid-America Dance Theatre presents at least two performance seasons annually and offers lecture demonstrations, master classes and informal concerts throughout the year. Membership in the company is by audition only.

Graduation Requirements

Dance majors must complete Dance 501, Modern Dance IV, and Dance 410, Ballet III. A minimum of 42 hours is required in modern dance and ballet with at least 24 of these hours in modern dance technique. All majors must take a minimum of five technique classes per week.

Advancement from one level of technique to the next is not automatic and will be by the instructor's consent or by audition. Students will be placed at the appropriate technical level upon admission to the program.

All majors present a senior concert to include one solo, one duet and one group dance and must perform in two of these three pieces. The total length of time for the senior concert should be between 20 and 25 minutes.

All dance majors are required to take Speech 645, Stage Lighting; Speech 254, Stage Makeup; and Speech 253, Costuming for the Stage. Students are assigned to work with the appropriate dance class to light, makeup or costume a specific dance performance.
Art History 122G; Survey of Western Art: Renaissance and Baroque; 124, Survey of Western Art: Modern; 525, 20th Century Art Before 1945; 526, Art Since 1945. (Select one of the previous courses.)

The remaining hours should be selected to fulfill General Education Program requirements.

Lower-Division Courses

120. Jazz I. (1-2). Introduction to jazz technique, emphasizing work in basic positions, body alignment, and history and development of jazz dance in America. Repeatable for credit. F 25 120 5 1008

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. F 25 130 5 1008

150. Dance Workshop. (1-4). Repeatable for credit. F 25 150 2 1008

201. Modern Dance Technique I. (2-3). Introduction to study of basic positions, body alignment, and history and development of modern dance in America. Repeatable for credit. F 25 201 5 1008

210. Ballet I. (2-3). Introduction to basic technique, positions, basic steps, proper body alignment, and history and development of ballet vocabulary. Repeatable for credit. F 25 210 5 1008

220. Jazz II. (1-2). Continuation of Dance 120 at intermediate/advanced level. Repeatable for credit. Prerequisite: instructor's consent or by audition. F 25 220 5 1008

Upper-Division Courses

301. Modern Dance II. (2-3). Continuation of Dance 201 with emphasis on movement phrases. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition. F 25 301 5 1008

305. Choreography I. (4). Basic work in creating movement, utilizing various rhythms, dynamics and designs. Exploration of appropriate accompaniment for dance. Class culminates in a performance of a solo work for an invited audience. Prerequisites: one year of modern dance and equivalent to intermediate technical level. Concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 305 5 1008

306. Choreography II. (4). Further work in composing dances for two, three or more dancers. Exploration of design and execution of stage lighting and make-up, various areas of publicity, promotion, and audio-visual techniques. Class culminates in a performance for an invited audience. Prerequisites: Dance 305 and concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 306 5 1008

410. Ballet III. (3). Continuation of Dance 310. Intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition. F 25 410 5 1008

425Q. Dance History II. (3). Twentieth century and later, modern dance. Study of major choreographers, performers and dance companies. F 25 425Q 5 1008

Courses for Graduate/Undergraduate Credit

501. Modern Dance IV. (3). Continuation of Dance 401. Advanced level. Emphasis on professional technique and performance quality. Prerequisite: Prerequisite: instructor's consent or by audition. F 25 501 5 1008

505. Dance Performance and Production. (3). Students receive practical experience in the organization and presentation of a dance concert. Class content may include design and construction of costumes and properties. Design and execution of stage lighting and make-up, various areas of publicity, promotion, and audio-visual techniques. Students are also required to design costumes and properties and be responsible for all technical aspects of the concert to be performed at the end of the semester. Prerequisites: Dance 405 and concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 505 5 1008


545. Methods of Teaching Dance. (3). Course in developing 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. F 25 545 5 1008

605. Advanced Dance Performance and Production. (3). Further work in the preparation and production of the end-of-the-semester concert. Students are required to choreograph and perform and be responsible for all technical aspects of the concert. Prerequisites: Dance 505 and concurrent enrollment in appropriate-level modern dance or ballet technique class. F 25 605 5 1008

Division of Music

The Division of Music, which includes the Department of Music Education, Department of Music Performance and Department of Musicology-Composition, offers courses, programs and curricula designed to train and educate serious music students who are planning careers in the music profession. In addition, the division's offerings allow students in other colleges to gain an understanding of music as a humanistic study. Recitals by students, faculty and guests augment the overall community programs in the fine arts.

Students in the Division of Music enjoy the use of extensive facilities in the Duerksen Fine Arts Center, which includes the Lewis and Selma Miller Concert Hall. In addition, Wiedemann Hall, constructed in 1986, houses the first Marcussen organ in the 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 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 the area of piano may pass the requirement by special examination. If students pass the examination, they may elect other interest areas or additional private study in piano courses designed for the nonpiano major. 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 dean are exempt from this requirement.

All proficiency examinations must be passed before students are allowed to student teach.

Applied Music

Instruction is given in applied media to develop musicianship, performance skills and reading knowledge of music literature. Specific requirements for each level are set by the individual applied areas.

For one semester hour of credit, students receive a one-half-hour lesson each week with a minimum of five hours of practice required per week.

For two semester hours of credit, (majors and special music students only), students receive either (1) a one-half-hour private lesson each week and a one-hour class each week or (2) a one-hour lesson per week or other equivalent arrangements at the option of the instructor. Students are expected to practice a minimum of ten hours each week.

For four semester hours of credit, (performance majors and special music students only), students receive two one-half-hour lessons and a one-hour class lesson each week or other equivalent arrangements at the option of the instructor. Students are expected to practice a minimum of 20 hours per week.

Students receive academic credit for applied music instruction only when they take instruction on the University campus offered 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, AM 231 and 232; juniors and seniors, AM 431, 432 and 434 *; and graduates, AM 731, 732 and 734 *.

These applied music courses are repeatable for credit.

Prior to graduation all music majors must achieve a minimum degree 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.

Recitals

All music majors are required to enroll in five semesters of recital. Students fulfill four of these semesters by enrolling in Mus. Perf. 050, Recital, and attending a minimum of 14 specified recitals and concerts sponsored by the Division of Music. The students' performance of the senior recital fulfills their fifth semester recital requirement; they must be enrolled in Recital (Mus. Perf. 050 for BME and BM theory-composition majors or Mus. Perf. 400 for BM performance majors) during that semester.

All students are required to declare a chief performance medium and in this major area they 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 and (3) whether or not the program should be performed before a faculty jury.

Further recital specifications are found under graduation requirements for Bachelor of Music in Theory-Composition.

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 departments in the Division of Music.

Bachelor of Music in Theory-Composition

Area

<table>
<thead>
<tr>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
</tr>
<tr>
<td>Chief performing medium (piano, organ)</td>
</tr>
<tr>
<td>Other performing media</td>
</tr>
<tr>
<td>Chief performing medium (nonkeyboard)</td>
</tr>
<tr>
<td>Keyboard performing medium</td>
</tr>
<tr>
<td>Other performing media</td>
</tr>
<tr>
<td>Theory and Composition</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-128, 129-130, 227-228, 229-230, 259-260, 523, 559, 560, 561, 641, 659, 660, 661, 671 and 672</td>
</tr>
<tr>
<td>History and Literature of Music</td>
</tr>
<tr>
<td>Mus.- Comp. 113Q, 334Q, 335Q and two hours of upper-division electives in music history or literature</td>
</tr>
<tr>
<td>Conducting</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218, 651 or 691</td>
</tr>
<tr>
<td>Electives (music or nonmusic courses)</td>
</tr>
<tr>
<td>Recital attendance (four semesters plus senior recital)</td>
</tr>
</tbody>
</table>

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 ink copies. These ink copies must represent a high quality of music manuscript and must be completed in the candidate's own hand. In addition, students may elect to present a recital in their chief performing medium with the permission of their applied music instructor and achievement of junior proficiency in that instrument.
**Bachelor of Music in Performance—Instrumental Major**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>28</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium</td>
<td>24</td>
</tr>
<tr>
<td>(four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>22</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661 and 641, 643 or 645</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>12</td>
</tr>
<tr>
<td>Mus.-Comp. 113Q, 334Q and 335Q</td>
<td></td>
</tr>
</tbody>
</table>

**Bachelor of Music in Performance—Keyboard Major**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>28-32</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium</td>
<td>24</td>
</tr>
<tr>
<td>(four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 250 and 251, Applied Piano Concerto (for piano performance majors)</td>
<td>2</td>
</tr>
<tr>
<td>Piano accompanying majors:</td>
<td></td>
</tr>
<tr>
<td>Piano</td>
<td>16</td>
</tr>
<tr>
<td>Applied accompanying</td>
<td>12</td>
</tr>
<tr>
<td>(Mus. Perf. 223, 224, 423 and 424)</td>
<td></td>
</tr>
<tr>
<td>Theory</td>
<td>22-26</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661, 641, 643 or 645, and for piano accompanying majors only, Mus. Perf. 121, 122, 221, 222</td>
<td></td>
</tr>
</tbody>
</table>

**Bachelor of Music in Performance—Vocal Major**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>26</td>
</tr>
<tr>
<td>Voice</td>
<td>24</td>
</tr>
<tr>
<td>Piano (two semesters)</td>
<td>2</td>
</tr>
</tbody>
</table>

**Ensembles**

- **Organ majors**: 10
- **Piano majors**: 8
  - (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.)
- **Organ majors (electives)**: 11
  - (Must include Mus.-Comp. 597-598 and 4 hours of music electives)
- **Piano majors**
  - Performance Majors: Mus.-Perf. 107-407, Piano Repertoire
  - Mus.-Perf. 580, Piano Pedagogy
  - Mus.-Comp. 582 and 583, Piano Literature

**History and Literature of Music**

- Mus.-Comp. 113Q, 334Q and 335Q

**Conducting**

- Mus. Perf. 217 or 218 and 651 or 691

**Electives**

- (Six hours of music electives required. Include Mus. Perf. 680 for woodwind majors; Mus. Perf. 681 for brass majors; Mus. Perf. 682 for percussion majors; Mus. Perf. 560 for violin and viola majors.)

**Senior Recital (Mus. Perf. 400)**

- 1

**Recital attendance (specified number of recitals per semester for four semesters)**

- (Mus. Perf. 050)

**Bachelor of Music in Performance with Minor in Business**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>28</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium</td>
<td>24</td>
</tr>
<tr>
<td>(four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>22</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661, 641, 643 or 645, and for piano accompanying majors only, Mus. Perf. 121, 122, 221, 222</td>
<td></td>
</tr>
</tbody>
</table>

**History and Literature of Music**

- Mus.-Comp. 113Q, 334Q and 335Q

**Conducting**

- Mus. Perf. 217 or 218 and 651 or 691

**Ensembles**

- (Six hours of appropriate ensemble. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)
- **Organ majors**: 10
- **Piano majors**: 8

**Electives**

- (In upper-division theory, conducting or choral majors)

**Bachelor of Music in Performance—Vocal Major**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>26</td>
</tr>
<tr>
<td>Voice</td>
<td>24</td>
</tr>
<tr>
<td>Piano (two semesters)</td>
<td>2</td>
</tr>
</tbody>
</table>

**Ensembles**

- **Organ majors**: 10
- **Piano majors**: 8
  - (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.)
- **Organ majors (electives)**: 11
  - (Must include Mus.-Comp. 597-598 and 4 hours of music electives)
- **Piano majors**
  - Performance Majors: Mus.-Perf. 107-407, Piano Repertoire
  - Mus.-Perf. 580, Piano Pedagogy
  - Mus.-Comp. 582 and 583, Piano Literature

**History and Literature of Music**

- Mus.-Comp. 113Q, 334Q and 335Q

**Conducting**

- Mus. Perf. 217 or 218 and 651 or 691

**Business Requirements**

- Econ. 201, 202 (6); Acctg. 210, 220 (6); and any three
Bachelor of Music in Performance with Minor in Journalism

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 1270-129, 128-130, 227-229, 228-230, 561 or 661, 641, 645, 643, or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Must include Mus.-Comp. 1130, 334Q and 335Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218 and 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Recital (specified ensembles)</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
<tr>
<td>Vocal majors require Mus. Perf. 121, 221, 222, Piano majors require Mus. Perf. 580</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (Mus. Perf. 400)</td>
<td>1</td>
</tr>
<tr>
<td>Recital attendance (specified number of recitals per semester for four semesters, Mus. Perf. 050)</td>
<td></td>
</tr>
<tr>
<td>Journalism Requirements</td>
<td>21</td>
</tr>
<tr>
<td>Journalism 115Q (3); 200 (3); 300 (3); 500 (3); 550 (3); 650 (3); 690 (3)</td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Music in Performance with Minor in Journalism (Advertising/Public Relations Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 1270-129, 128-130, 227-229, 228-230, 561 or 661, 641, 645, 643, or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Must include Mus.-Comp. 1130, 334Q and 335Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218 and 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Recital (specified ensembles)</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
<tr>
<td>Vocal majors require Mus. Perf. 121, 221, 222, Piano majors require Mus. Perf. 580</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (Mus. Perf. 400)</td>
<td>1</td>
</tr>
<tr>
<td>Recital attendance (specified number of recitals per semester for four semesters, Mus. Perf. 050)</td>
<td></td>
</tr>
<tr>
<td>Journalism Requirements</td>
<td>21</td>
</tr>
<tr>
<td>Journalism 115Q (3); 200 (3); 322 (3); 332 (3); 552 (3); 560 (3); 690 (3)</td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Music in Performance with Minor in Journalism (Broadcasting Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>20</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>16</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 1270-129, 128-130, 227-229, 228-230, 561 or 661, 641, 645, 643, or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Must include Mus.-Comp. 1130, 334Q and 335Q</td>
<td></td>
</tr>
</tbody>
</table>

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 four 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.

4. **Piano pedagogy emphasis** offered to satisfy the needs of students whose chief performing medium is piano and who plan to enter the field of vocal, piano or general music teaching in the community.

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 English composition (Eng. 101 or its equivalent and Eng. 102); a grade of C or better in Speech 111 or 112; completion of prerequisites in educational psychology, foundations of education and music education methods;
## Professional Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>IS 233 or 333 and 433</td>
<td>6</td>
</tr>
<tr>
<td>IS 232, 231, 234 and 428</td>
<td>6</td>
</tr>
<tr>
<td>IS 401</td>
<td>3</td>
</tr>
<tr>
<td>IS 456</td>
<td>3</td>
</tr>
<tr>
<td>IS 451*</td>
<td>3</td>
</tr>
<tr>
<td>IS 469*</td>
<td>3</td>
</tr>
</tbody>
</table>

*These courses must be taken during the student teaching semester.

## Additional Courses Required for Instrumental Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>18</td>
</tr>
<tr>
<td>Instrumental majors</td>
<td></td>
</tr>
<tr>
<td>(chief medium)</td>
<td>14</td>
</tr>
<tr>
<td>(piano)</td>
<td>2</td>
</tr>
<tr>
<td>Keyboard majors</td>
<td></td>
</tr>
<tr>
<td>(chief medium)</td>
<td>14</td>
</tr>
<tr>
<td>(second instrument)</td>
<td>2</td>
</tr>
<tr>
<td>Electric bass majors</td>
<td></td>
</tr>
<tr>
<td>(electric bass)</td>
<td>10</td>
</tr>
<tr>
<td>(string bass)</td>
<td>4</td>
</tr>
<tr>
<td>(piano)</td>
<td>2</td>
</tr>
</tbody>
</table>

Required for all of the above majors: IS 341, 1 hr. and 342, 1 hr. Students must be enrolled in applied music during the semester of their senior recital.

## General Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td>12</td>
</tr>
<tr>
<td>Eng. 101 and 102</td>
<td>6</td>
</tr>
<tr>
<td>Speech 111 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Math. 109, 111, 121 or 211</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td>9</td>
</tr>
<tr>
<td>Literature required, 3 hrs.; Mus.-Comp. 113Q required, 3 hrs.; 4 hrs. from American studies, art education, art history, foreign languages (excluding basic language courses), history, linguistics, musicology-composition, philosophy or religion</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Psychology 1110 required, 3 hrs.; 3 hrs. from sociology, anthropology, economics, geography or political science</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Courses in 2 of the following departments: biological sciences, chemistry, geology, mathematics or physics</td>
<td></td>
</tr>
<tr>
<td>Electives (to make a total of 42 hours)</td>
<td>9</td>
</tr>
</tbody>
</table>

6 hours required from Mus.-Comp. 3340 and 3350. Other hours may be taken in any University division (except the student's major department).

## Additional Courses Required for Vocal (Keyboard) Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16</td>
</tr>
<tr>
<td>Vocal majors (voice)</td>
<td>14</td>
</tr>
<tr>
<td>(piano)</td>
<td>2</td>
</tr>
</tbody>
</table>

Keyboard majors (piano) 14 (Mus. Ed. 341, 342, 2

Students must be enrolled in applied music during the semester of their senior recital.

## General Music

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus.-Comp. 127Q-128, 129-130, 227-228, 230-230, 561 or 661, 641 or 645 or 643, Mus. Perf. 217 or 218, 651 or 691, 4 hrs. of music electives for vocal majors; for piano majors Mus. Perf. 217 or 218, 651 or 691, 4 hrs. of music electives for vocal majors; for piano majors</td>
<td>28</td>
</tr>
</tbody>
</table>

Ensembles 8-10

Vocal, harp, organ, guitar, electric bass majors 10

Piano majors 8

(see degree sheets for specified ensembles)

Recital attendance (four semesters plus senior recital-Mus. Perf. 050)

## Additional Courses Required for Special Music Education Emphasis (Vocal or Instrumental)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied music</td>
<td>18</td>
</tr>
<tr>
<td>Vocal majors (voice)</td>
<td>14</td>
</tr>
<tr>
<td>(piano)</td>
<td>2</td>
</tr>
</tbody>
</table>

## Key Points
- Successful completion of the piano proficiency exam is required.
- Transfer students must satisfy education requirements for prerequisites not taken at Wichita State.
- All students must have an application file on file with the Admissions Committee of the College of Education and the Department of Music Education and receive their approval.
- Students must file applications with the chairperson of the music education department.
- The following program fulfills both the University requirements for graduation and the Kansas certification requirement and must be taken by all Bachelor of Music Education (BME) candidates.
- Additional courses are required for Vocal and Instrumental Emphasis.
- General Music requirements include a variety of courses across different disciplines.
- Additional courses must be taken during the student teaching semester.
Ensembles .................................. 8-10
  Instrumental and vocal
  majors .................................... 10
  Piano majors ................................... 8
  (see degree sheets for
  specified ensembles)
  Recital attendance (four
  semesters plus senior recita-
  tal-Mus. Perf. 850)

Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Educational Psychology</td>
<td>6</td>
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<tr>
<td>IS 333 and 433</td>
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<tr>
<td>Foundations of Education</td>
<td>6</td>
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<tr>
<td>IS 232, 231, 234, 428</td>
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</tbody>
</table>

Recommended for special music
education majors, CDS 214  ....... 3

Music Education Methods . . . 12-16

  Elementary Vocal Emphasis-
  Mus. Ed. 309, 402, 241, 242
  Secondary Vocal Emphasis-
  Mus. Ed. 203, 303, 309, 404, 241, 242
  Elementary Inst. Emphasis-
  Mus. Ed. 309, 402, 235, 236, 237, 238, 239, 240
  Secondary Inst. Emphasis-
  Mus. Ed. 204, 304, 309, 404, 235, 236, 237, 238, 239, 240

Additional courses for piano
pedagogy majors-Mus. Perf.
580 (2 hours) and 690 (4
hours)

Music Major in Fairmont College
of Liberal Arts and Sciences

Students in Fairmont College of
Liberal Arts and Sciences who wish to major
in music are required to elect 41 hours as
specified in the following areas and
course listings.

Area                      | Hrs.        |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Group I</td>
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</tbody>
</table>
  Music Literature and History | 8 |
  Mus.-Comp. 113Q and six
  hours from Mus.-Comp. 331Q, 326Q or 333Q

| Group II                  |             |
  Music Theory              | 16          |
  Mus.-Comp. 127Q-128, 129- 130, 227-228, 229 and
  523

| Group III                 |             |
  Counterpoint              | 2           |
  Mus.-Comp. 561

| Group IV                  |             |
  Conducting: Orchestration and
  Choral Arranging           | 4           |
  Mus. Perf. 217 or 218 and
  Mus.-Comp. 641, 643 or
  645

Group V
  Applied Music (four semesters) 4
  Voice, piano, organ or
  orchestral instrument

Group VI
  Ensemble 3
  Select in consultation with ad-
  viser

Group VII
  Electives from the areas of
  music, literature, music
  theory, counterpoint, con-
  ducting, orchestra and
  choral literature 4

Music Minor in Fairmont College
of Liberal Arts and Sciences

A music minor in Fairmont College of
Liberal Arts and Sciences consists of 18
hours selected from the following:

  Mus.-Comp. 113Q, 127-128, 129-130, 227-228, 229-230, 331Q, 332Q, 339Q, 523, a
  maximum of four hours of ensembles; and
  a maximum of two hours (two semes-
  ters) in applied music. Students who
  choose to utilize two hours of applied
  music must satisfy freshman proficiency
  requirements.

Music Education

Lower-Division Courses

150. Music Education Workshop  (1-4).
  Repeatable for credit. F 11 150 2 0832

203. Fundamentals of Vocal Music for
  Secondary Schools. (3). The teaching of
  music in the secondary school, considera-
  tion of objectives and examination of materials.
  Designed for students primarily interested in
  teaching music in secondary schools, the
  course includes the study of materials for
  public schools. Includes classroom guitar, choral,
  and vocal programs as well as an introduction to
  music theory. Prerequisite: music education major or
  instructor's consent. Grades 6-12. F 11 193 0 0832

204. Fundamentals of Instrumental Music
  for Secondary Schools. (3). Techniques and
  materials focused on teaching instrumen-
  tal music in junior and senior high
  schools. Emphasis on instrumental organiza-
  tion and administration, pedagogical prac-
  tices, laboratory experiences, guiding
  student behavior, evaluation and profes-
  sional responsibilities. For students primarily
  interested in teaching instrumental music in
  the secondary schools. Includes teaching tech-
  niques for marching band and jazz ensemble.
  Prerequisite: music education major or
  instructor's consent. Grades 6-12. F 11 193 0 0832

235. Methods of Teaching Orchestral In-
  struments (Violin and Viola). (1).
  Procedures and materials for classical
  and private teaching. Performance and
  fundamentals in first position and theory and
  reading knowledge of positions two through five are
  included. Band and orchestra laboratory is
  included. Grades 4-12. F 11 236 0 0832

236. Methods of Teaching Orchestral In-
  struments (Cello and String Bass). (1).
  Procedures and materials for classical and
  private teaching. Fundamental techniques are
  applied. Knowledge of more difficult po-
  sitions and special techniques are included.
  Band and orchestra laboratory is included.
  Grades 4-12. F 11 236 0 0832

237. Methods of Teaching Band and Or-
  chestral Instruments (Clarinet and Saxo-
  phone). (1). Designed to prepare the pro-
  spective instrumental music instructor to
  effectively teach clarinet and saxophone in
  the public school setting. Included are dis-
  cussions of teaching techniques, identification
  of problems peculiar to each instrument, care
  and repair, instructional materials, instru-
  ment brands, and the development of sufficient
  playing skills. Two class periods per week
  consisting of one group and one private
  meeting. (Enrollment is limited.) Grades 4-12.
  F 11 237 0 0832

238. Methods of Teaching Band and Or-
  chestral Instruments (Flute and Double
  Reeds). (1). Designed to prepare the pro-
  spective instrumental music instructor to
  effectively teach flute and double reeds in
  the public school setting. Included are dis-
  cussions of teaching techniques, identification
  of problems peculiar to each instrument, care
  of instrument, instructional materials, instru-
  ment brands, and the development of sufficient
  playing skills. Two class periods per week
  consisting of one group and one private
  meeting. (Enrollment is limited.) Grades 4-12.
  F 11 238 0 0832

239. Methods of Teaching Band and Or-
  chestral Instruments (Brass). (1).
  Procedures and materials for classical and
  private teaching of all brass instruments, empha-
  sizing tone qualities, differences in embouchure
  and necessary techniques for performance.
  Grades 4-12. F 11 239 0 0832

240. Methods of Teaching Band and Or-
  chestral Instruments (Percussion). (1).
  Procedures and materials for classical and
  private instruction. Application of snare drum
  fundamentals and a study of basic tech-
  niques for all percussion instruments are
  included. Grades 4-12. F 11 240 0 0832

  String rehearsal techniques and materials for
  grades 4 through 12. Required of majors on
  choral/keyboard program and choral/key-
  board majors on special music education
  program. F 11 241 0 0832

242. Wind and Percussion Rehearsal
  Methods. (1). Wind and percussion tech-
  niques and materials for grades 4 through 12.
  Required of majors on choral/keyboard pro-
  gram and choral/keyboard majors on special music
  education program. F 11 242 0 0832

281. Cooperative Education. (1-8).
  A field experience designed to com-
  plement and enhance the student's academic pro-
  gram. Individualized programs must be formu-
  lated in consultation with and approved by ap-
  propriate faculty sponsors and Cooperative Edu-
  cation 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 addi-
  tion to their co-op assignment; alterna-
  tive, working full-time one semester in a field study
352. Music Methods for the Classroom Teacher. (3). For the elementary classroom teacher. The development of children's musical growth through singing, listening, rhythmic and creative activities is emphasized. Prerequisite: Mus. Ed. 351 or instructor's consent. F 11 352 O 0832

403. Advanced Techniques of Vocal/General School Music. (1-2). Emphasis on special problems related to preparation for student teaching: composition, orchestration, and general music programs at all levels. Includes are audiovisual instruction and materials. Prerequisites: Mus. Ed. 203 and 303 (also 309 for special music education majors). To be taken during student teaching semester. Grades K-12. F 11 403 O 0832

404. Advanced Techniques of Instrumental School Music. (1). Consideration of special problems related to preparation for student teaching in instrumental music programs at all levels. Includes audiovisual instruction and materials. Prerequisites: Mus. Ed. 204 and 304. To be taken during student teaching semester. Grades 4-12. F 11 404 O 0832

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. 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; 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. Offered Cr/NCr only. F 11 481 O 0832

Courses for Graduate/Undergraduate Credit

606. Music Methods for Early Childhood Educators. (3). Materials and methods for teaching music in the preschool and kindergarten classroom. Included are 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. F 11 606 O 0832

611. Music for Special Education. (3). Open to upper-division or graduate students and designed for the potential practicing music teacher, classroom teacher of special education students, or the identification of dysfunctions and their problems and current theory and practices in special music education are included. This course satisfies one hour of the requirements for the major in special education. Prerequisite: one hour of applied voice or Music Ed. 341 and Mus. Pers. 217 or 218. Grades 6-12. F 11 341 O 0832

617. Music Fundamentals for the Classroom Teacher. (3). For students planning to teach in the elementary school classroom. Basic fundamentals of music are included with emphasis upon development of student's music ability in singing, playing the piano and classroom instruments. F 11 351 O 0832

688. 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. F 11 688 O 0832

690. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent. F 11 690 O 0832

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. F 11 732 O 0832

737A. Advanced Woodwind Techniques. (2). Special problems and techniques in the teaching of woodwind instruments. Current materials are surveyed. Prerequisites: Mus. Ed. 237 and 238 or equivalent. F 11 737A O 0832

739A. Advanced Brass Techniques. (2). Special problems and techniques in the teaching of brass instruments. Current materials are surveyed. Prerequisite: Mus. Ed. 239 or equivalent. F 11 739A O 0832

740A. Advanced Percussion Techniques. (2). Special problems and techniques in the teaching of percussion instruments. Current materials are surveyed. Prerequisite: Mus. Ed. 240 or equivalent. F 11 740A O 0832

750. Music Education Workshop. (1-4). Repeatable for credit. F 11 750 O 0832

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 coordinators. 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. Prerequisites: 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. F 11 781 O 0832


785. Instrumental Music Organization and Administration. (2). Problems of developing school instrumental music programs. F 11 785 O 0832

Courses for Graduate Students Only

821. Elementary Music Supervision. (3). Trends in elementary music education; evaluation of various materials and techniques; and special projects in planning and executing a modern program of music supervision. Prerequisite: Mus. Ed. 831 or instructor's consent. F 11 821 O 0832

822. Advanced Techniques in Special Music Education. (3). A course for the music
833. Special Music Education Practicum. (3). For the music special education emphasis MME candidate only. Supervised teaching is done in special education classrooms. A companion course to Mus. Ed. 822, this course gives the music special education emphasis MME candidate experience in teaching in special education classrooms. Prerequisite: Mus. Ed. 822 or concurrent enrollment. F 11 833 2 0 0832

831. Developing the Child’s Musical Understanding. (3). Definition of understandings necessary for the attainment of musical awareness in the child. The exploration of classroom experiences is directed toward the successful development of understanding through the application of basic learning principles. Prerequisite: Mus. Ed. 402 or 404, F 11 831 0 0832


841. Special Project in Music. (1-3). Individually supervised study or research with emphasis upon the personal needs of the student. Repeatable for credit. Prerequisite: Instructor’s consent. F 11 841 4 0832

842. Special Project in Music. (1-3). Individually supervised study or research with emphasis upon the personal needs of the student. Repeatable for credit. Prerequisite: Instructor’s consent. F 11 842 4 0832

843. Terminal Conducting Project. (2). Individually supervised project for those electing the conducting option on the instrumental or choral emphasis under the MME degree. Prerequisite: Instructor and departmental consent. F 11 843 4 0832

845A. Seminar in Instrumental Music Education Literature. (2). Critical analysis of literature for band, orchestra and small ensembles in elementary and secondary schools. Current bibliography is used. Repeatable for credit. F 11 845A 9 0832

851. Psychology of Music. (2). An overview of music behaviors from a psychological perspective. Recent literature concerning human psychoacoustics, melodic, rhythmic and harmonic perception; and major learning theories are related to current trends in music education. F 11 851 0 0832

852. Introduction to Graduate Study. (3). See course listing under music composition department. F 13 852 0 1006

854. Research Seminar in Music Education. (3). Continued application of technique of research. The completion of a major research project is required. Prerequisite: Mus.-Comp. 852; F 11 854 9 0832

871. History and Philosophy of Music Education. (2). A study of historical trends and contemporary philosophies relevant to music education, behavioral objectives and curriculum planning. Prerequisite: Mus. Ed. 851; F 11 871 0 0832

875. Thesis Research. (1-2). F 11 875 4 0832

876. Thesis. (2). F 11 876 4 0832

Music Performance

Applied Music Private Study

231. (1). Basic instruction. Repeatable for credit. Lower division. F 12 231 3 1004

232. (2). For majors only. Repeatable for credit. Lower Division. F 12 232 3 1004

431. (1). Repeatable for credit. Upper Division. F 12 431 3 1004

432. (2). For majors only. Repeatable for credit. Upper Division. F 12 432 3 1004

434. (4). For performance majors only. Repeatable for credit. Upper Division. F 12 434 3 1004

731. (1). Repeatable for credit. Graduate. F 12 731 3 1004

732. (2). For majors only. Repeatable for credit. Graduate. F 12 732 3 1004

734. (4). For performance majors or students preparing for master’s degree recitals only. Repeatable for credit. Graduate. F 12 734 3 1004

Applied Music Abbreviations

A Bassoon
P Piano
B Cell
R String Bass
C Clarinet
S Trombone
D Euphonium
T Trumpet
E Flute
U Tuba
F French Horn
V Viola
G Guitar
W Violin
K Harp
X Saxophone
L Oboe
Y Voice
M Organ
Z Electric Bass
N Percussion

Applied Music Classes

117J. (1). Guitar class. Beginners. F 12 117J 3 1004

118J. (1). Guitar class. Intermediate. F 12 118J 3 1004

117P. (1). Piano class. Beginners majors. F 12 117P 3 1004

118P. (1). Piano class. Piano majors. F 12 118P 3 1004

120P. (1). Piano class. Normajors. F 12 120P 3 1004

117Y. 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. F 12 117Y 3 1004

Lower-Division Courses

107-207. Piano Repertoire. (1-3). Designed to give performing and listening experience to piano majors. Repeatable for credit. F 12 107 2 1004; F 12 207 2 1004

121. Italian Diction. (1). Designed for the vocal performer, including a comprehensive study of Italian consonant and vowel sounds. F 12 121 0 1004

122. English Diction. (1). Designed for the vocal performer, including a comprehensive study of English consonant and vowel sounds. F 12 122 0 1004

146. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite: Mus. Ed. 238 or instructor’s consent. F 12 146 2 1004

150. Music Performance Workshop. (1-4). Repeatable for credit. F 12 150 2 1004

210-211-212-213-214. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Concert Band; (Marching Band; Symphony Band; Wichita Community Band; Wind Ensemble; (C) Choral Union; (D) Women’s Glee Club; Men’s Glee Club; (F) A Capella Choir; University Singers, Concert Chorale; (J) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (R) Percussion Ensemble; (S) String Ensemble; (T) Jazz Arts Ensembles I and II, (V) Guitar Ensemble. Repeatable for credit. F 12 210 1 1004; F 12 211 1 1004; F 12 212 1 1004; F 12 213 1 1004; F 12 214 1 1004

217. Instrumental Conducting. (2). Fundamentals of baton technique, elementary score reading and musical leadership. Practical experience conducting laboratory and classroom groups. F 12 217 0 1004

218. Choral Conducting. (2). Fundamentals of conducting, score reading and rehearsal techniques. Practical experience conducting classroom groups. Prerequisites: Mus.-Comp. 128 and 130. F 12 218 2 1004

221. German Diction. (1). Designed for the vocal performer, including a comprehensive study of German consonant and vowel sounds. F 12 221 0 1004
222. French Diction. (1). Designed for the vocal performer, including a comprehensive study of French consonant and vowel sounds. F 12 222 0 1004

223-224. Applied Piano Accompanying. (2-2). Individual private study of standard accompanying repertoire. Prerequisites: successful completion of two semesters of piano study. F 12 223 0 1004; F 12 224 0 1004

250-251. Applied Piano Concerto. (2-2). Designed to give students concerto performance experience. Prerequisites: sophomore standing and admittance to the BM performance program. F 12 250 0 1004; F 12 251 0 1004

281. Cooperative Education. (1-3). 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, either 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. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Co/Cr only. F 12 281 2 1004

Upper-Division Courses

300. Junior Recital. (1). Required for BM piano majors, performance or accompanying emphasis. Prerequisite: Department Consent. F 12 300 3 1004

307-407. Piano Repertoire. (1-1). Designed to give performing and listening experience to piano literature. Prerequisite: 207 or consent of instructor. F 12 307 2 1004; F 12 407 2 1004

400. Recital. (1). Prerequisite: Department Consent. F 12 400 3 1004

410-411-412-413-414. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Concert Band; Marching Band; Symphony Band; Wichita Community Band; Wind Ensemble; (C) Choral Union; (D) Women's Glee Club; Men's Glee Club; (F) A Cappella Choir; University Singers; Concert Chorale; (J) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) Saxophone Quartet; (P) Brass Chamber Ensemble; (Q) String Ensemble; (R) Percussion Ensemble; (S) Orchestra; (T) Jazz Arts Ensembles I and II; (V) Guitar Ensemble. Repeatable for credit. F 12 410 1 1004; F 12 411 1 1004; F 12 412 1 1004; F 12 413 1 1004; F 12 414 1 1004

417Y. Voice for Music Theater. (2). Basic repertoire and singing techniques with weekly master classes devoted to music theater techniques and concepts. Restricted to persons other than vocal majors. F 12 417Y 3 1004

423-424. Applied Piano Accompanying. (4-4). Individual private study of standard accompaniment literature. Prerequisite: successful completion of solo recital. F 12 423 0 1004; F 12 424 0 1004

450-451. Accompanying Recital. (1-1). Required for BM piano majors, accompanying emphasis. Prerequisite: Department Consent. F 12 450 3 1004; F 12 451 3 1004

481. Cooperative Education. (1-6). 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 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; 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. Offered Co/Cr only. F 12 481 2 1004

Courses for Graduate/Undergraduate Credit

548. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Repeatable for credit. Prerequisite: Music Ed. 259 or instructor's consent. F 12 548 2 1004

580. Piano Pedagogy. (2). Primarily concerned with the art and science of teaching includes observations of master teachers in the University and community. F 12 580 0 1004

581. Piano Teaching Materials. (2). A survey of teaching methods and materials from beginning through early advanced levels. F 12 581 0 1004

625. Voice Pedagogy. (2). Required for voice performance majors. Designed to acquaint the voice major with vocal techniques, concepts and materials of private and class instruction. F 12 625 0 1004

627. Music Theater Directing. (2). Coaching, mounting and staging musical-drama productions with emphasis on acting and directing techniques. Prerequisite: instructor's consent. F 12 627 0 1004

651. Advanced Conducting and Score Reading. (2). Baton technique, score reading and musicianship. Prerequisite: Music 217 or 218 or equivalent. F 12 651 0 1004

680. Woodwind Pedagogy. (2). Required for woodwind performance majors. 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 consent of instructor. F 12 680 0 1004

681. Brass Pedagogy. (2). Required for brass performance majors. 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 consent of instructor. F 12 681 0 1004

682. Percussion Pedagogy. (2). Required for percussion performance majors. 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 consent of instructor. F 12 682 0 1004

690. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent. F 12 690 2 1004

691. Advanced Choral Conducting. (2). A comprehensive study of conducting and rehearsal techniques, analysis and ear training with emphasis upon the personal needs of the individual student. Prerequisite: departmental consent. F 12 691 0 1004

707. Piano Repertoire. (1). Designed to give performing and listening experience to piano performance majors. Repeatable for credit. F 12 707 2 1004

710-711-712-713-714. Ensembles. (1-1-1-1-1). (A) Orchestra; (B) Concert Band; Marching Band; Symphony Band; Wichita Community Band; Wind Ensemble; (C) Choral Union; (D) Women's Glee Club; Men's Glee Club; (F) A Cappella Choir; University Singers; Concert Chorale; (J) Piano Accompaniment; (K) Opera Theater; (L) Madrigal Singers; Chamber Singers; (N) Woodwind Ensemble; (O) String Ensemble; (P) Brass Chamber Ensemble; (Q) Saxophone Quartet; (R) Percussion Ensemble; (S) Jazz Arts Ensembles I and II; (V) Guitar Ensemble. Repeatable for credit. F 12 710 1 1004; F 12 711 1 1004; F 12 712 1 1004; F 12 713 1 1004; F 12 714 1 1004

717Y. 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. F 12 717Y 3 1004

750. Music Performance Workshop. (1-4). Repeatable for credit. F 12 750 0 1004

760. Group Piano Practicum. (2). Supervised group piano teaching for graduate students. Prerequisites: Music 580 and 581. F 12 760 2 1004

761. Studio Piano Practicum. (2). Supervised studio piano teaching for graduate students. Prerequisites: Music 580 and 581. F 12 761 2 1004

Courses for Graduate Students Only

841. Special Project in Music. (1-3). Individually supervised study or research with emphasis upon the personal needs of the student. Repeatable for credit. Prerequisite: instructor's consent. F 12 841 4 1004

842. Special Project in Music. (1-3). Individually supervised study or research with emphasis upon the personal needs of the student. Repeatable for credit. Prerequisite: instructor's consent. F 12 842 4 1004
843. Piano Pedagogy Seminar. (2). Variable topics, such as (1) advanced techniques in class piano or private piano (college curriculum); (2) class piano in early childhood; (3) class piano for leisure-age students; (4) class piano in private (for private teachers), extending the prepared piano of music pedagogy students as needed. Repeatable for credit. Prerequisite: Mus. Perf. 580. F 12 643 4 1004

862. Introduction to Graduate Study. (3). See course listing under musicology-composition department. F 13 852 0 1006

873. Graduate Recital. (2). Performance of a full recital featuring the chief performing medium. Prerequisite: consent of instructors in applied area. F 12 873 4 1004

874. Professional In-service Presentation Project. (2). Planning, organizing and presenting a three-hour in-service presentation (workshop) to in-service private piano teachers, perhaps in conjunction with an established community piano teacher's league, etc. Available as a terminal requirement alternative (in lieu of performance recital) in the Master of Music (piano pedagogy emphasis). Students approved for this terminal requirement option will also be required to perform a major piano work, prepared at acceptable recital level, during semester jury examination within the final year (two semesters) of the degree program. Requires approval of piano performance area faculty. Prerequisite: departmental consent. F 12 674 4 1004

**Musicology-Composition**

**Noncredit Course**

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. F 13 080 2 1006

**Lower-Division Courses**

113Q. Introduction to Music Literature. (3). Development of skills and techniques used in critical analysis and a comparison of the contrasting styles of both Western and non-Western music. This course is designed for music majors or students with some musical background. F 13 113Q 0 1006

114. Music Literature Survey. (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: Mus.-Comp. 113 or instructor's consent. F 13 114 0 1006

127Q. Theory I. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadences, phrase, period), simple harmonic relationships and fundamental voice-leading techniques. Prerequisites: concurrent enrollment in Mus.-Comp. 129 and departmental consent. F 13 127Q 0 1004

128. Theory II. (2). A continuation of Theory I. Formal expansion includes binary and ternary structures. Basic harmonic structures are further elaborated. Another score being performed by a University ensemble is studied. Prerequisites: Mus.-Comp. 127 and concurrent enrollment in Mus.-Comp. 129 or 130. F 13 128H 0 1004

128H. Theory II Honors. (2). Formal expansion includes binary and ternary structures. Basic harmonic structures are further elaborated. Prerequisites: Mus.-Comp. 127 or 127H, concurrent enrollment in Mus.-Comp. 129 or 130 and departmental consent. F 13 128H 0 1004

129. Aural Skills I. (2). Recognition, singing and dictation of melodies from all periods of music. Interval training emphasized. Instruction assisted by computer. F 13 129 0 1004

136. Aural Skills II. (2). Continuation of melodic, rhythmic perception. Recognition and dictation of diatonic harmonic structures are included. Instruction assisted by computer. Prerequisite: Mus.-Comp. 129. F 13 136 0 1004

160G. The Heritage of Western Music. (3). Intended to acquaint the nonmajor with the central tradition of Western music. Emphasis on the development of listening techniques with which the student may perceive and understand fundamental musical processes as they exist in the various styles within the Western heritage. F 13 160G 0 1005

161. Music through the Ages. (3). Open to all students, particularly those involved in alternative schedules. It is designed to help students develop the capacity for critical music listening and an appreciation for all musical styles. F 13 161 0 1005

162. Afro-American Music. (2). A survey of Afro-American music, its origins and development and the influence of Afro-American music in the United States up to the present time. F 13 162 0 1005

227. Theory III. (2). The study of contrapuntal forms and textures from music of all periods. Melodic, harmonic and rhythmic aspects of this music are explored, as well as basic orchestration techniques related to these textures. Study of an appropriate score being performed by a University ensemble is included. Prerequisite: Mus.-Comp. 129. F 13 227 0 1004

228. Theory IV. (2). Study of the larger homophonic forms (sonata, rondo) using techniques acquired in previous semesters. Analysis of an appropriate score being performed by a University ensemble is included. Prerequisite: Mus.-Comp. 227. F 13 228 0 1004

229. Aural Skills III. (2). Recognition, singing and dictation of contrapuntal textures with emphasis on harmonic practice using techniques in elementary chromaticism. Instruction assisted by computer. Prerequisite: Mus.-Comp. 130. F 13 229 0 1004

230. Aural Skills IV. (2). Summation and expansion of previous skills with further emphasis on harmonic chromaticism and atonal contexts. Instruction assisted by computer. Prerequisite: Mus.-Comp. 229. F 13 230 0 1004

245. Jazz Improvisation. (2). Melodic, harmonic and rhythmic creation with emphasis on the relationship of scale patterns and seventh chords. Repeatable for credit. Prerequisite: Mus.-Comp. 129 and 130 or instructor's consent. F 13 245 0 1004

259 & 260. Applied Composition. (2-2). Individual study in fundamentals of musical composition with emphasis on the development and expansion of music materials. May be repeated as an elective. Offered on an elective basis to those not majoring in theory-composition. Prerequisites: Mus.-Comp. 127 or equivalent and instructor's consent. F 13 259 3 1004 & F 13 260 3 1004

281. Cooperative Education. (1-8). A field placement which integrates course work with a plan of 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 an add-on 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. Prerequisites: 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. F 13 281 2 1006

**Upper-Division Courses**

310. Interrelated Arts. (3). Interdepartmental course presenting an aesthetic analysis of three arts. The course emphasizes style in the three arts. F 13 310 0 1005

315. Music of the 20th Century. (2). An aesthetic approach to music of this century, its major composers and stylistic and formal characteristics. It is designed primarily for the nonmusic major who has musical interest and background. F 13 315 0 1005

316. Symphonic Literature. (2). An advanced course in the great orchestral literature covering the development of the symphony orchestra and its music from the 18th century Mannheim school to the present. The course is designed primarily for the nonmusic major who has musical interest and background. F 13 316 0 1005

334Q. History of Music I. (3). A survey of the evolution of musical styles and practices in the Western world through ca. 1750. Lectures, reference readings and the study of representative examples of music are included. Prerequisites: Mus.-Comp. 113Q and 227 or instructor's consent. F 13 334Q 0 1006

335Q. History of Music II. (3). A survey of the evolution of musical styles and practices in the Western world from ca. 1750 to the present. Lectures, reference readings and the study of representative examples of music are included. Prerequisites: Mus.-Comp. 113Q and 227 or instructor's consent. F 13 335Q 0 1006

student. Repeatable for credit. Prerequisite: instructor's consent. F 12 642 4 1004
345. Jazz Arranging. (2). Arranging for small and large jazz ensembles with emphasis on current big band styles. Prerequisites: Mus.-Comp. 220 or instructor's consent. F 13 345 0 1004

346G. Styles of Jazz. (3). A survey of various eras in the evolution of the many styles in the jazz idiom from the end of the 18th century to the present. Open to majors and nonmajors. F 13 346G 0 1006

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. Individualized programs must be formulated in consultation with and approval 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; 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. Offered C/NCR only. F 13 481 2 1006

483G. American Music. (2). A study of music in American society from 1820 to the middle of the 20th century. F 13 483G 0 1005

Courses for Graduate/Undergraduate Credit

523. Form and Analysis. (2). Extensive analysis of the forms and formal processes of musical literature. Prerequisite: Mus.-Comp. 227. F 13 523 0 1004

531. Introduction to Electronic Music. (2). Basic techniques of electronic music. Instruction is directed toward musicians who wish to use the electronic medium in teaching, performing or communicating in any way with their constituency. F 13 531 0 1004

559-560. Applied Composition. (2-2). Individual study in advanced musical composition with emphasis on writing for small ensembles in the smaller forms. Designed for theory-composition majors. Repeatable. Prerequisites: Mus.-Comp. 260 and consent of theory-composition area faculty and department chairperson to continue as a theory-composition major. F 13 559 3 1004; F 13 560 3 1004

561. 18th Century Counterpoint. (2). Contrapuntal devices of the 18th century as found in the works of J. S. Bach. Prerequisite: Mus.-Comp. 226. F 13 561 0 1004

563-564. Collegium Musicum. (1-1). A laboratory in the editing, rehearsing and performing of early music. Prerequisite: instructor's consent. F 13 563 2 1005; F 13 564 2 1005

582-583. Piano Literature. (2-2). Survey of the historical eras of professional piano repertory. F 13 582 0 1006; F 13 583 0 1006

597-598. Organ Literature and Practice. (1-1). Performance and discussion of works for the instrument of all periods; study of organ design and construction; and practice in aspects of service playing, such as hymn playing, modulation, accompanying and improvisation of all organ majors. Repeatable. Prerequisite: Mus.-Comp. 228 or departmental consent. F 13 597 0 1004; F 13 598 0 1004

623. Opera Literature. (3). A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the 17th century to the present. Mus.-Comp. 113 is strongly recommended before taking the course. Should be only upperclassmen. Not limited to music majors. F 13 623 0 1006

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. F 13 624 0 1006

625. Voice Literature. (3). A comprehensive survey of early Italian arias, French chansons, German lieder, contemporary English songs and Russian and Spanish literature. F 13 625 0 1006

641. Orchestration. (2). The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations with an approach to the problems of full orchestra and band scores. Prerequisite: Mus.-Comp. 227. F 13 641 0 1004

643. Band Arranging. (2). Fundamental principles of arranging and scoring musical materials for various bands and wind ensembles. Prerequisites: Mus.-Comp. 226 and 230. F 13 643 0 1004

645. Choral Arranging. (2). Scoring for women's, men's and mixed choruses. Performance and analysis of student's arrangements in classes are included. Prerequisites: Mus.-Comp. 226 and 230. F 13 645 0 1004

652. Choral Literature. (3). An historical survey of choral literature from the Renaissance to the 20th century. F 13 652 0 1006

659-660. Applied Composition. (2-2). Individual study in musical composition with emphasis on writing for small ensembles with their constituency. F 13 659 3 1004; F 13 660 3 1004

661. 16th Century Counterpoint. (2). Analysis and application of the contrapuntal composition techniques of the 16th century. Prerequisite: Mus.-Comp. 227. F 13 661 0 1004

671. Chromatic Harmony. (2). Advanced study of chromatic harmonic materials of all periods with special attention to the 19th century. Analysis and creative writing are emphasized. Prerequisite: Mus.-Comp. 227. F 13 671 0 1004

672. Contemporary Techniques. (2). Advanced study of music from impressionism to the present with emphasis on related literature and creative writing. Prerequisite: Mus.-Comp. 229. F 13 672 0 1004

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. F 13 685 0 1006

690. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent. F 13 690 2 1006


750. Musicology-Composition Workshop. (1-4). Repeatable for credit. Prerequisite: instructor's consent. F 13 750 2 1004

755. Basic Musicianship in the Secondary School Curriculum. (2). An examination of approaches to musicianship training at the secondary level. Prerequisite: A comprehensive study of fundamentals through musical analysis and composition in various styles. F 13 755 0 1004

758. Teaching of Theory in the Community Junior College. (2). Designed to prepare the junior college theory teacher. Attention is given to contemporary trends in music theory and their application to planning courses of study, evaluation of texts and pedagogical techniques. F 13 758 0 1004

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 coordinators. 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. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered C/NCR only. F 13 781 2 1006

791-792. Seminar in Music History. (3-3). Areas of interest in music history are explored in seminars to 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 791-792 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. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered C/NCR only. F 13 791 2 1006; F 13 792 2 1006

Courses for Graduates, 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. The course is designed to develop analytical approaches rather than compositional skills. F 13 830 0 1004

840A-C. Seminar in the Techniques of Composition. (2). The nature of compositional techniques is examined through selected works in different media: (A) large ensembles, (B) small ensembles and (C) solo literature. Prerequisites: Mus.-Comp. 671, 672 and 641, or departmental consent. F 13 840A 9 1004; F 13 840B 9 1004; F 13 840C 9 1004

841-842. Special Project in Music. (1-3). Individually supervised study or research with emphasis on the professional needs of
the student. Repeatable for credit. Prerequisite: instructor's consent. A 27 13841 4 1006; F 13 842 4 1006.

852. Introduction to Graduate Study. (3). Techniques of research and development of bibliography in music and music education. The course must be elected the first available semester of enrollment. F 13 852 0 1006.

859-860. Advanced Composition. (2-2). Original work in the large forms and a continuation and expansion of Mus.-Comp. 659-660. Prerequisite: Mus.-Comp. 660 or equivalent. F 13 859 3 1004; F 13 860 3 1004.


893. Music of Antiquity Through the Renaissance. (3). F 13 893 0 1006.

894. Music of the Baroque Era. (3). F 13 894 0 1006.

895. Music of the 18th Century. (3). F 13 895 0 1006.

896. Music of the 19th Century. (3). F 13 896 0 1006.

897. Music of the 20th Century. (3). F 13 897 0 1006.

Division of Theater

The Division of Theater offers a Bachelor of Arts degree in theater, as well as a Bachelor in Education for students who plan to teach in the secondary schools. A Master of Arts in communication/theater is also available.

The B.A. major requires a minimum of 39 hours, including Theater 180, 2210, 242Q, 243Q, 244, 253, 254, 259, 380, 6230, 624Q, 628, and at least 12 hours of electives, chosen with the adviser's consent from other theater courses. All majors must participate in some area of the production of University Theatre, after consultation with staff and faculty members.

Students intending to teach have two options:

1. Theater major. At least 39 hours, including Theater 180, 2210, 242Q, 244, 253, 254, 259, 380, 6230, 628, Speech/Comm. 650 and 661, plus six hours of electives, chosen with the adviser's consent from other theater courses.

2. Combined theater/rhetoric and communication major. At least 39 hours, including Theater 2210, 242Q, 244, 259, Speech/Comm. 111, 112, 211, 213Q, 228Q, 650, 661, plus six hours of electives, chosen with the adviser's consent from other theater courses.

Students also must meet the requirements for the professional education sequence and prior to admission to the student teaching semester, must have a 2.500 grade point average in their major field and recommendation from the major department.

Lower-Division Courses

143Q. The Art of the Theater. (3). An introduction to the theater as an art form with emphasis on critical appreciation from the viewpoint of the audience. The course is not counted toward a theater major. A 27 143G 0 1007.

180. Theater Practicum. (1). Practical training in the organization and presentation of plays in the University Theatre program. The practicum may be organized in the following areas: design and construction of scenery, costumes or properties, the design and execution of stage lighting or makeup, and the organization and practice of theater management. May be repeated once for credit. A 27 180 2 1007.

221Q. Oral Interpretation. (3). The development of the mental, vocal and analytical techniques essential to the oral interpretation of literature. A 27 221Q 0 1007.

222. Improving Voice and Diction. (3). Cross-listed as Spch. 222. A course for students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. The course is oriented toward the use of the vocal mechanism in the International Phonetic Alphabet and techniques essential to the oral interpretation of literature. A 27 222 0 1506.

243Q. Acting I. (3). Emphasis on the training of the actor. Characterization, the actor's role, and on the actor's acting in the play and the role. A 27 243Q 0 1007.

244. Stagecraft. (3). R; L arr. Theory and practice of making, painting and using scenery for the stage. Practical work on University Theatre and Experimental Theatre productions. A 27 244 0 1007.

253. Costuming for the Stage. (3). R; L arr. Basic principles of costume design and construction; pattern making, materials selection, wardrobe management, and organization and practical experience with University Theatre and Experimental Theatre productions. A 27 253 1 1007.

254. Stage Makeup. (1). Study and practice of the basic application of stage makeup. Also includes character analysis, anatomy, materials and special makeup techniques and problems. A 27 254 1 1007.

259. 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: Speech 243Q or departmental consent. A 27 259 1 1007.

Upper-Division Courses

375. Directed Projects in Theater. (2-4). Independent research or practical and creative projects in the various areas of theater, including performance, design, technical theater, management and dramatic literature. Repeatable for credit to a maximum of four hours. Prerequisite: departmental consent. A 27 375 2 1007.

380. Theater Practicum. (1). Practical training in the organization and presentation of plays in the University Theatre program. The practicum may be organized in the following areas: design and construction of scenery, costumes or properties, the design and execution of stage lighting or makeup, and the organization and practice of theater management. May be repeated once for credit. A 27 380 2 1007.

Courses for Graduate/Undergraduate Credit


544. Advanced Stagecraft. (3). R; L arr. A study of the principles of stage perspective and the fundamentals of stage design and the building of the individual or group costume related to a particular topic. A 27 544 0 1007.

559. Directing II. (3). R; L arr. Staging and rehearsal techniques with emphasis on practical application of the principles of stage perspective and coordination of the stage director and the director. A 27 559 0 1007.

610. Musical Theater for the Public School Teacher. (2). Provides an interdisciplinary course in utilizing the principles of theater (speech and music) to teach the student in both areas how to produce a musical in the secondary schools. Prerequisites: concurrent enrollment in MUS. 610. A 27 610 0 1007.

621. Advanced Oral Interpretation. (3). Intensive study and analysis of various forms of oratory, the techniques of effective oral communication and the building of the individual or group concert recital. Arranged workshops and festivals. Prerequisites: Speech 221 and junior standing. A 27 621 0 1007.

622. Academic Theater Practicum. (2). The investigation and exploration of the theatrical act in the classroom situation within the University community. The course is designed to reinforce the research, writing, directing and performing skills of the participating students, functioning as a company, and perform for various disciplines on campus. Repeatable for credit. A 27 622 2 1007.

623Q. Development of the Theater I. (3). The study of theatrical activity as a social institution and an art form, from its beginnings to the 17th century. Representative plays, methods of staging and theatrical architecture of various periods are included. A 27 623Q 0 1007.

624Q. Development of the Theater II. (3). From the 17th century to the present. A 27 624Q 0 1007.
625. Dramatic Theory. (3). Critical examination of selected aesthetic theories of the theatrical arts and the relationship of the theories to major dramatic works and theatrical periods. Prerequisite: Speech 623Q, 624Q or departmental consent. A 27 625 0 1007

628. Playscript Analysis. (3). The course is designed to develop students' abilities to analyze playscripts from the point of view of those who face the task of staging them. The focus is on studying and testing practical methods of analysis developed by outstanding theater directors, teachers and critics. Collective analysis and individual projects are part of the course work. Prerequisite: Speech 623Q or 624Q or Eng. 324. A 27 628 0 1007

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, Restoration and modern nonrealistic styles. Prerequisite: Speech 243Q, 542 and junior standing. A 27 643 0 1007

644. Scene Design. (3). Fundamentals of scene design. Practical work on University Theatre and Experimental Theatre productions is included. A 27 644 1 1007

645. Stage Lighting. (3). R; L arr. Lighting equipment and light design and its relation to scenery design. Emphasis is upon the problems in schools and colleges. Practical work on University Theatre and Experimental Theatre productions is included. Prerequisite: Speech 244 with a grade of "C" or better. A 27 645 1 1007

653. History of Costume. (3). R; L arr. Historical survey and individual research of dress from ancient Egypt to present day with emphasis on social, political, economic and religious influences. Theory and practice of adapting period styles to the stage. Prerequisite: Speech 253 or departmental consent. A 27 653 0 1007

675. Directed Study. (2-4). Cross-listed as Spch. 675. Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent. A 27 675 3 1599

Courses for Graduate Students Only

820. Investigation and Conference. (2-3). Cross-listed as Spch. 820. Directed research and experimentation for graduate students in some phase of (a) public address, (b) theater history and production, (c) radio-television or (d) the teaching of speech. Repeatable for credit up to a total of six hours. A 27 820 3 1599

823. History of Dramatic Criticism. (3). A survey and analysis of major critical theories from Aristotle to the present. A 27 823 0 1007

824. Development of Modern Theater Styles. (3). An examination of the major movements in the modern theater since 1870. Emphasis is on both literary and physical elements of styles. A 27 824 0 1007

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 Health Professions

M. Diane Roberts, DPH, Dean

The College of Health Professions was established in 1970. Fourteen programs of study are offered at the undergraduate and graduate levels.

In addition to the academic departments, the college houses the Center for Continuing Health Education and the Office of Health Education Research and Development. The Center for Continuing Health Education provides continuing education opportunities for members of the health professions in Kansas. The Office of Health Education Research and Development offers programs in two major components, Biomedical Communications Production Services and the Independent Study Laboratory, which provide opportunities for individualized study and technical and consulting services in graphic arts and the use of microcomputers in instruction.

Departments within the college are accredited through the following agencies: the Council on Dental Education of the American Dental Association, the Commission on Accreditation in Education in Physical Therapy, National League for Nursing, the Association of University Programs in Health Administration, and the Committee on Allied Health Education and Accreditation of the American Medical Association.

Degrees Offered

Undergraduate

Of the programs offered at the undergraduate level, five lead to the Bachelor of Science (BS) degree—health care administration, medical record administration, medical technology, nursing and physical therapy. Three programs lead to a Bachelor of Health Science (BHS) degree—dental hygiene, physician assistant and respiratory therapy. Students in the BHS may select one of the following emphases (all options are not available in each program): (1) education, (2) administration and supervision or (3) natural or clinical sciences with specific preparation in the majors listed above.

In addition, the Associate of Science is awarded in dental hygiene and respiratory therapy. Students in the physician assistant and emergency medical training programs receive a certificate of completion.

Graduate

A graduate program leading to a Master of Health Science (MHS) degree with options for emphasis in administration, education or advanced clinical study is offered. Admission to the MHS program of study requires a bachelor's degree and the fulfillment of additional requirements.

A Master of Nursing program, individualized to meet the needs and professional goals of the student, is offered for part-time (three to six credits) or full-time study. The student selects an area of clinical interest such as adult nursing, maternal and child care and mental health. Role development in administration, teaching or advanced practice is also available.

More information on graduate programs is available in The Wichita State University Graduate School Bulletin.

Policies

Admission

All students desiring admission to undergraduate programs offered by the College of Health Professions must:

1. Meet The Wichita State University admission requirements (see the Admission to Wichita State section of the Catalog)

2. Have an overall minimum grade point average of 2.000 in all previous college work

3. Meet the requirements in one of the following categories:

   Category I—Students Seeking Admission to the Associate Degree or Special Programs. Students seeking admission to associate degree or special programs must meet the general admission requirements of the college and the specific admission requirements for each program, as stated in The Wichita State University Catalog.

   Category II—Students Seeking a Baccalaureate Degree. In addition to meeting the general admission requirements to the College of Health Professions, each student must meet the college's 24-hour transfer rule: (1) All students transferring to the College of Health Professions must have completed a minimum of 24 semester hours of credit, out of which 12 credit hours must be in any combination of biological sciences, chemistry, physics and/or mathematics and (2) students must maintain a minimum grade point average of 2.000 in the 12 credit hours of science courses.

   Category III—Students Seeking a Graduate Program of Study. Students seeking admission to graduate programs within the college should consult the Graduate Bulletin, which may be obtained through the Graduate School in Jardine Hall.

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 The 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.

Students interested in pursuing a career in medicine, osteopathy, dentistry, veterinary medicine, pharmacy, optometry, podiatry or public health should make an appointment with the health professions adviser in Fairmount College of Liberal Arts and Sciences, Room 200, to clarify preprofessional and professional course and admissions requirements.

Probation and Dismissal

Students are placed on probation for the next term in which they enroll if their cumulative 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 cumulative grade point average is not at least 2.000. Probation is removed when a student's cumulative 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 military science, physical education or marching band. Exception to this limitation may be made on the recommendation of a student's adviser with the approval of the dean of the college.

Students on probation are subject to academic dismissal from the College of Health Professions 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.

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 department. (See the appropriate department’s section in the Catalog.)

Exception to these requirements may be granted to nonmajors by the chairperson of the department offering the course with the approval of the College of Health Professions Admissions-Exceptions Committee and the dean.

Students should check with their departmental advisers 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.

Progression
To progress in the professional sequence, a grade of Cr or C or better must be earned in all professional courses. If students receive a NG or D or F in only one segment of a course that combines theory and clinical practice, they do not receive credit for the course. Students who receive an NG, D or F in any professional course may not progress in the professional sequence and may be dismissed from the program. If their overall academic record remains at 2.000 or above and they desire to continue in the program, they may petition the Committee on Admission and Progression in their department to remain in the program.

Exceptions
Students may petition the department, college or University for exception to any requirement. Students are required to discuss all petitions with their college/department adviser prior to submission of the petition. Petitions may or may not be approved by the body to whom the petition was made.

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
Most students are required to purchase a modest fee professional liability insurance in the amount of not less than $100,000/$300,000 as well as personal health insurance at the beginning of the professional phase of a College of Health Professions program; students in some programs may require additional coverage. Several departments may require evidence of sufficient coverage prior to clinical practice.

Financial Aids
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 Financial Aids and the department from which the student is seeking a degree or certificate.

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 departmental faculty advisers 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 departments 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.

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 degrees.

A minimum of 30 credit hours in course work in residence at WSU is required for all students seeking bachelor’s degrees. A minimum of 30 unduplicated credit hours in course work in residence at WSU is required for students seeking second bachelor’s degrees. In addition, these students must also complete all University, college and departmental requirements for the degree being sought. Completion of University courses is counted toward fulfillment of the residency requirement. For specific requirements, consult the individual departmental sections of the Catalog.

Degree Requirements and Course Listings

Baccalaureate

Dental Hygiene

The Bachelor of Health Science program in dental hygiene is designed for the individual currently enrolled in The Wichita State University dental hygiene associate degree program or graduates of other accredited dental hygiene programs. The Bachelor of Health Science provides opportunities for dental hygienists to expand their role in education or administration and supervision of dental hygiene.

Admission

Students wishing to work toward baccalaureate degrees should contact the dental hygiene department for individual advising. Students who are registered dental hygienists must:
1. Submit an application prior to the semester in which they plan to enroll
2. Meet the admissions requirements of The Wichita State University and the College of Health Professions
3. Submit the results of the National Board Examination for Dental Hygienists and a clinical examination and provide a letter of recommendation from the director of the dental hygiene program they attended.

A personal interview is required and must be initiated through an invitation from the Admissions Committee of the Department of Dental Hygiene.

Admission to the program is not a right acquired by meeting minimum admission requirements, but a privilege extended to students who exhibit motivation, initiative and the potential to
become dental hygienists of outstanding quality.

Professional Curriculum

The baccalaureate degree program requires completion of a basic program in dental hygiene plus the general requirements of the University. It is a two-track option program providing two interrelated courses of study. Students may select one of the following course options: (1) dental hygiene education or (2) dental hygiene administration and supervision.

Under this program, each student's curriculum is individually structured. A contract is developed and approved by the student and is signed by the department chairperson.

Lower-Division Courses

101. Preclinical Dental Hygiene. (5). 3R; 6L. A presentation of the basic philosophy of dentistry and dental hygiene. Consideration is given to measures that can be employed to prevent oral disease and promote dental health. Laboratory instruction is given in instrumentation for removal of deposits from the teeth. Offered only in the fall semester. Prerequisite: departmental consent. H 12 201 0 1213.

104. Clinical Radiology. (4). 3R; 3L. A presentation of the theory and practice of exposing, processing and mounting X-ray films. The laboratory periods are used to gain proficiency in X-ray techniques. Care of the equipment is stressed. Prerequisite: departmental consent. H 12 104 1 1213.

201. Dental Hygiene Concepts I. (2). Fundamentals of planning and delivering dental hygiene treatment are presented with an emphasis on patient education for plaque control. Integration and expansion of material presented in preclinical courses and the application of this material to the treatment situation will be stressed. Offered only in the spring semester. Prerequisite: departmental consent. H 12 201 0 1213.

202. Clinical Dental Hygiene I. (3). 9L. This course emphasizes providing patient care in a clinical setting. Basic instrumentation techniques as well as the prevention of dental disease is stressed. Patient evaluation and treatment planning skills are developed. Offered only in the spring semester. Prerequisite: departmental consent. H 12 202 1 1213.

206. General and Oral Pathology. (3). A survey of general pathology of tissues and organs of human anatomy. Discussions are held on dental pathologies of the teeth, dental pulp and oral tissues. A consideration of the signs, symptoms and manifestations of oral lesions is accomplished through lectures and visual aids. Offered only in the fall semester. Prerequisite: departmental consent. H 12 206 0 1213.

281. Cooperative Education Field Study. (1-8). The goal of this course is to provide 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 an 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. H 12 261 2 1213.

290. Embryology, Histology and Oral Anatomy. (3). A study of the development and microscopic anatomy of the elementary tissues and organs. Examination of tooth development, eruption, arrangement, function, morphology and anatomy. Prerequisite: departmental consent. H 12 290 0 1213.

Upper-Division Courses

301. Dental Materials and Expanded Functions. (3). 2R; 3L. Fundamental instruction in practical laboratory phases of modern technology and the manipulation of materials and equipment used in dental practice and expanded auxiliary practice. Prerequisite: departmental consent. H 12 301 1 1213.


303. Dental Hygiene Concepts II. (2). Seminar discussion of current and advanced clinical concepts and techniques as well as other topics related to future employment opportunities. Offered only in the fall semester. Prerequisite: DH 201 and departmental consent. H 12 303 0 1213.

304. Dental Hygiene Concepts III. (2). Discussion of dental specialties and explanation of the rationale for treatment prescribed by the dentist. Offered only in the spring semester. Prerequisite: departmental consent. H 12 304 0 1213.

305. Periodontics for the Dental Hygienist. (3). Lecture and visual aid presentation of the etiology and classification of periodontal disease. A study of the treatment of the periodontal patient with further demonstration of advanced scaling and root planing procedures and local anesthesia as it relates to the periodontal patient. Prerequisite: departmental consent. Offered only in the fall semester. H 12 305 0 1213.

307. Ethics and Jurisprudence. (2). A survey of 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, the essentials of building, bookkeeping, office and personnel management and patient records. Offered only in the spring semester. Prerequisite: departmental consent. H 12 307 0 1213.

309. Community Dental Health Education. (1). An introduction to the foundations of dental health in the community, epidemiology, health care systems and organization of community services with fieldwork in applying the learned concepts. Prerequisite: departmental consent. H 12 309 0 1213.

311. Dental Health Education. (2). This course will cover the professional philosophy and foundations of dental health education. Students will develop dental health education materials and presentations will be given to children, adult and minority groups in the community. H 12 311 1 1213.

322. Clinical Dental Hygiene III. (3). 12L. Continued development of clinical proficiency and utilization of various scaling techniques and instruments. Offered only in the fall semester. Prerequisite: departmental consent. H 12 322 1 1213.

324. Clinical Dental Hygiene IV. (4). 12L. During the final semester of clinical dental hygiene, emphasis is placed on utilizing information and skills acquired in previous courses and the demonstration of proficiency and increase their level of competency in all objectives from Clinical Dental Hygiene I, II and III. Offered only in the spring semester. Prerequisite: departmental consent. H 12 324 1 1213.

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, management thought, planning and effecting innovation, business administration and finance, operations, motivation, leadership, conflict and communication. Prerequisite: departmental consent. H 12 405 2 1213.

409. Introduction to Research for the Health Professions. (1). An introduction to the scope, format and use of research in the health professions. Development of the ability to be a critical consumer of professional literature and the initiation of research projects. Prerequisite: departmental consent. H 17 409 0 1213.

420. Course Development and Methods of Teaching in Dental Hygiene Education. (3). Seminar dealing with the implementation of teaching and learning theory and application of this theory to course construction. Students will gain experience in teaching undergraduate students in laboratory/clinical settings. Prerequisite: departmental consent. H 12 420 2 1213.

430. Curriculum Development in Dental Hygiene Education. (3). A continuation of DH 420. Focus will be upon the development of an educational curriculum for a dental hygiene program and additional opportunities will be available for instruction in the development and implementation of a curriculum. Prerequisite: departmental consent. H 12 430 2 1213.

455. Personnel Management in Dental Hygiene. (3). Analysis of personal management and completion of a personnel simulation, including job analysis, recruitment, interviewing, testing, job evaluation, wage determination, training, employee evaluation and career development. Prerequisite: departmental consent. H 12 455 0 1213.

462. Special Problems in Dental Hygiene. (3). A practical approach to the application and acquisition of basic research techniques as related to dental hygiene. Included in the course are the study and identification of research problems, review of related literature, development of research hypotheses and research methodology. H 12 462 0 1213.

465. Research in Dental Hygiene. (3). A continuation of DH 462. The research proposal which is developed in this prerequisite course is implemented. Data is collected concerning a specific problem in dental hygiene, data analysis is undertaken and conclusions are drawn relative to stated hypotheses. Prerequisite: DH 462. H 12 465 4 1213.

481. Cooperative Education Field Study. (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 coordinators. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 12 481 2 1213

**Health Care Administration**

The program in health care administration seeks to develop professionally competent individuals to serve in administrative capacities in the health field. Health care administrators are employed in a variety of health facilities and organizations—hospitals, nursing homes, private and public clinics, health insurance organizations, educational institutions and governmental agencies at federal, state and local levels. The program is part of the Department of Health Administration and Education which is an approved member of the Association of University Programs in Health Administration. Upon satisfactory completion of the courses as outlined, plus eight weeks (one summer) of practicum in a selected area, students receive the Bachelor of Science degree. Additional information regarding major elective areas of special emphasis can be obtained from the chairperson of the Department of Health Administration and Education.

**Admission**

In order to be permitted to enroll in the health care administration curriculum, students must fulfill the following requirements. They must:
1. Be enrolled in or admitted to the Wichita State University
2. Have completed 24 hours in the required lower-division courses
3. Have an overall grade point average of 2.00 or above in all college work completed and no grade lower than "C" in all required courses
4. Have an overall grade point average of 2.00 or above in all college work completed and no grade lower than "C" in all required courses
5. Submit to the chairperson of the health administration department a letter of intent including semester of enrollment. Intent to enroll forms may be obtained from the Department of Health Administration, Room 401, Albright Hall.

**Curriculum**

**Undergraduate**

**Major**. The following courses, totaling 124 hours, are required for a major in health care administration. This curriculum meets both the University's general education and the department's requirements. All undergraduate students are strongly encouraged to take HAE 503 before taking other health administration and education courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>Basic Skills courses (12 hours)</strong></td>
<td></td>
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<tr>
<td>Communications (9 hours)</td>
<td>3</td>
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<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
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<tr>
<td>Eng. 102, College English II</td>
<td>3</td>
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<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
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<tr>
<td>Distribution Courses (30 hours)</td>
<td></td>
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<tr>
<td>Division A, Humanities and Fine Arts (at least nine hours in three different departments and at least three hours in General Studies courses)</td>
<td></td>
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<tr>
<td>Division B, Social and Behavioral Sciences (at least six hours in two different departments)</td>
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<tr>
<td>Econ. 201Q, Principles of Economics I</td>
<td>3</td>
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<tr>
<td>Econ. 202, Principles of Economics II</td>
<td>3</td>
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<tr>
<td>Psych. 111Q, General Psychology</td>
<td>3</td>
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<tr>
<td>Psych. 514, Psychology of Illness</td>
<td>3</td>
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<tr>
<td>Soc. 111Q, Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>Soc. 539, Medical Sociology</td>
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<tr>
<td><strong>Division C, Math and Natural Sciences</strong> (or six hours in two different departments)</td>
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<tr>
<td>Math. 111, College Algebra or equivalent</td>
<td>3</td>
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<tr>
<td>Biol. 105G, The Human Organism</td>
<td>3</td>
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<tr>
<td>or any higher level biology course</td>
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<tr>
<td><strong>Other required courses</strong></td>
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<tr>
<td>Acctg. 210, Financial Accounting I</td>
<td>3</td>
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<tr>
<td>Acctg. 220, Managerial Accounting</td>
<td>3</td>
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<tr>
<td>CS 105, Introduction to Computers</td>
<td>3</td>
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<tr>
<td>ISEP 704, Introduction to Educational Statistics</td>
<td>3</td>
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<tr>
<td>Mgnt. 360, Concepts of Administration</td>
<td>3</td>
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<tr>
<td>Mkt. 300, Marketing</td>
<td>3</td>
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<tr>
<td>Pers. 466, Personnel Management</td>
<td>3</td>
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<tr>
<td>Pers. 664, Labor Relations, or Econ. 661, Collective Bargaining and Wage Determination</td>
<td>3</td>
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<tr>
<td>HAE 410, Community Health Concepts</td>
<td>3</td>
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<tr>
<td>HAE 440, Health Care Administration Practicum</td>
<td>6</td>
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<tr>
<td>HAE 490, Independent Study in Health Care Administration</td>
<td>3</td>
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<tr>
<td>HAE 503, Organization of the Health Care System</td>
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<tr>
<td>HAE 504, Health Economics</td>
<td>3</td>
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<tr>
<td>HAE 507, Health Planning</td>
<td>3</td>
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<tr>
<td>HAE 509, Health Care Operations Analysis</td>
<td>3</td>
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<tr>
<td>HAE 510, Health Finance</td>
<td>3</td>
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<tr>
<td><strong>HAE 590, Legal Aspects of Health Care Administration</strong></td>
<td>3</td>
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<tr>
<td><strong>HAE 605, Health Services Research</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>HAE 684, Health Administration Policy</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>HAE 685, Computer Applications in Health</strong></td>
<td>3</td>
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<tr>
<td><strong>HAE 686, Seminar in Health Administration</strong></td>
<td>3</td>
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<tr>
<td><strong>Approved electives to complete the 124-hour graduation requirements</strong></td>
<td></td>
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</tbody>
</table>

* For math requirement, see Division C.

**Lower-Division Courses**

111Q. Introduction to Community Health. (3). This course concerns itself with modern man and his effort to achieve harmony within the community and an analysis of man's inner and outer ecosystems as they relate to contemporary health issues. H 24 1110 Q 1202

281. Cooperative Education Field Study. (1-8). Open to students 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. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 24 281 2 1201

**Upper-Division Courses**

410. Community Health Concepts. (3). An introduction to the foundations of public health, biostatistics, epidemiology, ecology, community organization, and organization and administration of health services. Prerequisite: departmental consent. H 24 410 0 1202

440. Health Care Administration Practicum. (6) or (40L). A course providing the student with an opportunity for field experience in the health care system. Students must select, with the consent of an adviser, a specific internship in one of the following special areas: health care administration, nursing home administration, governmental health agencies, home health agency administration or hospital departmental administration. A written report is required. Prerequisite: senior standing or departmental consent. H 24 440 2 1202

481. Cooperative Education Field Study. (1-8). The goal of this course is to provide 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. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 24 481 2 1201

490. Independent Study in Health Care Administration. (3). Supervised intensive study of special topics and problems relating to health care delivery. Repeatable up to six hours. Prerequisite: departmental consent. H 24 490 3 1202
Courses for Graduate/Undergraduate Credit

503. Organization and Administration of the Health Care System. (3). Cross-listed as Geron. 503. An examination of the health care system in the United States including the demand for and supply of health care services, the quality, quantity and pricing of health care services, the need for insurance, and the role of the government in the health sector. Prerequisite: HAE 503 or Econ. 202. H 24 503 0 1202

504. Health Economics. (3). Cross-listed as Econ. 665. An analysis of health care systems in the United States including the demand for and supply of health care services, the quality, quantity and pricing of health care services, the need for insurance, and the role of the government in the health sector. Prerequisite: HAE 503 or Econ. 202. H 24 504 0 1202

505. The Politics of Health. (3). Cross-listed as Pol. Sci. 505. Designed to show how governmental decisions in the health field, to describe the political forces shaping governmental policy in health and to analyze the arguments for and against an increased governmental role in health care. Emphasizes the interrelatedness of economic, political and social aspects of the health services system. Current trends and the role of planning are considered and students are exposed to guest lecturers with professional expertise in relevant areas. Prerequisite: departmental consent. H 24 590 0 1202

506. Health Services Research. (3). Deals with intermediate statistical procedures and research designs that health professionals must understand in order to intelligently analyze research into health care. Refers to health professionals to the conduct research themselves. This course covers the designs of experimental, survey and post facto research plus statistical techniques, including correlation coefficients, the t-test, chi square and two-way analysis of variance. Prerequisite: departmental consent. H 24 605 4 1201

507. Health Planning. (3). Designed to discuss strategic business planning in health services management. Includes a strategic management scheme that will accommodate change and encourage innovation and enhanced productivity. Presents an identification of and adaptation to strategies and options in an anticipatory time frame that provides the organization with protection against the crisis decision making in traditional entrepreneurial organizations. Prerequisites: junior standing and instructor's consent. H 24 507 0 1202

508. Health Care Operations Analysis. (3). An examination of methods for measuring the operational efficiency and effectiveness of health care delivery systems. Included are methods to analyze and evaluate current operations and approaches to plan better manpower, facility, technology, financial planning and management control systems. Systems covered are the acute care hospital, the community health center, the health maintenance organization, the long-term care facility, the mental health institution and the home health agency. Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360 and junior standing. H 24 508 0 1202

510. Health Finance. (3). An examination of the principles of financial analysis and management for health care institutions. Emphasis is on understanding and applying general financial concepts to the health sector. Financial organization, sources of operating revenues, management of working capital and budgeting are considered utilizing examples of how financial, governmental and health organizations. Prerequisites: HAE 503 and Accct. 210 or equivalent. H 24 510 0 1202

512. Health Program Evaluation. (3). An examination of the principles of health program evaluation and management for health care institutions. Emphasis is on understanding and evaluating financial, governmental and health organizations. Prerequisites: HAE 503 and Accct. 210 or equivalent. H 24 512 0 1202

565. Concepts of Quality Assurance in Health Care. (3). This is a course for health care personnel which focuses upon current social concerns with assessing quality of health care and the utilization of activities and resources. Prerequisite: departmental consent. H 24 565 0 1202

590. Legal Aspects of Health Care Administration. (3). Cross-listed as Geron. 590. A study of the principles of law as applied to the health fields. Such items as release of information, subpoena, records and testimony, settlement of claims (insurance); doctor-patient-nursing home relationship and legal comments and other topics are considered. Prerequisite: junior standing or departmental consent. H 24 590 0 1202

605. Health Services Research. (3). Deals with intermediate statistical procedures and research designs that health professionals must understand in order to intelligently analyze research into health care. Refers to health professionals to the conduct research themselves. This course covers the designs of experimental, survey and post facto research plus statistical techniques, including correlation coefficients, the t-test, chi square and two-way analysis of variance. Prerequisite: departmental consent. H 24 605 4 1201

684. Health Administration Policy. (3). Cross-listed as Mgmt. 684. Course designed to give graduating seniors an understanding of the structure of health care organizations, including roles and responsibilities managers have within these organizations. Exposure to management, policy making and strategic planning processes is also included. Prerequisites: to function in administrative positions in health care administration. Prerequisite: HAE 503 and at least one other HAE course or departmental consent. H 24 684 0 1202

685. Computer Applications in Health. (3). Data reduction, summarization, editing and analysis using technical assistance of micro and mainframe computer for operational research and administrative purposes. Health data bases from hospitals or other agencies such as state health department, HMO agency, HSA are investigated. More emphasis is placed on microcomputers than on large computers with more statistical and graphical capacity. Prerequisite: HAE 605 or instructor's consent. H 24 685 0 1201

686. Seminar in Health Care Administration. (3). Critical analysis and discussion of selected topics in health care administration. Topics vary from semester to semester and include examination of specific financial, managerial and operational problems. In addition, a large number of methods and analysis techniques will be encountered. Prerequisites: HAE 503 and at least one other HAE course. H 24 686 9 1202

720. Community Health Organization and Administration. (3). Introduction to the organization and activities in the health system roles and problems. Introduction to administrative problem-solving as a structured process. Prerequisite: instructor's consent. H 24 720 0 1201

808. Epidemiology of Chronic Disease. (3). The study of the distribution and determinants of chronic diseases and injuries in human populations. The frequencies and types of illnesses and injuries in groups of people and the factors that influence their distribution. Prerequisites: graduation school enrollment, HAE 605 or instructor's consent. H 24 808 0 1201

Medical Record Administration Program

The Bachelor of Science program in Medical Record Administration, offered through the Department of Health Administration and Education, is designed to prepare administrators and health information coordinators for medical record departments. After completing a three-year preprofessional sequence at The Wichita State University, students must transfer to the Department of Medical Record Administration at The University of Kansas Medical Center (KUMC) to complete the professional sequence. The professional sequence includes directed practice and clinical application which may be taken at hospitals or other health institutions that are officially affiliated with The University of Kansas Medical Center and that are approved by the American Medical Record Association. After completing these requirements, students receive the Bachelor of Science (BS) in medical record administration from The Wichita State University and are eligible to become registered by successfully completing the registration examination given by the American Medical Record Association.

Preprofessional Curriculum

Course                      Hrs.

Communications (12 hours)         
Eng. 101, College English I     3
Eng. 102, College English II    3

Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication     3
Eng. 210, Technical Writing Composition                      3

Distribution Courses (30 hours of which at least nine hours must be taken in General Studies courses)

Division A, Humanities and Fine Arts (at least nine hours in three different departments)

Division B, Social and Behavioral Sciences (at least six hours in two different departments)

Econ. 201Q, Principles of Economics I                  3
Psych. 111Q, General Psychology                   3
Psych. 314, Psychology of Illness            3
Soc. 111Q, Introduction to Sociology               3
Soc. 338, Medical Sociology                   3

Division C, Math and Natural Sciences (or six hours in two different departments)

Math. III, College Algebra (or equivalent)               3
Biol. 105G, The Human Organism (4) or any higher level biology course    4
Biol. 225, Human Anatomy (with lab)                          3
Biol. 226, Human Physiology                              3
Biol. 227, Physiology Lab                                1
Plus five additional hours chosen from biology, chemistry or physics
1. Be admitted to The Wichita State University.

2. Have a minimum grade point average of 2.500.

3. Be accepted by the KUMC admissions committee.

A total of 132 credit hours, including 80 credit hours in the preprofessional curriculum and 52 credit hours in the professional curriculum, is required for graduation.

Medical Technology

The medical technologist performs a variety of clinical laboratory procedures needed by the physician to give accurate diagnosis, prognosis and proper treatment to the patient. The medical technology program is designed to give students thorough scientific training and education. This knowledge enables them to know not only how to perform a test, but also the theory behind it.

The Bachelor of Science program in medical technology, requiring a total of 133 hours, includes 78 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: St. Joseph Medical Center, Wesley Medical Center, the Wichita Clinic and the Veterans Administration Center. Upon successful completion of the program, students are granted the Bachelor of Science in medical technology and are eligible to take several national certification examinations.

Preprofessional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Basic Skills (12 hours)</td>
<td></td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 102, College English II</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Math. 111, College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Division A, Humanities and Fine Arts (9 hours) *</td>
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<tr>
<td>Nine hours in at least three different departments</td>
<td>9</td>
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<tr>
<td>Division B, Social and Behavioral Sciences (6 hours)</td>
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<tr>
<td>Psych. 111Q, General Psychology</td>
<td>3</td>
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<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Division C, Natural Sciences and Mathematics (50 hours)</td>
<td></td>
</tr>
<tr>
<td>Biol. 203Q, Introductory Biology I</td>
<td>5</td>
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<tr>
<td>Biol. 204, Introductory Biology II</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 226, Elementary Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 330, General Microbiology</td>
<td>5</td>
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<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 and 532, ten hours, or Chem. 533 and 534, five hours)</td>
<td>5-10</td>
</tr>
<tr>
<td>Chem. 561, Introduction to Biological Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>MT 405Q, Medical Immunology</td>
<td>3</td>
</tr>
<tr>
<td>Electives from areas of biological sciences, chemistry, physics, mathematics or others as approved by Department of Medical Technology (including four hours of &quot;G&quot; and/or &quot;Q&quot; courses)</td>
<td>12</td>
</tr>
</tbody>
</table>

* Students may wish to select General Studies courses to satisfy the University graduation requirement of General Studies courses. (See Academic Information—General Studies section of the Catalog.)
† May substitute Chem. 1230-1240, General and Analytical Chemistry (10 hours), if prerequisites are met. Check with adviser.

Admission to the Professional Curriculum

Applications must be submitted to the Department of Medical Technology by November 1 for fall entry of the following year, September 15 for entry in the following spring and February 15 for entry in the following summer.

To qualify as a candidate for admission to the professional phase the student must:

1. Be admitted to The 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 2.000.
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>
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</thead>
<tbody>
<tr>
<td>MT 400, Special Topics</td>
<td>2</td>
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<tr>
<td>MT 406, Foundations of Labora-</td>
<td>2</td>
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<tr>
<td>tory Practice</td>
<td></td>
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<tr>
<td>MT 450, Clinical Chemistry I</td>
<td>3</td>
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<tr>
<td>MT 451, Clinical Chemistry I Laboratory</td>
<td>2</td>
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<tr>
<td>MT 452, Analysis of Body Fluids</td>
<td>3</td>
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<tr>
<td>MT 456, Clinical Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>MT 457, Clinical Chemistry II Laboratory</td>
<td>2</td>
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<tr>
<td>MT 459, Applied Clinical Chemis-</td>
<td>2</td>
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<td>try</td>
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<td>MT 460, Hematology I</td>
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<td>MT 489, Applied Clinical Tech- niques</td>
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<td>MT 490, Clinical Microbiology I</td>
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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: department chairperson’s consent. H 14 411 3 1201

450. Clinical Chemistry I. (3). This course is the study of basic clinical chemistry. It encompasses the study and application of clinical chemistry calculations and quality control and the study of colorimetric, spectrophotometric, and titrimetric principles and techniques on serum, plasma and other body fluids. Prerequisites: MT 451 and BioL 361 and Biol. 226. H 14 450 0 1223

451. Clinical Chemistry I Laboratory. (2). 6L. Application of the theory of the procedures and techniques used for colorimetric, spectrophotometric and titrimetric analysis of serum plasma and other body fluids for clinically significant substances. H 14 451 1 1223

452. Analytical and Biological Principles. (5). This course includes the study of renal physiology, routine urinalysis and renal function tests. It 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. H 14 452 1 1223

456. Clinical Chemistry II. (3). This course is advanced instrumentation principles and techniques, acid-base balance, advanced enzyme quantification, endocrinology and toxicology. Emphasis is placed on relationships existing between substances of the body and procedural development and evaluation. Prerequisite: MT 450, 451 or departmental approval. H 14 456 0 1223

457. Clinical Chemistry II Laboratory. (2). 6L. 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: MT 456, concurrent enrollment or department approval. H 14 457 1 1223

459. Applied Clinical Chemistry. (2). Application of clinical chemistry procedures and techniques in the analysis of body fluids in a clinical laboratory setting. Prerequisites: MT 457 and departmental consent. Offered Cr/NCr only. H 14 459 2 1223

460. Hematology 1. (2). The course emphasizes the theory underlying basic procedures performed in the hematology laboratory and the relation of these procedures to the diagnosis of disease. Prerequisite: BioL 226 and departmental consent. H 14 460 0 1223

461. Hematology Laboratory. (2). 3L. The course emphasizes performance of the basic procedures used in the hematology laboratory, including blood counts, normograms and abnormal differentials and miscellaneous hematology tests. Prerequisite: MT 460 or concurrent enrollment and/or departmental consent. H 14 461 1 1223

462. Hemostasis. (3). 2R; 3L. Examination of the function/dysfunction of the hemostatic mechanisms and associated diagnostic laboratory procedures utilized in evaluation of various hemostatic disorders. Prerequisites: Biol. 226, MT 460 and departmental consent. H 14 462 1 1223
481. Cooperative Education. (1-5). The goal of this course is to provide the student with an opportunity to integrate theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs for the student's career goals are consulted with and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisites: the basic requirements for admission include successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. Repeatable for credit. H 14 480 2 1223

482. Applied Clinical Microbiology. (2). Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Prerequisites: MT 496 and MT 495. H 14 497 1 1223

483. Clinical Immunology Laboratory. (1). A laboratory course in techniques relevant to serological diagnosis of the following conditions: syphilis, gonococcal infections, streptococcal infections, febrile diseases, mycoplasma infections, infectious mononucleosis, rheumatoid arthritis and pregnancy. Prerequisites: MT 490 or concurrent enrollment or consent of instructor. H 14 483 1 1223

489. Applied Clinical Techniques. (1). Application of theory and techniques of clinical immunology, serology, body fluids and specimen collection in the clinical laboratory. Offered Cr/Ncr only. Prerequisites: MT 400, 452, 480, 483 and departmental consent. H 14 489 2 1223

490. Clinical Microbiology I. (3). Basic theory covering (a) procedures for specimen processing in the clinical laboratory, (b) normal flora, (c) morphological, cultural and serological characteristics of common pathogenic bacteria and (d) basic theory in antimicrobial susceptibility testing techniques. Prerequisites: Biol. 330 and concurrent enrollment in MT 491. H 14 490 0 1223

491. Clinical Microbiology I Laboratory. (1). A laboratory course in techniques for the set up and examination of specimens, the isolation and identification procedures for the more common pathogenic organisms. Use and interpretation of common antimicrobial susceptibility testing procedures. Runs concurrently with MT 490. Prerequisites: Biol. 330, previous or concurrent enrollment in MT 490 and departmental consent. H 14 491 1 1223

494. Special Topics in Clinical Microbiology. (2). 2L: 2L. The study of the medically important fungi and parasites with an emphasis on their identification in the clinical laboratory. Discussion of life cycles and their relation to the infection/disease process and the epidemiology of these organisms. Prerequisites: Biol. 330 and departmental consent. H 14 494 1 1223

496. Clinical Microbiology II. (3). Advanced theory, procedures and rationale for the isolation and identification of the nonfermenters, the anaerobic and unusual aerobic organisms. Discussion of disease processes and identification of fast bacteria. Introduction to advanced antimicrobial susceptibility testing techniques. Prerequisites: MT 490, 491, 497 or concurrent enrollment. H 14 496 0 1223

497. Clinical Microbiology II Laboratory. (1). An advanced laboratory techniques in the isolation and identification of nonfermenters, the anaerobic and unusual aerobic organisms. Techniques for cultures and identification of acid-fast bacteria. Advanced antimicrobial susceptibility testing techniques. Prerequisites: MT 490, 491 and concurrent enrollment in MT 496. H 14 497 1 1223

498. Applied Clinical Microbiology. (2). Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Prerequisites: MT 496 and MT 495. H 14 497 2 1223

550. Clinical Endocrinology. (3). This course will deal with hormone functions and the practical application of modern clinical laboratory methods for the diagnosis of functional hormonal disorders. Prerequisites: Biol. 226 or equivalent and Chem. 103Q or 111Q or equivalent or instructor's consent. An understanding of biochemistry is recommended. H 14 550 0 1223

Courses for Graduate/Undergraduate Credit

752. Method Evaluation and Selection. (3). This course will present an objective, practical approach to the evaluation of laboratory methodologies. This approach incorporates the use of statistical analysis, evaluation of technology and clinical application. Prerequisites: MT 459, 469, 479 and 498, or equivalent, HS 705 or instructor's consent. H 14 752 0 1223

760. Hematologic Neoplasms. (3). This course deals with the etiology, pathophysiology and morphology of hematologic neoplasms and the health care practitioners' interactions with persons with these disorders. H 14 760 0 1223

765. Advanced Clinical Hemostasis. (3). Advanced studies in the mechanisms of hemostasis, pathological changes that can occur in the hemostatic mechanism and the laboratory evaluation of these changes. Prerequisite: MT 462 or instructor's consent. H 14 765 0 1223

770. Therapeutic Dimensions of Clinical Laboratory Science. (3). A study of the expanding role of the scientific laboratory in the monitoring of therapy and the patient's response to therapy. Areas to be addressed include hemoengineering and hemotherapy, immunology, rejection phenomena and chemotherapy, including therapeutic drugs, electrolytes, vitamins, trace minerals and antimicrobials. H 14 770 0 1223

775. Advanced Clinical Pathophysiology. (3). Advanced studies in the mechanisms of the disease process and pathological changes that can occur in various pathophysiological states. Prerequisites: HS 400 or 15 hours of biology or instructor's consent. H 14 775 0 1223

780. Issues in Immunohematology. (3). 3R. An indepth analysis of current issues in a modern transfusion service with emphasis on responding to changes in patient care through application of scientific research and supervision. Prerequisites: MT 479 and HS 701 or instructor's consent. H 14 780 0 1223

790. Epidemiology and Infection Control. (3). A study of the expanding role of hospital personnel in the performance of hospital epidemiology and infection control. Areas to be addressed include basic epidemiological principles, basic considerations of hospital infections, including investigations and surveillance, potential problem areas within the hospital environment, the role of the hospital laboratory and possible endemic and epidemic infections. Prerequisite: course in medical microbiology or instructor's consent. Taught in the fall semester. H 14 790 0 1223

800. Seminar in Laboratory Sciences. (1). Recent issues and advances in the fields of clinical laboratory science, including the areas of microbiology, chemistry, hematology, immunology and immunohematology, are discussed. Students are responsible for assigned topics, using current journal articles as resource material. Prerequisite: departmental consent. H 14 800 9 1223

890. Thesis. (1-3). Repeatable to a maximum of six hours. Prerequisite: consent of thesis adviser. H 14 890 2 1223

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. Nursing students have the opportunity for increased clinical experiences through a cooperative arrangement with The Wichita State University and Wesley Medical Center.

Students are admitted to the Department of Nursing at the junior year after completing 60-64 hours of course work. Persons interested in the Bachelor of Science in Nursing may direct inquiries to Chairperson, Department of Nursing, The Wichita State University, Wichita, Kansas 67208-1595.

Preprofessional Curriculum

Students applying for admission to the Department of Nursing must have completed the following courses. Students should consider taking 16 hours per semester or attending Summer Session.

Courses

Basic Skills (12 hours)

Math. 109, 110, 111, 112 or 211 3
Eng. 101, College English I 3
Eng. 102, College English II 3
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication 3

Division A—Humanities and Fine Arts (nine hours)

Phil. 121, Introduction to Philosophy, or Phil. 100G, The Meaning of Philosophy 3
Six hours in two other departments (excluding performance and studio arts)†

Division B—Social and Behavioral Sciences (12 hours)
Psych. 111Q, General Psychology 3
Psych. 334Q, Developmental Psychology 3
Soc. 211Q, Introduction to Sociology 3
One elective in any department in Division B. 3

Division C—Natural Sciences and Mathematics (24 hours)
Biol. 120Q, Introduction to Microbiology 3
Biol. 225, Human Anatomy 3
Biol. 226, Elementary Human Physiology 3
Chem. 103Q, General Chemistry, or Chem. 111Q, General Chemistry 3
HS 331Q, Principles of Dietetics and Nutrition 3
HS 301, Clinical Pharmacology 3
Three-hour course in statistics with Department of Nursing approval † 3
Electives (3-10 hours) †

* Students who wish a minor in philosophy should take Phil. 121.
† Students should select some General Studies courses to meet the University graduation requirement of nine hours of General Studies courses and C courses to meet the 30-hour requirement. See Academic Information—General Education section of the Catalog.
‡ Prerequisite to statistics may be required.

Admission To Department of Nursing

Students who have satisfactorily completed two semesters of lower-division courses may request admission to the Department of Nursing. Intent to enroll forms for fall semester admission are requested by January 1; for spring semester admission, by August 1. To qualify as a candidate for admission to the Department of Nursing, students must:
1. Be enrolled in, or admitted to, The Wichita State University
2. Have completed, or have plans to complete, the lower-division 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 specified required courses
4. Submit a letter of intent including the above requirements, must:
1. Submit a photocopy of current license to practice as a registered nurse in Kansas
2. Submit official transcripts of college courses and records from the school of nursing.

Registered nurse students who have met these requirements may obtain information from the Department of Nursing regarding enrollment in the transition course, Nurs. 334, Dimensions of Professional Nursing, and Advanced Standing Examinations by which they may demonstrate competency in required nursing courses.

Professional Curriculum

The following courses in the Department 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.
Division A—Humanities and Fine Arts (three hours)
A three-hour upper-division course in philosophy/ethics to be selected with Department of Nursing approval
Division C—Mathematics and Natural Sciences (53 hours)
Nurs. 327, Nursing as a Practice Discipline 2
Nurs. 330, Technologies I 2
Nurs. 332Q, Dimensions of Self-Care 2
Nurs. 334, Dimensions of Professional Nursing 3
Nurs. 336, Design of Nursing Systems 3
Nurs. 340, Technologies II 2
Nurs. 347, Nursing Systems: Organic Disorders 4
Nurs. 351, Nursing Systems: Behavioral Disorders 2
Nurs. 352, Nursing Practice I 3
Nurs. 354, Nursing Practice II 3
Nurs. 400, Introduction to Pathophysiology 3
Nurs. 460, Technologies III 1
Nurs. 464, Nursing Systems: Aging Families 3
Nurs. 465, Nursing Systems: Young Families 3
Nurs. 466, Nursing Practice III 3
Nurs. 468, Scholarship Dimensions of Nursing 3
Nurs. 472, Nursing Practice IV 6
Nurs. 473, Senior Seminar 3
Nurs. 478, Nursing Systems: Large Groups 3
Upper-division elective courses ‡ 8-9

† A transition course designed to be taken by registered nurse students.
‡ At least three credit hours must be taken outside the Department of Nursing.

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. Lab fees may be assessed. 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 Department of Nursing.

Upper-Division Courses

325. Communication in Health Professions. (3). Elective. Study of selected communication theories and concepts relevant to health care with emphasis on applications in health care practice. Prerequisite: admission to the department of nursing.

327. Nursing as a Practice Discipline. (2). An introductory course in the study of nursing within the self-care framework and its use in nursing practice, education, theory, and research. The student examines perceptions of the nurse, nursing as a practice discipline and as a student of nursing. Prerequisite: admission to the department of nursing. H 11 325 0 1203

336. Technologies I. (2). 6L. A series of learning experiences in which the student learns sets of manipulative, discriminative, communicative and interpersonal skills for use in the design and control of nursing systems for individuals. Emphasis is placed on the scientific and humanistic basis for the various technologies. Prerequisite: admission to the department of nursing. H 11 336 1 1203

332Q. Dimensions of Self-Care. (2). Self-care (health) practices and health state of individuals within ranges of wellness. Prerequisite: admission to the department of nursing. H 11 332Q 0 1203

334. Dimensions of Professional Nursing. (3). A course designed to introduce registered nurse students to the study of nursing as a practice discipline and professional nursing roles. Prerequisite: admission to the department of nursing. H 11 334 0 1203

336. Design of Nursing Systems. (5). 3R. 6L. The study of knowledge, attitudes and skills for the design, implementation and evaluation of nursing systems for individuals. Methods of assessment and use of nursing systems are studied. Prerequisite: admission to the department of nursing. H 11 336 1 1203

347. Nursing Systems: Organic Disorders. (4). This course is designed to study the design and control of nursing systems related to organic disorders, focusing on educative-supportive and partly and wholly compensatory nursing systems. Prerequisites: Phase I nursing courses. Corequisites: Nurs. 340 and 379. H 11 347 0 1203

350. Basic Concepts of Nursing Process. (3). Elective. A course exploring basic concepts of the nursing process as a foundation for professional nursing practice in contemporary society. Emphasis is placed on development of nursing care plans, scientific rationale for nursing interventions, priorities and evaluation of nursing care and nursing actions. Prerequisite: departmental consent. H 11 350 0 1203

351. Nursing Systems: Behavioral Disorders. (4). This study of design and control of nursing systems for individuals with behavioral disorders focusing on educative-supportive and partly and wholly compensatory nursing systems. Prerequisites: Phase I nursing courses. Corequisites: Nurs. 354. H 11 351 0 1203

352. Nursing Practice I. (3). 9L. This 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 systems appropriate for adult client(s)/patient(s) demonstrating major health problems in contemporary society. Prerequisites: Phase I courses. Corequisites: Nurs. 340 and 347. H 11 352 1 1203

352H. Clinical Honors: Nursing Practice. (3). 9L. A clinical honors course for the use and evaluation of nursing theory and research in the role of practitioner of nursing. The major emphasis of the course is the expanded development of nursing agency in clinical nursing. Prerequisites: Phase I nursing courses and departmental consent. H 11 352H 1 1203

354. Nursing Practice II. (2). 6L. A clinical course for evaluation and use of nursing theory and research in the role of practitioner of nursing. The major emphasis of the course is the development of nursing agency in clinical nursing situations related to behavioral disorders. Prerequisites: Phase I courses. Corequisite: Nurs. 351. H 11 354 1 1200

400. Introduction to Pathophysiology. (3). Cross-listed as HS 400. A course for professional upper-division students enrolled in the College of Health Professions. The course focuses on the essential mechanisms of disorders with functions which produce common diseases. Some basic diseases are discussed, but as examples of the basic processes covered, not as a part of an exhaustive inventory. The purpose of the course is to help the health professional with accessible, usable and practical information he can broadly and quickly apply in his clinical or laboratory experience or use as a basis for a 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. H 11 400 0 1201

425-427. Special Projects in Nursing. (1-4). Elective. Individual study of selected topics, didactic and/or clinical, designed to enhance the student's knowledge base and competencies in nursing practice. Repeatable up to four credit hours. Prerequisite: departmental consent. H 11 425 2 1203; H 11 427 2 1203

430. Concepts of Loss. (3). Elective. Strategies for helping clients and families cope with broad aspects of loss, from temporary transient illness to death. Includes human response, through the life-span, to changed body functioning, chronic illness, dying and death. Includes grief and mourning. Open to nonnursing majors. H 11 430 0 1203

432. Educative-Supportive Nursing Systems. (3). 2R; 3L. Elective. This lecture and clinical course focuses on the planning and implementation of educative-supportive systems. The nurse's role in patient education includes assisting the patients in decision-making, behavior control and acquiring knowledge and skills. The emphasis of the course is the development of the nurse's ability to use teaching methods in clinical nursing situations. This elective course builds upon the previous knowledge and clinical experiences of identified prerequisite courses. The purpose of this course is to enhance 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. H 11 432 1 1203

434. Perioperative Clinical Management for the Nurse Agent. (3). 6L. This is an elective lecture/clinical course. It examines the nursing needs of individuals in small groups that have various health problems requiring surgery. The focus is the expansion of the nursing student's power to perform deliberate actions for the benefit and well-being of others at the time of a surgical process (before, during and after). The major emphasis of the course is the nursing student's acquisition of clinical management skills in all phases of the surgical process. Prerequisites: Nurs. 340, 347 and 352 or instructor's consent. H 11 434 1 1203


464. Nursing Systems: Aging Families. (3). 2R; 3L. This course is designed to provide in-depth 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 age. Prerequisites: Nurs. 340, 347, 351, 352 and 354 or permission of the instructor. Open to non-nursing majors who have a license to practice nursing. H 11 464 1 1203

465. Nursing Systems: Young Families. (3). The study of the design and control of nursing systems for the family during specific stages of health states. Eduative-supportive and partly and wholly compensatory systems appropriate for young families are the focus of this course. Prerequisites: Nurs. 340, 347, 351, 352 and 354. Corequisites: Nurs. 460 and 466. H 11 465 0 1203

466. Nursing Practice III. (3). 9L. A clinical course for evaluation and use of nursing and nursing-related research in the role of practitioner of nursing. The major emphasis of the course is the development of nursing agency in clinical nursing situations related to young families. Prerequisites: Nurs. 340, 347, 351, 352 and 354. Corequisites: Nurs. 460 and 465. H 11 466 1 1203

466H. Clinical Honors: Nursing Systems for Families. (3). 9L. A clinical honors course for the use and evaluation of nursing theory and research in the role of practitioner of nursing systems for the family as a client of nursing. The emphasis of the course is the design and control of nursing systems for family clients who are members of families. Prerequisites: Nurs. 340, 347, 351, 352, 354 and departmental consent. Prerequisite or corequisite: Nurs. 460, 466 and 468. H 11 466H 1 1203

468. Scholarship Dimensions of Nursing. (2). The study of research methodology in nursing and its use in developing nursing knowledge. Students identify research problems and develop a research question. The uses of research findings in practice are discussed. Relations among the roles of practitioner, teacher, leader and scholar are examined. Prerequisite: Nurs. 340, 347, 351, 352 and 354. H 11 468 0 1203

472. Nursing Practice IV. (6). 18L. This practical 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 with emphasis on the development of organizational and managerial skills. H 11 472 1 1203

473. Senior Seminar. (3). This course examines nursing issues and the roles of the nurse within the context of health care delivery and the emerging profession of nursing. The theoretical concepts of management are emphasized. Prerequisites: Phase II courses, Corequisite: Nurs. 472 for generic students. H 11 473 0 1203

476. Health Assessment. (3). Designed to help the registered nurse develop skills in health assessment. The complete health history and head-to-toe physical assessment, as well as temporary and permanent society, emphasis is placed on development of nursing care plans, scientific reasoning and the emerging profession of nursing. The student practices clinical nursing situations related to behavioral disorders. Prerequisites: Nurs. 340, 347, 351, 352 and 354. Corequisites: Nurs. 460, 466 and 468. Prerequisite: departmental consent. H 11 476H 1 1203

478. Nursing Practice: Large Groups. (5). 2R; 9L. The study of nursing to large groups of people with multiple complex health problems. Community health problems are assessed and design and control of nursing systems for large groups of people are practiced. Prerequisites: Phase I and II courses. H 11 478 1 1203

478H. Nursing Systems for Large Groups. (3). 9L. A clinical honors course for the study of nursing for large groups with potential multiple, complex health problems. The focus is health promotion throughout the life span. The expanded emphasis of the course is the expanded development of nursing agency in clinical nursing situations. Prerequisites:

481. Cooperative Education Field Study. (1-6). 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 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. H 11 481 2 1203

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: departmental consent. H 11 505 3 1203

543. Women and Health Care. (3). Focuses on 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. Self-care practices of women are examined and ways to promote positive health practices are studied. Open to non-nursing majors. H 11 543 0 1203

570. Interpretations of Sexuality for Health Professions. (3). Cross-listed as HS 570. Elective. Strategies to assist clients and families to cope with sexual problems and analyze concepts related to sexuality. Emphasis is placed on understanding interpretations of biological, psychological and cultural aspects of sexuality to the helping professions. Open to non-nursing majors. H 11 570 0 1203

700. Assessment of Pediatric and Adolescent Clients. (3) 2L; 3L. A theoretical and clinical laboratory experience in which students focus on the assessment of pediatric and adolescent clients. Open admission to RN and graduate students. H 11 700 1 1203

703. Foundations of Nursing. (3). Focuses on the nature of theory and the process of theory development. The historical development of nursing theory and the implications of theories for the future are explored. Selected conceptual models of nursing are analyzed in terms of their implications for nursing practice, nursing research and nursing education. Prerequisites: admission to Graduate School. H 11 703 0 1203

704. Health Maintenance of the School Age Child. (3) 2L; 3L. This course examines and applies major theories, clinical concepts and research studies related to school health nursing. Prerequisite: Corequisite: H 11 704 0 1203

705. Nursing Research. (3). Building on an initial research experience, this course is designed to assist the student in understand-
thesis committee, to design and conduct a formal research project. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 822 3 1201


623. 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, historical study, a philosophical paper or other type project developed in conjunction with the student's faculty advisor. Prerequisites: admission to Graduate School and departmental consent. H 11 825 4 1201

625. Independent Study. (1-6). Independent study provides opportunity for the student to develop in collaboration with a departmental faculty member, objectives and protocol for independent work related to the practice of nursing. Prerequisites: admission to Graduate School and departmental consent. H 11 825 3 1201

829. Foundations of Maternal-Child Nursing. (3). This course provides the foundation for all courses in the maternal-child clinical concentration. Seminars enable students to investigate knowledge clinical concepts and research studies related to maternal-child nursing. Prerequisites: Nurs. 703, 705 and 802. H 11 829 0 1203

332. Maternal-Child Nursing: Practicum I. (3). An intensive clinical experience in which the student focuses on the process of systematic assessment of individuals and groups within a family system. A seminar accompanies the practicum. Prerequisite or corequisite: Nurs. 829. H 11 832 1 1203

833. Adult Nursing I. (3). This course will examine clinical concepts and issues related to the maintenance of optimal health states of adults. Emphasis is placed on assessment, measurement and nursing interventions related to these concepts. Prerequisites: Nurs. 703, 705 and 802. H 11 833 0 1203

834. Adult Nursing Practicum. (3 or 6). An intensive clinical experience in which the student is expected to design, implement and evaluate nursing care for adults. Specialized areas of study are selected and may include health maintenance or illness care of acutely or chronically ill adults. Practicum sites may include hospitals, extended care facilities, rehabilitation centers, community health agencies. A seminar is included as part of the practicum. Prerequisites: Nurs. 703, 705, 802 or instructor's consent; Nurs. 833 or 839 may be concurrent. H 11 834 2 1203

835. Perspectives in Maternal-Child Nursing. (3). This course critically examines health care needs for maternal and child health. The effects of political, economic and social factors on maternal and child health are analyzed. Nursing roles in the delivery of maternal and child health care are examined. Prerequisites: Nurs. 703, 705, 802 and 829. H 11 835 0 1203

836. Maternal-Child Nursing: Practicum II. (3). An intensive clinical experience in which the student analyzes, designs, implements and evaluates nursing systems for individuals and groups with special needs. Prerequisites: Nurs. 703, 705, 802, 829 and 832. Nurs. 835 may be concurrent. H 11 836 2 1203

837. Perspectives in Gerontological Nursing. (3). Emphasis is on the synthesis of concepts and theories into a functional framework of gerontological nursing. This basis is utilized to identify health problems of older adults and to plan appropriate preventive, rehabilitative or restorative approaches to these problems. Attention is given to social, economic, political and legal aspects as they impact upon the well being of older adults. Prerequisites: Nurs. 833 and 834 or instructor's consent. H 11 837 0 1203

839. Adult Nursing II. (3). This course examines clinical concepts and issues related to major disruptions in the health status of adults. Emphasis is placed on assessment, measurement and interventions related to these concepts. Prerequisites: Nurs. 703, 705 and 802. H 11 839 0 1203

841. Foundation of Community Health Nursing. (3). As the health care system broadens its base to community settings, an appraisal of historical development, trends and theories are analyzed as related to nursing practice and research in the community. Prerequisite: instructor's consent. H 11 841 0 1203

843. Perspectives in Psychiatric/Mental Health Nursing. (3). An intensive clinical experience in which the student analyzes group processes and dynamics, initiates and evaluates therapeutic strategies. Prerequisites: Nurs. 819, 821 and 822. Corequisites: Nurs. 843, H 11 844 2 1203

844. Psychiatric/Mental Health Nursing: Practicum II. (3). An intensive clinical experience in which the student analyzes group processes and dynamics, initiates and evaluates therapeutic strategies. Prerequisites: instructor's consent. H 11 844 0 1203

Physical Therapy
The physical therapy professional program prepares students to become health care professionals who work with patients disabled by illness or accident or born with a handicap. Physical therapists also work to prevent functional disability and to maintain health. They evaluate neuromuscular, musculoskeletal, sensorimotor and related functions to determine the degree of muscle strength, motor development, motion, respiratory ventilation and/or peripheral circulatory efficiency.

Physical therapists plan and implement treatment programs based on test findings after a referral from a licensed physician or dentist. Treatments by physical therapists include exercises for increasing strength, endurance, coordination and range of motion; stimuli to facilitate motor activity and learning; instruc-
Admission to Professional Curriculum

In order to enter the physical therapy professional curriculum, students must:

1. Be admitted to The Wichita State University
2. Have a minimum cumulative grade point average of 3.000 in all college courses, including a minimum 3.000 grade point average in required courses and a 3.000 grade point average in all required math and science courses
3. Submit to the Physical Therapy Admissions Committee all application forms, test results, information and fees requested by the committee by the deadline set each year by the Physical Therapy Admissions Committee
4. Be able to complete successfully (grade of C or better) all physical therapy prerequisites prior to the beginning of the first semester of the professional program (no more than one required course may be taken during the summer prior to entering the program)
5. Be interviewed and recommended for acceptance by the Physical Therapy Admissions Committee and accepted by the dean of the College of Health Professions.

A $100 nonrefundable tuition deposit is required of all students accepted by the committee.

Students may petition the committee for an exception to one of these requirements provided they are able to show that valid circumstances prevent compliance with that requirement.

Professional Curriculum

The following courses are required of students accepted into the professional phase of the physical therapy program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 112Q, General and Inorganic Chemistry</td>
<td>5</td>
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<tr>
<td>Math. 111, College Algebra, and 123, College Trigonometry</td>
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<tr>
<td>Math. 112, Precalculus Mathematics</td>
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<tr>
<td>Phys. 213Q, General College Physics I</td>
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<tr>
<td>Phys. 214Q, General College Physics II</td>
<td>5</td>
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<tr>
<td>PT 350, Physical Therapy Evaluation Procedures</td>
<td>2</td>
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<tr>
<td>PT 355, Physical Agents</td>
<td>4</td>
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<tr>
<td>PT 409, Introduction to Research for the Health Professions</td>
<td>1</td>
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<tr>
<td>PT 411, Special Projects</td>
<td>1-1</td>
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<tr>
<td>PT 422, Clinical Education III</td>
<td>2</td>
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<tr>
<td>PT 432, Clinical Education IV</td>
<td>3</td>
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<tr>
<td>PT 440, Prosthetics and Orthotics</td>
<td>2</td>
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<tr>
<td>PT 442, Clinical Internship I</td>
<td>6</td>
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<tr>
<td>PT 445, Physical Therapy Procedures</td>
<td>4</td>
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<tr>
<td>PT 448, Therapeutic Exercise I</td>
<td>3</td>
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<tr>
<td>PT 450, Therapeutic Exercise II</td>
<td>5</td>
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<tr>
<td>PT 452, Clinical Internship II</td>
<td>6</td>
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<tr>
<td>PT 480, The Physical Therapist in Practice</td>
<td>3</td>
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<tr>
<td>PT 485, Topics in Physical Therapy</td>
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<tr>
<td>PT 489, Basic Joint Mobilization</td>
<td>1</td>
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<tr>
<td>PT 505, Pathophysiology I</td>
<td>4</td>
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<tr>
<td>PT 605, Pathophysiology II</td>
<td>4</td>
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<tr>
<td>HS 301, General Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>HS 310, Gross Anatomy</td>
<td>6</td>
</tr>
<tr>
<td>HS 511, Neuroanatomy and Neurophysiology</td>
<td>3</td>
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Special Requirements

Students are required to purchase uniforms and other apparel needed during clinical learning experiences. Students are also required to purchase professional liability insurance (in the amount of not less than $300,000/$900,000) and health insurance coverage. This must be done on a yearly basis. Prior to entering the clinical learning experiences in the first year of the professional program, each student must be certified in cardiopulmonary resuscitation (CPR). This may be accomplished through the Red Cross, American Heart Association or the Department of Physical Therapy. Recertification will be needed prior to entry into the senior year clinical education courses. In addition, students are required to provide their own transportation to and from the health care facilities used for clinical experiences. During internship assignments outside Wichita, students may be required to pay all living and travel expenses.

Information related to special requirements is available in the office of the Department of Physical Therapy.

Lower-Division Course

201. Cooperative Education Field Study. (1-6). 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 at 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. H 17 281 2 1212

Upper-Division Courses

300. Basic Patient Care Skills. (2). 1R; 2L. Theory and practice of fundamentals of patient care in physical therapy including medical terminology, communications, physical management of the patient and ambulation. Prerequisite: departmental consent. H 17 300 1 1212

302. Clinical Education I. (1). 4P. Introduction to basic patient care in various physical therapy settings. Offered Cr/NcR only. Prerequisite: departmental consent. H 17 302 2 1212

312. Clinical Education II. (2). 8P. Supervised application of the skills acquired in class to patients in various physical therapy settings. Offered Cr/NcR only. Prerequisite: departmental consent. H 17 312 2 1212

320. Applied Biomechanics. (3). 3R; 2L. Analysis of the integration of the systems of the body that produce normal motion and the effects of dysfunction on normal motion. Prerequisite: departmental consent. H 17 320 1 1212

350. Physical Therapy Evaluation Procedures. (2). 1R; 3L. Theory and practice of basic physical therapy evaluation procedures; includes sensory and muscle testing, goniometry and posture evaluation. Prerequisite: departmental consent. H 17 350 1 1212

355. Physical Agents. (4). 2R; 4L. The focus of this course is the study of physical agents—thermal, mechanical and electrical. Skill in performance of therapeutic applications of the physical agents will be developed. Prerequisite: departmental consent. H 17 355 1 1212

409. Introduction to Research for the Health Professions. (1). An introduction to the scope, format and use of research in the health professions. Development of ability to be a critical consumer of professional literature and the initiation of research projects. Prerequisite: departmental consent. H 17 409 0 1212

411. Special Projects. (1-2). Arr. An introduction to the performance of investigative study through the completion of a project in, or related to, the field of physical therapy. Students must complete two credit hours as a requirement for the major. Prerequisite: PT 409. H 17 411 3 1212

422. Clinical Education Ill. (2). 8P. Continuation of PT 312. Offered Cr/NcR only. Prerequisite: departmental consent. H 17 422 2 1212

432. Clinical Education IV. (4). 16P. Continuation of PT 422. Offered Cr/NcR only. Prerequisite: departmental consent. H 17 432 2 1212
440. Prosthetics and Orthotics. (2) 1R; 2L. Study of prosthetics and orthotics including basic principles of design, components, alignment and use. Prerequisite: departmental consent. H 17 440 1 1212

442. Clinical Education V. (6) 40P. Supervised full-time assignments to physical therapy settings where the student is responsible for initiating patient evaluations, program planning, implementation and assessment of patient progress. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 442 2 1212

445. Physical Therapy Procedures. (4) 2R; 4L. The study of evaluation and treatment procedures used by physical therapists in dealing with patients with needs as diverse as cardiac rehabilitation, pulmonary rehabilitation, child birth education, sports medicine and burn care. Prerequisite: departmental consent. H 17 445 1 1212

448. Therapeutic Exercise I. (3) 1R; 4L. Basic exercise procedures with and without equipment to increase range of motion, strength and/or coordination; theory, and skill development. Prerequisite: departmental consent. H 17 448 1 1212

450. Therapeutic Exercise II. (5) 2R; 6L. The major approaches to therapeutic exercise are presented and skill in performance development. The use of therapeutic exercise equipment also is studied. Activities of daily living are analyzed in order to see the relationship between therapeutic exercise treatment and the patient's functional ability. Prerequisite: departmental consent. H 17 450 1 1212

452. Clinical Education VI. (6) 40P. Continuation of PT 442 at a different physical therapy setting. Offered Cr/NCr only. Prerequisite: Departmental consent. H 17 452 2 1212

480. The Physical Therapist in Practice. (3). Management principles used by a physical therapy administrator. Current trends in physical therapy and health care, including legal and ethical considerations. Prerequisite: departmental consent. H 17 480 1 1212

485. Topics in Physical Therapy. (1) Weekly discussion topics include those of current interest and activity within the profession. Among the topics are education and accreditation, realm of practice and competency and the changing roles and interactions of diverse health professionals. Prerequisite: departmental consent. H 17 485 0 1212

489. Basic Joint Mobilization. (2) 1R; 1L. This course is intended to provide the student with basic knowledge and skills necessary to select and perform appropriate technique of joint mobilization for the evaluation and treatment of joint dysfunction. Prerequisite: departmental consent. H 17 489 1 1212

Courses for Graduate/Undergraduate Credit

500. Advanced Developmental Disabilities. (1) 1R; 1L. Elective. The emphasis of this course is on advanced evaluation and treatment of children with perceptual motor and/or development disabilities. Reading assignments, class discussions and laboratory experiences are directed toward student's interests of particular needs. Prerequisite: PT 360. H 17 500 1 1212

505. Pathophysiology I. (4). The body's defenses and responses to disorders, disease and injury are studied. The common disorders, diseases and injuries to the body systems are analyzed as to cause, effect and treatment. Prerequisite: departmental consent. H 17 505 0 1201

605. Pathophysiology II. (4). The in-depth analysis of diseases, disorders and injuries to the musculoskeletal system and to the nervous system are presented. Pathology, assessment and treatment are discussed. Prerequisite: departmental consent. H 17 605 0 1201

890. Thesis. (1-4). Repeatable to a maximum of six hours. Prerequisite: enrollment in graduate studies and consent of thesis adviser. H 17 890 4 1212

Physician Assistant

As defined by the American Medical Association, the physician assistant is "a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant." Graduates of the program are eligible to take the examination given by the National Commission on the Certification of Physician Assistant and to be registered in states that have made provisions for the registration of physician assistants, including Kansas. This program has been accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association.

Preprofessional Curriculum

Students who intend to apply for admission into the physician assistant professional curriculum with no college degree must complete the following courses.

Course Hrs.

Basic Skills (12 hours)
Eng. 101, College English I ....... 3
Eng. 102, College English II ..... 3
Speech 111, Basic Public Speaking ... 3
Speech 112, Basic Interpersonal Communication, or equivalent .... 3

General Education (36 hours)

Division A—Humanities and Fine Arts (nine hours in at least three departments)
Division B—Social and Behavioral Sciences (six hours in at least two departments)
Division C—Natural Sciences and Mathematics (12 hours in at least two departments). Must include:
Biol. 225, Human Anatomy ....... 3
Biol. 226, Human Physiology ... 3
Chem. 103G, General Chemistry .... 3
Electives—Nine hours of any "G" or "Q" courses. (All course work must be designated "G" or "Q" courses. Nine hours must be taken in General Studies (G) courses. No more than six hours may be counted in any department. No courses can be counted in the students' major department.)

NOTE: "G" courses are the most comprehensive and they serve as an overview for students not majoring in the field. "Q" courses serve majors and nonmajors. They tend to be more specialized and often are foundation courses.

Admission to Professional Curriculum

Minimum requirements for students accepted for the program are (1) a baccalaureate degree with 12 hours of natural sciences to include human anatomy, human physiology and general chemistry; (2) completion of the 48-hour preprofessional curricula; (3) admission to The Wichita State University; (3) submission of application to the department; and (4) completion of a personal interview and (5) acceptance by the Physician Assistant Admissions Committee. Individual waivers to these requirements will be considered by the department upon request.

Applicants must be accepted by the Admissions Committee of the Physician Assistant Department. Applications must be completed by February 1 for the fall class. Applications completed after February 1 will be considered as alternate applications if positions become available after the initial selection process. Historically, several alternates are offered class positions.

Professional Curriculum

The physician assistant program curriculum consists of both classroom and clinical courses. Clinical 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.

Courses Hrs.

HS 388, Clinical Anatomy ....... 3
HS 389, Clinical Anatomy ....... 3
HS 390, Clinical Physiology .... 2
HS 400, Clinical Pathophysiology .... 3
HS 421, Applied Clinical Pharmacology I .... 3
HS 422, Applied Clinical Pharmacology II .... 3
PA 211, Assessment and Management of the Integument .... 2
PA 212, Assessment and Management of the Cardiovascular System .... 2
Graduation Requirements
Students who meet the course requirements specified in the physician assistant curriculum will receive a certificate of completion and Bachelor of Health Science degree with a physician assistant major.

Other Requirements
Students must purchase labaratory jackets, identification patches and name tags and are required to provide their own transportation to the clinical site. Students are required to purchase diagnostic equipment and malpractice insurance in an amount of not less than $100,000/300,000. Students must provide special problems of physical examination including a tuberculosis test in 5 MMR immunization or rubella prior to clinical assignment.

Lower-Division Courses
211. Assessment and Management of the Integument (2). A combined theory, laboratory and clinical course dealing with the skin and major organ. Special considerations include 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 clinic through case presentations. H 19 211 0 1299

212. Assessment and Management of the Cardiovascular System (2). A combined theory, laboratory and clinical course dealing with the cardiovascular system. Special considerations include pulmonary function testing including blood gases; respiratory therapy; management of the pulmonary cripple; special pulmonary problems of the newborn; epidemiology of pulmonary disease; management, convalescence, and rehabilitation; roentgenology of the chest and resources of the American Heart Association. H 19 212 0 1299

213. Assessment and Management of the Pulmonary System (2). A theory, laboratory and clinical course dealing with the pulmonary system. Special considerations include bronchial asthma, chronic obstructive pulmonary disease, interstitial lung disease, pneumothorax, pleural effusion, pneumonias, and tuberculosis. H 19 213 0 1299

214. Assessment and Management of the Gastro-Intestinal System (2). A theory, laboratory and clinical course dealing with the gastrointestinal (GI) system. Special considerations include assessment of diseases of the GI tract, special problems of the newborn, relationships of the autonomic nervous system to GI symptoms, roentgenology of the GI tract, GI manifestations of psychiatric disturbances and demonstration of special diagnostic instruments. H 19 214 0 1299

278. Assessment and Management of Obstetrics and Gynecology (2). A theory, laboratory and clinical course dealing with obstetrics and gynecology. Special considerations include pregnancy, gynecologic diseases, techniques of normal delivery, obstetric emergencies, postpartum, family planning and infertility. H 19 218 0 1299
A six-week clinical experience in which students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis will be on obtaining and recording complete and/or problem-oriented physical examination data. Students will obtain and record complete and/or problem-oriented physical examination data, become familiar with common diagnostic procedures and be involved in the selection of therapeutic regimens. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 410 1 1299

412. Clinical Rotation II. (5). A six-week clinical experience in which students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis will be on obtaining and recording complete and/or problem-oriented physical examination data. Students will obtain and record complete and/or problem-oriented medical historical data, become familiar with common diagnostic procedures and be involved in the selection of therapeutic regimens. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 412 1 1299

413. Clinical Rotation in Obstetrics and Gynecology. (5). A six-week clinical experience in which students participate in the care of obstetric and gynecology patients. During this rotation, students are involved in patient assessment, diagnostic procedures and treatment of the gynecology patient. Students follow obstetric patients through all stages of pregnancy, delivery and postpartum care. Students also counsel patients in family planning and contraception. H 19 413 1 1299

414. Clinical Rotation III. (5). A six-week clinical experience in which students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis will be on obtaining and recording complete and/or problem-oriented diagnostic testing data and becoming involved in the selection of therapeutic regimens. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 414 1 1299

415. Clinical Rotation in Mental Health. (5). A six-week clinical experience in which students participate in the care of patients in a variety of mental health settings and specialties. Particular emphasis will be on recognizing the signs and symptoms of uncomroon illness. Students will obtain and record complete and/or problem-oriented data bases and perform and/or select appropriate therapeutic regimens and their indications, availability, reliability and limitations. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 415 1 1299

417. Clinical Rotation in Admitting and Personnel Health Care. (5). A six-week clinical experience in which students participate in the care of patients seeking hospitalization. In addition, students study employees' health services. Students are involved in history and physical examination, assessment and determination as to whether hospitalization is needed. Students also have the opportunity to discuss patient case load situations as well as participate in employee sick call situations. H 19 417 1 1299

418. Clinical Rotation IV. (5). A six-week clinical experience in which students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis will be on obtaining and recording complete and/or problem-oriented data bases, performing and/or selecting appropriate diagnostic procedures and become involved in the selection of therapeutic regimens. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 418 1 1299

419. Clinical Rotation V. (5). A six-week clinical experience in which students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis will be on obtaining and recording complete and/or problem-oriented data bases, performing and/or selecting appropriate diagnostic procedures and become involved in the selection of therapeutic regimens. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 419 1 1299

422. Clinical Rotation VI. (5). A six-week clinical experience in which students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis will be on obtaining and recording complete and/or problem-oriented data bases, performing and/or selecting appropriate diagnostic procedures and become involved in the selection of therapeutic regimens. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 422 1 1299

423. Clinical Rotation in Pediatrics. (5). A six-week clinical experience in which students participate in the care of the pediatric patient. During this rotation, the student is involved in history and physical examination, diagnostic procedures and treatment of the pediatric patient. The student participates in the daily practice of a pediatrician and is
involved in counseling patients and parents in all aspects of pediatric medicine. Special emphasis is placed upon immunization, preventive medicine, and developmental milestones. H 19 432 1 1299

424. Clinical Rotation in Radiology. (1-5). A six-week clinical rotation experience in which the students participate in all aspects of radiology as it pertains to patient care. During this rotation the student is involved in taking radiograph and assisting the radiologist and interpreting. The student has an opportunity to correlate physical and historical findings to radiographic results. Students are also involved in the role of the radiologist in urban and rural areas. H 19 424 1 1299

426. Clinical Rotation in Family Practice II. (5). A six-week advanced clinical experience in which students participate in the care of patients in a variety of medical settings and specialties. Particular emphasis will be on integrating the skills and knowledge obtained in previous rotations, as well as health promotion, disease prevention, patient education. Students will obtain and record complete and/or problem-oriented data bases and perform and/or select appropriate diagnostic and therapeutic regimens and follow-up. Students will, at the discretion of the preceptor, be included in all aspects of health care services offered at the site. Prerequisites: admission to the PA Professional Program and faculty approval. H 19 425 1 1299

427. Clinical Rotation in Primary Care II. (5). A six-week advanced clinical experience in which students participate in the care of a wide variety of patients in family practice. Students have the opportunity to improve their skills in physical examination, diagnostic procedures and development of a plan of care and treatment. Students also observe the diversity and complexity of the role of the family practitioner. Prerequisite: department chairperson's consent. H 19 426 1 1299

430. Clinical Conference I. (2). 1R; 2L. The major focus of this course is clinical research. Students will integrate research activities with clinical assignments and report to faculty. Included are the writing of clinical papers and presentation during the semester and an analysis of clinical problems encountered in the clinical rotation. This requires competence utilization of the computer patient tracking system as the program for student research. Students are planned for higher strengths and weaknesses in clinical skills. Prerequisites: concurrent enrollment in PA 432 and instructor's consent. H 19 433 1 1299

432. Clinical Conference II. (3). 1R; 3L. The course is offered in the spring semester to clinical physician assistant students. The primary focus of the class is on issues affecting the graduate physician assistant, which include legislative issues, professional associations, responsibilities, practice limitations, malpractice issues, etc. This course includes review sessions for the National Board Examination utilizing lecture, demonstration and computer-assisted instruction. Prerequisites: concurrent enrollment in PA 432 and instructor's consent. H 19 434 1 1299

434. Clinical Rotation in Radiology. (1-5). A six-week clinical rotation experience in which the students participate in all aspects of radiology as it pertains to patient care. During this rotation the student is involved in taking radiograph and assisting the radiologist and interpreting. The student has an opportunity to correlate physical and historical findings to radiographic results. Students are also involved in the role of the radiologist in urban and rural areas. H 19 424 1 1299

439. Clinical Conference I. (2). 1R; 2L. The major focus of this course is clinical research. Students will integrate research activities with clinical assignments and report to faculty. Included are the writing of clinical papers and presentation during the semester and an analysis of clinical problems encountered in the clinical rotation. This requires competence utilization of the computer patient tracking system as the program for student research. Students are planned for higher strengths and weaknesses in clinical skills. Prerequisites: concurrent enrollment in PA 432 and instructor's consent. H 19 433 1 1299

440. Clinical Preceptorship. (6). An eight-week course designed as a 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. H 19 440 1 1299

481. Cooperative Education Field Study. (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 coordinators. Students enrolled in Co-op 481 may elect one of two schedules: (a) a semester-long, enrolling two courses in a minimum of six hours of course work in addition to their co-op assignment, or (b) 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. H 19 481 1 1299

Respiratory Therapy
The baccalaureate program in respiratory therapy through a Bachelor of Health Science (BHS) is designed for the individual currently enrolled in the Wichita State University's respiratory therapy associate degree program or graduates of other accredited respiratory therapy programs. This degree provides opportunities for respiratory therapists to expand their role in education, administration or in the clinical sciences.

Curriculum
Students must be admitted by The Wichita State University and the Department of Respiratory Therapy to its Bachelor of Health Science (BHS) program. Students must satisfy general University graduation requirements. They must also successfully complete an Associate of Science degree (or equivalent) program in respiratory therapy with a grade of "C" or better.

Students may select from three emphasis options for their BHS degree. A plan of study contract is fashioned from the recommended courses listed under each option and must be made in consultation with and approved by the respiratory therapy department adviser. This contract for graduation must be completed one semester prior to the expected graduation date. Students must complete 145 credit hours.

Core Requirements (19 hours)
Course Credit
HS 230, Thoracic Anatomy *** 3
HS 301, Clinical Pharmacology ** 3
HS 331, Principles of Diet and Nutrition ** 3
HS 400, Introduction to Pathophysiology ** 3
IS 200, Introduction to Computer Programming ** 3
ISEP 704, Introduction to Educational Statistics *** 2
RT 300, Pulmonary Rehabilitation *** 3
HS 510, Departmental Management *** 3

Electives
HS 430, Introduction to Fluids and Electrolytes 2
HS 465, Cardiopulmonary Diagnostic, Preventive and Rehabilitation Methods 3

** Required during the WSU Associate Degree curriculum as scheduled. Transfer Associate Degree RT students must complete as soon as possible after admission to the BHS program of study.
*** Required BHS core courses

Education Option (12 hours)
Course Credit
IS 433, Educational Psychology Learning and Evaluation 3
HS 501, Instructional Design in Health Education 3
HS 506, Teaching and Learning Strategies in Health Science 3
RT 320, Projects (student teaching) 3

Courses—six hours required
Psych. 302, Psychology of Learning 3
Psych. 414, Child Psychology 3
IS 701, Foundations of Education 3
IS 785, Instructional Media 3

Plus nine hours of electives selected in consultation with a department adviser. Total—27 hours required.

Management Option (27 hours required)
Course Credit
Econ 201Q, Principles of Economics 3
Mgmt. 360, Concepts of Administration 3
Acct. 210, Financial Accounting 3
Acct. 220, Managerial Accounting 3
Mgmt. 466, Personnel Management 3

HAE (HCA) 503, Organization and Administration of Health Care 3
HAE 590, Legal Aspects of Health Care Administration 3
HAE 507, Health Planning 3
HAE 510, Health Finance 3
Clinical Sciences Option (27 hours required)

Course
Chem. 112, General and Inorganic Chemistry ................. 5
Biol. 505G, Foundations of Human Heredity .................. 4
Biol. 518Q, Biology of Aging ................................ 3
Chem. 533, Elementary Organic Chemistry ...................... 3
Psych. 404, Psychology of Aging ................................ 3
Chem. 561, Introduction to Biochemistry ......................... 3
RT 320, Projects ........................................... 6

Lower-Division Courses

101. Overview of Respiratory Therapy. (3). An overview of the profession, the cardio pulmonary system and therapy modalities. H 13 101 0 1299

102. Cardiopulmonary Resuscitation. (1). Instruction and supervised practice of cardiopulmonary life support plus introduction to basic terminology and principles of circulation and respiration are provided with special emphasis on guidelines for prudent heart living. H 13 102 0 1299

111. Introduction to Respiratory Therapy. (1-4). A course to familiarize students with the history and evolution of respiratory therapy and with the role of the respiratory therapist in the health care community. Major components also include the study of medical terminology and the application of basic scientific principles pertinent to respiratory therapy practice. Prerequisite: departmental consent. H 13 111 0 1299

202. Respiratory Therapy Practicum I. (1-5). The student acquires practical experience in affiliated health care agencies. Course stresses theory in technical areas, as well as overall departmental operations. Prerequisite: RT 222. H 13 202 2 1299

203. Respiratory Therapy Practicum II. (1-5). A continuation of RT 202 but with greater emphasis on the critically ill and diagnostic and treatment areas of respiratory therapy. Prerequisite: RT 202. H 13 203 2 1299

212. Respiratory Therapy Procedures. (1-5). This course presents the basic therapeutic and diagnostic skills and techniques used by the respiratory therapy practioner which can be developed in a skills laboratory. Included are: medical gas therapy, humidity and aerosol therapy. Prerequisite: RT 111. H 13 212 1 1299

222. Introductory Clinical Practicum. (1-3). This course is the student's first introduction to the clinical environment and practice of basic therapeutic skills that are required of the respiratory therapist. Prerequisite: RT 212. H 13 222 2 1299

281. Cooperative Education Field Study. (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 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. H 13 281 2 1299

Upper-Division Courses

301. Seminar I. (2). Discussion of departmental operations. Prerequisite: RT 222. H 13 301 B 1299

302. Seminar II. (2). Discussion of advanced skills and techniques involving patients and preparation of case studies. Prerequisite: departmental consent. H 13 302 B 1299


320. Clinical Projects. (1-3). Provides an opportunity for the student on an individual basis to select a topic for independent investigation. Repeatable to six hours. H 13 320 4 1299

325. Cardiopulmonary and Renal Physiology. (1-5). An in-depth study of pulmonary and cardiovascular physiology accompanied by an overview of the kidney's role in fluid, electrolyte and acid-base balance. Emphasis is placed on understanding essential mechanisms of normal function: with this context, knowledge is applied in interpreting diagnostic studies and in understanding disordered function. Prerequisite: departmental consent. H 13 325 1 1299

330. Blood Gases: Clinical Application, Instrumentation and Study. (1-5). May be repeated to six hours. Blood gases, acid-base theory, clinical application, blood gas analysis and quality control are presented. Modern monitoring trends and equipment are emphasized and demonstrated. Prerequisites: college chemistry and human physiology, or departmental consent. H 13 330 3 1299

360. Pulmonary Rehabilitation. (1-5). Objectives, methods and expected results are presented and discussed. Project testing methods, including clinical exercise testing, patient and family education, bronchial hygiene, breathing retraining, biofeedback, physical reconditioning and home care, are described and interpreted. Prerequisite: RT 212. H 13 360 0 1299

426. Cardiopulmonary Disorders and Management. (1-6). A study of the diagnosis, treatment and management of cardiopulmonary disorders. Emphasis is placed on (1) interpretation of diagnostic tests, (2) application of these interpretations to the treatment and management of the disease and (3) understanding essential mechanisms of disordered function. Patient management problems and techniques are used. Prerequisite: RT 222. H 13 426 2 1299

431. Ventilation and Applied Critical Care. (1-8). A study of respiratory ventilators and applied critical care, including monitoring techniques, criteria for ventilatory support, and aspects of critical care. Prerequisite: departmental consent. H 13 431 1 1299

450. Introduction to Neonatal Respiratory Care. (3). This course provides an overview of the basic principles and techniques utilized in the cardiopulmonary management of the high-risk neonate. Physiologic, laboratory and roentgenographic assessment, pathophysiologic, monitoring and therapeutic techniques will be discussed. Prerequisite: departmental consent. H 13 450 D 1299

465. Cardiopulmonary Diagnostic, Preventive and Revalidation Methods. (5). Study of cardiopulmonary diagnostic procedures, disease prevention and intervention and cardiopulmonary rehabilitation. Stress testing, exercise physiology and home care concepts are practiced in lab and clinic. Prerequisite: admission to program or departmental consent. H 13 465 3 1299

481. Cooperative Education Field Study. (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 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. H 13 481 2 1299

Associate of Science Programs

The College of Health Professions offers the Associate of Science in dental hygiene and respiratory therapy.

Dental Hygiene

The associate program in dental hygiene provides students with a knowledge of the social, dental and clinical sciences and competencies needed by the dental hygienist in contributing to the attainment of good 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 Commission on Dental Accreditation.

Professional Curriculum

Admission: In addition to fulfilling all requirements for admission to the University, students wishing to enroll in the dental hygiene program must apply for, and obtain approval of, the Admissions Committee of the Department of Dental Hygiene. Acceptance into the College
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 of the Department of Dental Hygiene, The Wichita State University, Wichita, Kansas 67208-1595.

To qualify for admission to the dental hygiene program, applicants must be high school graduates or have passed the General Education Development (GED) test.

Students must meet the following admission criteria. They must:
1. Have taken or be enrolled in Biol. 225, Human Anatomy
Chem. 103Q, General Chemistry; Eng. 101, College English I; Psych. 111Q, General Psychology
2. Maintain a minimum grade point average of 2.000 in all college work
3. Complete The Wichita State University and College of Health Professions general admission requirements.

Students must also be interviewed and their admission approved by the department's committee on admissions. The interview is used to determine a student's motivation and interest, general understanding of the scope of the dental hygiene program and of the dental hygiene profession and ability to communicate and listen.

If possible, students should obtain experience or observe in a dental office prior to or concomitant with their application to the dental hygiene program.

Curriculum. The following courses, totaling 79 to 84 hours, must be taken by dental hygiene students. For course descriptions see the dental hygiene baccalaureate program section of the Catalog.

Course | Hrs.
--- | ---
Prerequisite courses for admission to the dental hygiene program:
Biol. 225, Human Anatomy | 3
Chem. 103Q, General Chemistry | 5
Eng. 101, College English I | 3
Psych. 111Q, General Psychology | 3

Plus the following:
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication | 3
Soc. 211Q, Introduction to Sociology | 3

Biol. 120Q, Introduction to Microbiology | 4
Biol. 226, Human Physiology | 3
DH 101, Preclinical Dental Hygiene | 5
DH 104, Clinical Radiology | 4
DH 201, Dental Hygiene Concepts I | 2
DH 202, Clinical Dental Hygiene I | 3

DH 206, General and Oral Pathology | 3
DH 290, Embryology, Histology and Oral Anatomy | 3
DH 301, Dental Materials and Expanded Functions | 3
DH 302, Clinical Dental Hygiene II | 2
DH 303, Dental Hygiene Concepts II | 2
DH 304, Dental Hygiene Concepts III | 2
DH 305, Periodontics | 3
DH 307, Ethics and Jurisprudence | 2
DH 309, Community Dental Hygiene | 1
DH 311, Dental Health Education | 2
DH 323, Clinical Dental Hygiene III | 3
DH 324, Clinical Dental Hygiene IV | 4
DH 409, Research for the Health Professions | 1
HS 301, Pharmacology | 3
HS 315, Head and Neck Anatomy | 2
HS 331Q, Nutrition | 3
RT 102, Cardiopulmonary Resuscitation | 1

Special Requirements

Students are required to purchase uniforms and instruments needed during clinical learning experiences. Students also are required to purchase professional liability insurance in the amount of not less than $200,000/$600,000. This must be done on a yearly 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 Department of Dental Hygiene, The Wichita State University, Wichita, Kansas 67208-1595.

Respiratory Therapy

Respiratory therapy is an allied health specialty employed in the treatment, management, control and care of patients with deficiencies and abnormalities associated with the respiratory system.

It encompasses the therapeutic use of medical gases; air and oxygen administering apparatus; environmental control systems; humidification and aerosols; drugs and medications; ventilatory assistance and ventilatory control; postural drainage; chest physiotherapy and breathing exercise; respiration rehabilitation; assistance with cardiopulmonary resuscitation; and maintenance of natural, artificial and mechanical airways. Specific testing techniques can be employed in respiratory therapy to assist in diagnosis, monitoring, treatment and research, including measurement of ventilatory volumes, pressure and flows and blood gas analysis.

The Department of Respiratory Therapy has an American Medical Association-approved program for the education of respiratory therapists. Following completion of the professional program, students meet the educational requirements for examination by the National Board for Respiratory Care for Registered Respiratory Therapist (RRT) registration.

Preprofessional Curriculum

The respiratory therapy curriculum consists of both classroom and clinical courses. The majority of the classroom courses are taught on the Wichita State campus while the clinical courses are taught in clinical affiliations.

The following courses should be taken by respiratory therapy students desiring an Associate of Science in respiratory therapy. Due to course scheduling and/or availability, students may or may not complete all requirements for the Associate of Science degree in two years.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication (six hours)</td>
<td></td>
<td></td>
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<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Division A—Social and Behavioral Sciences (three hours)</td>
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<td></td>
</tr>
<tr>
<td>Psych. 111Q, General Psychology</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Division B—Natural Sciences, and Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biol. 120Q, Introduction to Microbiology</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 225, Human Anatomy</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Biol. 226, Elementary Human Physiology</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 103Q or 111Q, General Chemistry</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Math. 109, College Algebra with Review, or Math. 111, College Algebra</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Phys. 111Q, Introductory Physics, or Phys. 131, Physics for the Health Sciences</td>
<td>3</td>
<td>2</td>
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<tr>
<td>DH 206, General and Oral Pathology</td>
<td>3</td>
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</tr>
<tr>
<td>DH 290, Embryology, Histology and Oral Anatomy</td>
<td>3</td>
<td></td>
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<tr>
<td>DH 301, Dental Materials and Expanded Functions</td>
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<td>DH 302, Clinical Dental Hygiene II</td>
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<tr>
<td>DH 303, Dental Hygiene Concepts II</td>
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<td>DH 304, Dental Hygiene Concepts III</td>
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<tr>
<td>DH 305, Periodontics</td>
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<tr>
<td>DH 307, Ethics and Jurisprudence</td>
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<tr>
<td>DH 309, Community Dental Hygiene</td>
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<td></td>
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<tr>
<td>DH 311, Dental Health Education</td>
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<tr>
<td>DH 323, Clinical Dental Hygiene III</td>
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<td></td>
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<tr>
<td>DH 324, Clinical Dental Hygiene IV</td>
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<tr>
<td>DH 409, Research for the Health Professions</td>
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<tr>
<td>HS 301, Pharmacology</td>
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<td></td>
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<tr>
<td>HS 315, Head and Neck Anatomy</td>
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<td></td>
</tr>
<tr>
<td>HS 331Q, Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RT 102, Cardiopulmonary Resuscitation</td>
<td>1</td>
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</tbody>
</table>
Admission to the Professional Curriculum

Students submitting application to the professional program are eligible for consideration after they have met Wichita State and College of Health Professions general admission requirements with a minimum grade of C in the prerequisites and have a grade point average of at least 2.00. Admittance to the program must be requested through an application submitted to the Department of Respiratory Therapy.

Professional Curriculum *

The following courses are required in the professional curriculum. For course descriptions see the respiratory therapy baccalaureate program section of the Catalog. For current program requirements and admission dates see departmental adviser.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT 111, Introduction to Respiratory Therapy</td>
<td>4</td>
<td>1-2</td>
</tr>
<tr>
<td>RT 212, Respiratory Therapy Procedures</td>
<td>4</td>
<td>2-3</td>
</tr>
<tr>
<td>RT 222, Introductory Clinical Practicum</td>
<td>3</td>
<td>3-4</td>
</tr>
<tr>
<td>RT 202, Respiratory Therapy Practicum I</td>
<td>5</td>
<td>4-5</td>
</tr>
<tr>
<td>RT 203, Respiratory Therapy Practicum II</td>
<td>5</td>
<td>5-6</td>
</tr>
<tr>
<td>RT 310, Respiratory Therapy Practicum III</td>
<td>5 or 6</td>
<td>6-7</td>
</tr>
<tr>
<td>RT 325, Cardiopulmonary and Renal Physiology</td>
<td>5</td>
<td>7-8</td>
</tr>
<tr>
<td>RT 426, Cardiopulmonary Disorders and Management</td>
<td>5 or 6</td>
<td>8-9</td>
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<tr>
<td>RT 435, Ventilators and Applied Critical Care</td>
<td>5</td>
<td>9-10</td>
</tr>
<tr>
<td>RT 450, Introduction to Neonatal Respiratory Care</td>
<td>3</td>
<td>10-11</td>
</tr>
</tbody>
</table>

* Admission into the professional program is required before students can enroll in professional courses.

Special Requirements

Students are required to purchase uniforms and other items needed during clinical learning experiences. Students are also required to purchase professional liability insurance. For specific information, please contact your department adviser each semester. 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 Department of Respiratory Therapy, The Wichita State University, Wichita, Kansas 67208-1595.

Special Certificate Programs

The College of Health Professions offers certificate programs in basic emergency care training and physician assistant. It cooperates with the College of Education in offering a certificate program for school nurses.

Basic Emergency Medical Care Training

A certificate in basic emergency medical care training is offered by the Department of Health Science. The certificate obtained with successful completion of HS 110, described under the heading Service Departments—Health Science.

Students who would like to enroll in this course must fulfill all requirements for admission to the Wichita State University and be at least 18 years old. An application to the Emergency Medical Training Admissions Committee must also be submitted. HS 110 classroom instruction incorporates anatomy and physiology, pathophysiology, emergency recognition and care of medical emergencies and trauma-related injuries. In addition, students spend ten hours of in-hospital observation in such areas as the emergency room, surgery, critical care units and the obstetric and psychiatric departments. A simulated automobile accident provides students with field experience in auto extrication. Successful completion of the five-credit-hour course meets the educational prerequisite for taking the state and/or national registry examinations for emergency medical technicians.

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.

In the College of Education, students must take three courses: ISEE 428, Social and Cultural Foundations of Education (two hours); or ISEE 701, Foundations of Education (three hours); and ISEE 601, Introduction to Exceptional Child (three hours); and ISEE 490 or 790, Independent Study (one hour).

In addition, students must take courses in the College of Health Professions: Nurs. 700, Assessment of Pediatric and Adolescent Clients (three hours), or an equivalent course determined by the Department of Nursing; Nurs. 704, Health Maintenance of the School Age Child (three hours); Nurs. 708, Organization and Management of the School—Health Program School Nurse Settings (three hours); and Nurs. 708, School Nurse Practicum (two hours), optional.

The total program requires 17-18 credit hours.

Physician Assistant

The Physician Assistant Program is a 24-month program designed to train primary care physician assistants. As defined by the American Medical Association, the physician assistant "is a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant." All students completing the two-year course of study receive a certificate of completion. A full description of the program is found under the baccalaureate program listings.

Service Departments

Within the College of Health Professions there are two service departments, health administration and education and health science.

Health Administration and Education

The Department of Health Administration and Education, in addition to providing bachelor programs in health care administration and medical record administration, is responsible for providing public and community health education courses required by professional programs within the College of Health Professions.

Lower-Division Courses

111Q. Introduction to Community Health. (3). H 24 1112 0 1202 *

281. Cooperative Education Field Study. (3). Prerequisite: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 24 281 2 1201 *

Upper-Division Courses

410. Community Health Concepts. (3). Prerequisite: departmental consent. H 24 410 0 1202 *

440. Health Care Administration Practicum. (40P). Prerequisite: senior standing or departmental consent. H 24 440 2 1202 *
481. Cooperative Education Field Study. (3). Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 24 481 2 1201 *

490. Independent Study in Health Care Administration. (3). Prerequisite: departmental consent. H 24 490 3 1202 *

Courses for Graduate/Undergraduate Credit

503. Organization and Administration of the Health Care System. (3). Prerequisite: departmental consent. H 24 503 0 1202 *

504. Health Economics. (3). Cross-listed as Econ. 665. Prerequisite: HAE 503 or Econ. 202 or departmental consent. H 24 504 0 1202 *

505. The Politics of Health. (3). Cross-listed as Pol. Sci. 505. Prerequisite: HAE 503, Pol. Sci. 121Q or departmental consent. H 24 505 0 1202 *

507. Health Planning. (3). Prerequisite: departmental consent. H 24 507 0 1202 *

509. Health Care Operations Analysis. (3). Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360 and junior standing or departmental consent. H 24 509 0 1202 *

510. Health Finance. (3). Prerequisites: HAE 503 and Acctg. 210 or equivalent or departmental consent. H 24 510 0 1202 *

565. Concepts of Quality Assurance in Health Care. (3). Prerequisite: HAE 605 or departmental consent. H 24 565 0 1201 *

580. Legal Aspects of Health Care Administration. (3). Cross-listed as Geron. 590. Prerequisite: junior standing or departmental consent. H 24 580 0 1202 *

605. Health Services Research. (3). Prerequisite: departmental consent. H 24 605 4 1201 *

684. Health Administration Policy. (3). Cross-listed as Mgmt. 684. Prerequisite: HAE 503 and at least one other HAE course or departmental consent. H 24 684 0 1202 *

685. Computer Applications in Health. (3). Prerequisite: HAE 605 or departmental consent. H 24 685 0 1201 *

686. Seminar in Health Care Administration. (3). May be repeated for credit. Prerequisites: HAE 503 and at least one other HAE course or departmental consent. H 24 686 9 1202 *

720. Community Health Organization and Administration. (3). Prerequisite: departmental consent. H 24 720 0 1201 *

808. Epidemiology of Chronic Disease. (3). Prerequisites: graduate school enrollment, HAE 665 or departmental consent. H 24 808 0 1201 *

* For complete course descriptions see Health Care Administration Program in the Catalog.

Health Science

The Department of Health Science offers a variety of appliedclinical courses in the basic health sciences. These courses are applicable to several departments within the college at the undergraduate and graduate levels.

Lower-Division Courses

101. Emergency Care: First Responder. (3). Cross-listed as Mgmt. 684. Prerequisite: HAE 503 or departmental consent. H 24 101 2 1201 *

110. Basic Emergency Medical Care Training. (5). Prerequisite: departmental consent. H 24 110 1 2101 *

201. Orientation to Health Professions. (2). Prerequisite: departmental consent. H 24 201 0 1201 *


231G. Current Issues in Food and Nutrition. (3). Prerequisite: departmental consent. H 24 231G 0 1201 *

231L. Current Issues in Food and Nutrition. (3). Prerequisite: departmental consent. H 24 231L 0 1201 *

301. Clinical Pharmacology. (3). A survey of therapeutic terms, drugs, actions, dosages, side effects, and interrelationships of drugs in the clinical setting. H 18 301 0 1201 *

310. Gross Anatomy, Section A: (3). Section B: (6). Prerequisite: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 24 310 0 1201 *

315. Head and Neck Anatomy. (2). An in-depth study of the head, neck, and related structures. H 315 0 1201 *

Upper-Division Courses

331Q. Principles of Dietetics and Nutrition. (3). A study of dietetic and nutritional needs in the clinical setting. H 331Q 0 1201 *

385. Health Care Team Concepts. (1-6). A seminar and practicum course designed to provide 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 the program. Prerequisite: instructor's consent. H 18 385 2 1201 *

388. Clinical Anatomy. (3). Fall semester. A course designed to further the understanding of the health professional in a comprehensive and/or specific area of human anatomy. Emphasis is placed on the human anatomy of the thoracic and abdominal regions and the functional and 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. H 388 0 1202 *

390. Clinical Physiology. (1-2). A course designed to 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. H 390 0 1201 *

400. Introduction to Pathophysiology. (3). Cross-listed as NURS. 400. A course for professional upper-division students enrolled in the College of Health Professions. The course focuses on the essential mechanisms of the human body and the pathophysiology of diseases. H 400 0 1201 *

401. Advanced Clinical Pharmacology. (3). An advanced study of clinical pharmacology, pharmacognosy and pharmacodynamics that includes drug synergism, antagonism, and side effects. Prerequisites: HAE 301 and instructor's consent. H 401 0 1201 *

411. Special Projects. (1-6). Supervised intensive study of special topics and problems related to health professions. By arrangement. H 411 0 1201 *

421. Applied Clinical Pharmacology I. (3). A course designed to provide the student...
with a practical knowledge of pharmacotherapy. Emphasis is placed on the pharmacodynamic and toxicologic properties of chemotherapeutic agents and of drugs affecting the cardiovascular and autonomic nervous systems. Prerequisites: current enrollment in HS 420 and instructor consent. H 18 421 0 1201

422. Applied Clinical Pharmacology II. (3). A continuation of F-8 421 with emphasis on drugs affecting the exocrine, endocrine and central nervous systems. Prerequisites: HS 421 and instructor consent. H 18 422 0 1201

430. Introduction to Fluids and Electrolytes. (2). Concepts of fluid and electrolyte balance in health and disease. Included are discussions of clinical cases of diagnostic and therapeutic interest. Prerequisites: Chem 103/C, Biol 226 or equivalent and departmental consent. H 18 430 0 1201

450. Workshop in Health Sciences. (1-4). H 18 450 2 1201

Courses for Graduate/Undergraduate Credit

501. Instructional Design in Health Education. (2). A course designed to assist health professionals in constructing health science curricula. Emphasis is given to identifying various curriculum models and applying educational principles, writing behavioral objectives and the acquisition of supplementary materials. Special emphasis is given to program development in school, community and patient education settings. Prerequisites: junior, senior or graduate standing in one of the professional programs or instructor consent. H 18 501 0 1201

506. Teaching and Learning Strategies in Health Sciences. (3). A course examining the various means of presenting health knowledge and coupling these teaching strategies with the learning styles and goals of student bodies that receive this knowledge. The nature of health care curriculum is examined in depth, as are procedures for developing and improving them. Health education curricula are explored. Prerequisites: departmental consent. H 18 506 0 1202

510. Clinical Departmental Management. (3). Concepts and methods of clinical department management are presented through lectures, discussion, group interaction and individual problem solving and situational analysis projects. Course provides information pertinent to management majors, department directors, shift supervisors and staff personnel who need an understanding of departmental management and of student bodies that receive this knowledge. H 18 510 9 1299

511. Neuroanatomy and Neurophysiology. (3). Study of the structure, physiology and function of the central and peripheral nervous systems. Prerequisites: HS 310 or CBS 214. H 18 511 1 0425

521. Independent Study. (1-6). Offers reading and conference experience to complete a course requirement or provide enrichment in a specific area. Prerequisites: upper division or graduate standing or department chairperson's consent. H 18 521 3 1201

531. Applied Principles of Nutritional Support and Therapy. (4). A study of the principles of nutritional support and diet therapy. The dietary concerns of a variety of clinical disorders are investigated. These include gastrointestinal disorders, diabetes mellitus, cancer, burns, obesity and weight loss, kidney and cardiovascular disease, parenteral and enteral nutrition and surgical conditions. Nutritional assessment, data interpretation, case finding and subsequent diet planning and client communications are discussed. Prerequisite: HS 331 or instructor consent. H 18 531 0 0424

570. Interpretations of Sexuality for Health Professions. (3). Cross-listed as Nurs 570. Electives. Strategies to assist clients and families to cope with sexual problems and disorders. Emphasis on relating varying interpretations of the biological, psychological and cultural aspects of sexuality to the helping professions. Open to nonmajors. H 18 570 0 1203

572. Special Topics or Selected Topics. (1-4). A lecture/discussion course focused on a discipline or area relevant to the health professions. Course organized as in-depth study of particular topic or concept, including didactic and current research findings and implications for clinical practice. Prerequisites: upper-division statistics course or consent of instructor. H 18 572 1 1202

574. Health Services Research. (3). A lecture/discussion course on current conceptual and methodological considerations of health services research. The role of various research methods and research findings are presented and include disease prevention and health promotion, ethics, consumerism, and current research findings as they relate to current trends in the health professions. Prerequisite: graduate standing. H 18 574 0 1201

575. Special Topics or Selected Topics. (1-4). A course examining the background and methods for evaluating performance in the health professions. The planning, development and use of evaluation tools in the clinical setting are emphasized as well as the principles and methods for evaluating educational and professional settings. H 18 575 0 1201

576. Evaluation in the Health Professions. (3). This course provides basic methodologies for health services research and evaluation. Topics include performance measurement and improvement, program development, and evaluation of performance in the health professions. Prerequisite: departmental consent. H 18 576 0 1202

577. Continuing Education in the Health Professions. (3). Planning, implementation and evaluation of continuing education programs for the health professions. Review of existing continuing education models and consideration of alternative systems. H 18 577 0 1201

578. Health Services Research. (3). An examination of statistical research methods used by health professional organizations. Topics include research methods, probability, expectation, sampling distributions, hypothesis testing, analysis of variance and simple research designs. Prerequisites: upper-division statistics course or consent of instructor. H 18 578 0 1201

579. Characteristics of the Adult in Professional Education. (3). This course is designed to help professionals understand the process of accomplishing professional development throughout the lifespan of the individual. Students will explore the concept of professionalism and will study the processes of professional development, the demands of practice and the learners themselves. There will also be opportunities to apply knowledge and skills to actual real-life situations through discussions, readings and research projects. Prerequisite: HS 501 and HS 506. H 18 579 0 1201

710. Research Methods in Health Professions. (3). Examination of research methodology as related to the health professions. Topics include description, measurement, correlation, regression, and evaluation of research findings. Prerequisites: consent of instructor. H 18 710 1 1202

712. Administration of Hospital-Based Education. (3). A course examining the organization and activities relevant to quality assurance from both inside and outside the institution-roles and problems. Prerequisites: upper-division statistics course or consent of instructor. H 18 712 1 1202

714. Quality Assurance and Accreditation for Health Care Organizations. (3). Introduction to the organization and activities relevant to quality assurance from both inside and outside the institution-roles and problems. Topics include certification through alternate systems. H 18 714 0 1201

750. Workshop in Health Related Professions. (1-4). A lecture/discussion course focused on a discipline or area relevant to the health professions. Course organized as in-depth study of particular topic or concept, including didactic and current research findings and implications for clinical practice. Prerequisites: upper-division statistics course or consent of instructor. H 18 750 0 1201

800A. Seminar in Health Science. (1). Recent developments and issues affecting the financing, organization and management of health resources in the public and private sector of our nation's health care system. Prerequisite: HS 701 or departmental consent. H 18 800A 9 1201

800B. Seminar in Health Education. (1). Current trends and trends in allied health education in both the clinical and academic settings are covered. Prerequisite: HS 701 or departmental consent. H 21 800B 9 1201

810. Practicum/Project. (3). The course is designed to enhance and complement the academic experience of students pursuing the Master of Health Science degree. This learning experience provides an opportunity to link the student's academic studies with actual practice in direct observation and supervision. Prerequisites: graduate standing or departmental consent. H 18 810 2 1202

885. Thesis. (1-3). Repeatable to a maximum of six hours. Prerequisite: consent of thesis adviser. H 18 885 4 1201

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 2R, 2L means two hours of lecture and two hours of lab.
Degrees Offered

Baccalaureate

The Bachelor of Arts, Bachelor of Science and Bachelor of General Studies degrees are conferred by Fairmount College of Liberal Arts and Sciences. Each 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 field of study and a 2.000 WSU grade point average.

Bachelor of Arts degrees are offered in American studies, anthropology, art history, biological sciences, chemistry, computer science, classical languages, economics, English, French, geology, German, gerontology, history, journalism, communicative disorders and sciences, mathematics, minority studies, music, philosophy, physics, political science, psychology, social work, sociology, Spanish, speech communication, studio arts and women's studies. Bachelor degrees are being phased out beginning in 1987 in linguistics and religion; however, students in both programs will be accommodated. Both areas will be emphases within the general studies program.

The Bachelor of Science is available in administration of justice, biological sciences, chemistry, computer science, geology, mathematics and physics.

The Bachelor of General Studies is a nonmajor degree which requires breadth in distribution of course work and allows for the development of areas of concentration which may be thematically or occupationally related.

Associate

Associate degrees require completion of a minimum of 60 hours for the Associate of Arts and a minimum of 64 hours for the Associate of Science with 15 of these hours in residence. Both degrees require an overall grade point average of 2.000, a grade point of 2.000 in the major field of study and a WSU grade point average of 2.000.

Bachelor of Arts degrees are conferred in anthropology, history, political science, psychology, sociology and gerontology. The Associate of Science is being phased out in 1987 in administration of justice; however, students presently enrolled in the program will be accommodated.

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, communications (interdisciplinary), English, gerontology, history, political science, psychology, sociology and Spanish. The Master of Science (MS) may be obtained in biological sciences, chemistry, 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 Administration of Justice (MAJ) in administration of justice; the Master of Education (MED) in speech; the Master of Arts in Liberal Studies (MALIS) in interdisciplinary studies and the Master of Public Administration (MPA) in public administration.

For more information, consult The Wichita State University Graduate School Bulletin.

Policies

Admission

Students may be admitted to Fairmount College of Liberal Arts and Sciences upon successful completion of 24 semester hours with an overall grade point average of 2.000. Students must complete all basic skills courses (English 101 and 102 with grades of "C" or better; Speech 111 or 112; and Math 109, 111, 112 or 211) prior to admittance to Fairmount College.

Probation and Dismissal

Standards

Students are placed on probation whenever their cumulative or WSU grade point average falls below 2.000. Probation is removed when the overall 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 grade point average remains below 2.000. If students on probation fail to earn at least a 2.000 semester average, and if their 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 reenroll only with the permission of the college's Committee on Admissions and Exceptions.

Application for Graduation

Every student seeking a degree from the college must apply for graduation and complete a degree card at the end of the semester in which 90 credit hours have been earned. Although graduation may be several semesters away, both application and degree card must be completed at this time. Applications filed in the semester in which graduation is intended may result in a delay in actual graduation by one or more semesters. Applications and degree cards may be obtained from the college office, Room 200, Liberal Arts and Sciences.

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 prior approval. Students may have credit withheld for a course if they do not complete the required field trips.
External Credit Program

The External Credit Program applies only to courses offered by departments and programs within Fairmount College. It allows persons to earn credit for learning that has taken place outside the traditional classroom such as business or industry training programs, extensive experience in community service and volunteer work, operating a business or holding elective office.

In order to receive credit for such learning, applicants must demonstrate knowledge equivalent to that gained in regularly offered University courses to the satisfaction of faculty in the appropriate fields of study. The associate dean in charge of external credit will help decide which departments and programs within the college may give credit for nontraditional learning and representatives in those areas will determine the kind of documentation needed as evidence of this learning.

Students in the External Credit Program must be admitted to The Wichita State University and are required to pay a nonrefundable assessment fee which covers faculty assessment time. University and college equivalency examination fees will apply to all credit awarded. Applicants will be advised of these fees upon entering the program.

Cooperative Education

The 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.

Requirements for Graduation

Bachelor of Arts and Bachelor of Science

The following college requirements must be met in order for students to receive the Bachelor of Arts (BA) or the Bachelor of Science (BS) degrees from the college. Courses taken to fulfill these requirements also satisfy the University's general education distribution requirements. The requirements for the BA and BS fulfill all University graduation requirements except the following:

1. Communications—six hours of composition and three hours of oral communication (a grade of "C" or better must be earned in both Eng. 101 and 102).
2. General Education—30 hours of "Q" and "G" courses including a minimum of nine "G" hours. These courses may be used to satisfy University and college distribution requirements.
3. Upper Division—at least 40 semester hours of credit in courses numbered 300 or above.
4. Residence—at least 30 semester hours of course credit at Wichita State. At least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State.
5. D Grades—no students are allowed credit toward graduation for "D" grade work in excess of one-quarter of the total hours.

I. Humanities. Candidates for the BA degree must take 12 to 15 hours of courses in at least three of the following subdivisions. Three to six hours from the major may apply in this distribution toward the BA. Candidates for the BS degree must take nine hours in at least three of the following subdivisions. Nine hours must be "G" or "Q" courses in either degree.
   1. American Studies
   2. Literature (see Item II), English Language and Literature
   3. Foreign Language Literature
   4. History
   5. Humanities
   7. Philosophy
   8. Religion
   9. Speech Communication
   10. Women's Studies
   11. Art History (any course) and Music—Mus.-Comp. 113Q, 114, 160G, 161, 162

II. Literature. Students must complete at least three hours of literature. Foreign language literature courses taken after completion of the foreign language requirement (if any) may be used to meet the literature requirement and to count for humanities hours.

III. History—Political Science. Students must demonstrate proficiency in the field of the American political system and institutions either by passing Hist. 131Q or 132Q or Pol. Sci. 121Q or by passing an examination offered each semester by the history and political science departments.

IV. Social and Behavioral Sciences. Candidates for the BA degree must take 12 to 15 hours of courses in at least three of the following subdivisions. Six hours from the major may be included.

   1. Administration of Justice
   2. Anthropology
   3. Economics—Econ. 200G, 201Q, 202 and all upper-division courses
   4. Geography—all courses except Geog. 201 and 235
   5. Gerontology
   6. Journalism
   7. Minority Studies
   8. Political Science
   9. Psychology
   10. Sociology/Social Work

† A total of 27 hours must be taken in the humanities and social sciences by candidates for the BA degree.

† A total of 18 hours must be taken in the humanities and social sciences by candidates for the BS degree.

V. Natural Sciences. Each student must take 12 semester hours including four hours in a laboratory science. Each student must take at least one course in each of the physical and biological sciences divisions listed below or students who have taken two units of high school laboratory science (exclusive of general science) must take at least nine hours, including four hours in a laboratory science and one course in each of the physical and biological sciences divisions as listed below. Six hours in mathematics or natural sciences must be in "G" or "Q" courses.

   1. Physical Sciences. Chem. 101Q, 3 hours; 103Q, 5 hours; 111Q, 5 hours; 112Q, 5 hours; and all other courses except Chem. 201.
   2. Biological Sciences. 105Q, 4 hours; 109Q, 4 hours; 203Q, 5 hours; 204, 5 hours; 370Q, 3 hours; 503G, 4 hours; 518Q, 3 hours.
   3. Geol. 101Q, 3 hours; 110Q, 4 hours;
   4. Geol. 300Q, 3 hours; 302Q, 3 hours; 312, 3 hours.
   5. Phys. 111Q, 4 hours; 195Q, 3 hours; or with 196, 4 hours; 198, 3 hours; 213Q, 5 hours; 214Q, 5 hours; 313Q, 3 hours; 314, 4 hours; 315Q, 1 hour; 316Q, 1 hour.
   6. Psych. 111Q, 4 hours; 195Q, 3 hours; or with 196, 4 hours; 198, 3 hours; 213Q, 5 hours; 214Q, 5 hours; 313Q, 3 hours; 314, 4 hours; 315Q, 1 hour; 316Q, 1 hour.
   7. Biological Sciences. 105Q, 4 hours; 120Q, 4 hours; 203Q, 5 hours; 204, 5 hours; 370Q, 3 hours; 503G, 4 hours; 518Q, 3 hours.
   8. Geol. 101Q, 3 hours; 110Q, 4 hours; 203Q, 5 hours; 204, 5 hours; 370Q, 3 hours; 503G, 4 hours; 518Q, 3 hours.

VI. Mathematics. Students must demonstrate proficiency by passing Math. 109, 111, 112 or 211, or by passing an examination of equivalent mathematical skills. Six hours in mathematics or natural sciences must be in "G" or "Q" courses.
VII. Foreign Languages. Candidates for any BA degree and for the BS degree in administration of justice 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.

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.

Candidates for the BS within the division of natural sciences and mathematics* have no foreign language requirement unless it is required by the department. In that case, the foreign language required does not count in the humanities section of the general education distribution requirements.

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.

Candidates for the BS within the division of natural sciences and mathematics have no foreign language requirement unless it is required by the department. In that case, the foreign language required does not count in the humanities section of the general education distribution requirements.

VIII. 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 can be used to satisfy college distribution requirements.

3. General Studies courses may not be used as hours in the major unless approved by the department.

4. At least 12 upper-division hours are required in the major.

5. No more than 45 hours in the major can be used for graduation with a BA degree and no more than 50 hours in the major can 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 combined major, consisting of 24 hours from one field of study and 12 hours from an allied field of study, may be designed under the advisement of the major departments and Fairmount College of Liberal Arts and Sciences.

X. Field Major. Field majors in biochemistry, chemistry/business, classical studies, gerontology, international studies, Latin American studies, urban affairs and women's 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 adviser in the major area of study and the dean's office of Fairmount College of Liberal Arts and Sciences.

XI. Minor. Minors are offered in geography, Italian and all fields of study in which a major may be earned. Minors acceptable from outside the college are education (those courses necessary for certification), accounting and business administration. The number of hours required for a minor is set by each department.

XII. Nonliberal Arts and Sciences Courses. Students may count only 24 hours of nonliberal arts and sciences courses toward either the Bachelor of Arts or Bachelor of Science 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.

Bachelor of General Studies
The Bachelor of General Studies degree allows students who wish to design their own programs of study greater freedom by reducing some of the requirements of the other bachelor's degrees for the purpose of allowing the student to develop areas of concentration which may cross departmental, or even college, lines. The Bachelor of General Studies degree allows the student to become a generalist and may allow preprofessional or nontraditional career students greater flexibility in planning for their unique future.

Students planning to receive the Bachelor of General Studies degree will declare their intention at least 30 hours before the degree is granted. (See Application for Graduation statement in the general college information section.) At this point a plan of study including the area of concentration will be developed with the assistance of the Bachelor of General Studies advisor in the primary department of interest (see Area of Concentration below). 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.

The requirements of the degree include the following:

1. Communications—six hours of composition and three hours of oral communication (a grade of "C" or better must be earned in both Eng. 101 and 102).

2. General Education—30 hours of "G" and "Q" courses including a minimum of 9 "G" hours. These courses may be used to satisfy University and college distribution requirements.

3. Upper Division—at least 40 semester hours of credit in courses numbered 300 or above.

4. Residence—at least 30 semester hours of credit at Wichita State. At least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State.

5. D Grades—no students are allowed credit toward graduation for D grade work in excess of one-quarter of the total hours.

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. The distribution of course work must occur in the following three divisions:

A. Humanities (minimum of 12 hours within three departments with nine "G" or "Q" hours): 1. American Studies
2. English Language and Literature (no specific requirement)
3. Foreign Languages (no specific requirement)
4. History (no specific requirement)
Areas of concentration encompass a logical combination of courses to provide initial occupational expertise in selected areas or to help students fulfill personal, social or cultural objectives. Candidates must complete at least 15 hours in one area of concentration.

**Associate of Arts in Humanities**
The associate degree in humanities requires 60 semester hours including the following requirements:

1. **General Education (30 semester hours)**
   1. English composition—six hours
   2. Oral communication—three hours
   3. Social sciences—six hours
   4. Natural sciences and mathematics—six hours
   5. Humanities—six hours
   6. Electives—three hours

2. **Area of Concentration (15-20 semester hours)**
   At least 15 to 20 semester hours of course work must be taken from the following general areas with at least three courses from one discipline:
   - American Studies
   - Art
   - English
   - History
   - Modern Languages
   - Music
   - Philosophy
   - Religion
   - Speech Communication
   - Women’s Studies

3. **General Electives (10-15 semester hours)**
   Students must select at least ten to 15 hours of elective courses in consultation with their academic adviser to support the overall objectives of the degree program.

**Associate of Arts in Natural Sciences and Mathematics**
The associate degree in natural sciences and mathematics requires 60 semester hours, including the following requirements:

1. **General Education (30 semester hours)**
   1. English composition—six hours
   2. Oral communication—three hours
   3. Social sciences—six hours
   4. Natural sciences and mathematics—six hours
   5. Humanities—six hours
   6. Electives—three hours

2. **Area of Concentration (15-20 semester hours)**
   At least 15 to 20 semester hours of course work must be taken from the following general areas with at least three courses from one discipline:
   - Biochemistry
   - Biological Sciences
   - Chemistry
   - Computer Science
   - Geology
   - Mathematics
   - Physics
   - Statistics

3. **General Electives (10-15 semester hours)**
   Students must select at least ten to 15 hours of elective courses in consultation with their academic adviser to support the overall objectives of the degree program.

**Associate of Arts in Gerontology**
The associate degree in gerontology is offered through the gerontology program as described in the gerontology section of the Catalog.

**Associate of Science in Administration of Justice**
The Associate of Science offered through the Department ofAdministra-
tion of Justice is being phased out beginning in 1987. Students enrolled in the program will be accommodated. The program is described in the administration of justice section in the Catalog.

Special Programs of Study
Fairmount College of Liberal Arts and Sciences provides basic courses for certain professional fields and for subsequent professional studies. Liberal arts studies are vital in establishing background resources for such areas.

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 adviser 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 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 adviser in developing an appropriate field major or may use one of the predesigned field majors indicated below:

Biochemistry. Biochemistry is a relatively young but 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. Required courses are Biol. 203Q, 204, 416 and 584; Chem. 123Q, 124Q, 531, 532, 662, 663, 664 and 665; Phys. 213Q and 214Q; and Math. 112 or 111 and 123. Also required are the following courses which are cross-listed in the departments of biological sciences and chemistry: 360, 666 and 669 (two enrollments). Students must meet the BS graduation requirements in the college.

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, including six hours selected from Greek or Roman history (Hist. 559Q, 560, 562, 563, 734) and six hours selected from art history (Art Hist. 221Q, 222, 520). Also required are Phil. 349, 531, 585 or 650 (ancient topic). Eng. 270, 545 or 550, and one of the following: Art Hist. 123Q or 322, Greek 350, Hist. 101Q or Rel. 442. In addition, Latin 210 or Latin or Greek 224 or one Latin or Greek course beyond 224 (except Greek 350) must be completed. The remainder of the 36 hours 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.

Gerontology. See gerontology section for a complete description.

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 Professor John Dreifort (history); those interested in Option B should contact Professor Dharmna de Silva (management) or Professor Dreifort.

Public Administration. See public administration section for a complete description.

Women's Studies. See women's studies for a complete description.

Art History
The art history program is designed to prepare students for the whole range of activities related to the art of the past: criticism, college-level and secondary-level teaching and conservation. Requirements and curriculum for a major or minor in art history in Fairmount College of Liberal Arts and Sciences are listed in the College of Fine Arts, Division of Art, section of the Catalog.

Studio Arts
Requirements and curriculum for a major or minor in studio arts in Fairmount College of Liberal Arts and Sciences are listed in the College of Fine Arts, Division of Art, section of the Catalog.

Communicative Disorders and Sciences (Logopedics)
Requirements and curriculum for a major or minor in communicative disorders and sciences in Fairmount College of Liberal Arts and Sciences are listed in the College of Education section of the Catalog.

Music
Requirements and curriculum for a major or minor in music in Fairmount College of Liberal Arts and Sciences are listed in the College of Fine Arts, Division of Music, section of the Catalog.

Special Preprofessional Programs
Advisers 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 field of major study.

Prelaw advisers may be contacted through the college office in Room 200 of the Liberal Arts and Sciences building where students can find information about entrance requirements for law school so that undergraduate programs may be appropriately arranged.

Premedical, Predental, Preveterinary, Prepharmacy, Preoptometry, Prepodiatry, Prechiropractic
Medical schools encourage students to obtain a broad education in addition to
the prerequisite studies in the sciences. Preparation for the study of medicine should include courses that develop disciplined thinking, intelligent appreciation of values and sympathetic understanding of society and human interaction. Since the study of medicine is associated with scientific knowledge and techniques, courses in biological sciences, chemistry, physics and allied fields are required. Students may choose to major in one of these fields or they may select any other major in preparation for the study of medicine.

The completion of a bachelor's degree is a general admissions requirement for the majority of medical schools. A few medical schools grant admission on the basis of a three-year program of studies. Wichita State students on the three-year program may be granted the BA by Wichita State if they have taken 94 hours of preparation (the last 30 must be taken at Wichita State) within the required fields of study; earned 188 credit points with no more than 20 hours of D grade work; passed the first year of medical or dental school (for 30 hours); and qualified for admission to the second year. Candidates must apply for the degree.

Dental schools require prescribed preparation in the sciences as well as a broad education. Entrance requirements are generally similar, but students should give careful attention to the pattern in each school of their choice. Emphasis on the sciences is recommended. The counselor for preclinical studies in Fairmount College of Liberal Arts and Sciences can provide a specific program of course work for either the three-year or four-year program. The preparation for the study of veterinary medicine generally includes a minimum of 71 hours and an emphasis on science courses. The counselor for preclinical medicine in Fairmount College of Liberal Arts and Sciences can provide a specific program of course work.

Schedules also may be arranged to meet entrance requirements of the various schools of optometry, osteopathy, pharmacy, podiatry, chiropractic, mortuary science and related professional fields. The office of the preclinical professions counselor is in Room 200 of the Liberal Arts and Sciences building.

Pretheological
Students interested in pursuing gradu-

ate theological work should consult with the religion department chairperson for specific requirements set forth by specific seminaries.

Teaching
Students in Fairmount College of Liberal Arts and Sciences may qualify for secondary teaching certificates in Kansas and additional states. Those who plan to qualify for the standard secondary teaching certificate must complete the program outlined in the College of Education section of the Catalog.

Administration of Justice
In addition to the campus program, the Department of Administration of Justice offers a program at Emporia State University.

The Department of Administration of Justice offers two degree programs: (1) Bachelor of Science and (2) Master of Administration of Justice. A third program, the Associate of Science degree, is being phased out beginning in 1987 but students presently enrolled will be accommodated. These degree programs are designed to provide preservice and inservice students with a broad educational background in all aspects of the administration of justice field. Within the Bachelor of Science and Master of Administration of Justice degree programs, the student may select among several established areas of specialization.

The Associate of Science and Bachelor of Science degree programs are described below. Students interested in the requirements for the Master of Administration of Justice degree should consult the WSU Graduate School Bulletin.

Bachelor of Science—Major and Minor
Major. The major in administration of justice consists of at least 33 hours (but not more than 50 hours) includingAJ 100Q, 201, 220Q, 403, 512 and 521; 12 hours in one of the following areas of specialization; and a minimum of three with a maximum of 20 additional elective hours in administration of justice (except in the general administration of justice track, where a minimum of 15 hours of electives are required).

I. Law Enforcement (12 hours). This area involves a study of the law enforcement role in society and the methods used by law enforcement agencies to achieve criminal justice goals. Course work in this area includes a minimum of 12 semester hours selected from the following courses: AJ 143, 320, 340, 343, 344, 606, 610Q and 422 (or 481).

II. Courts (12 hours). This area concerns the "adversary process" of the criminal justice system. Course work includes a minimum of 12 hours to be selected from the following courses: AJ 320, 520, 533, 606, 610Q, 641 and 422 (or 481).

III. Corrections Services (12 hours). This area involves rehabilitative case-work and supervision of offenders in both correctional institutions and the community. Course work in this area to be selected from the following courses: AJ 533, 560, 606, 641, 653, 655, 660 and 422 (or 481).

IV. Criminal Justice Administration (12 hours). This area concerns the management of various criminal justice agencies. Course work in this area to be selected from the following courses: AJ 533, 560, 606, 641, 653, 655, 660 and 422 (or 481).

V. Security Services (12 hours). This area involves provision of security services and training of personnel to law enforcement agencies. Course work in this area is to be selected from the following courses: AJ 320, 340, 343, 344, 345, 643, 646 and 422 (or 481).

VI. General Administration of Justice (15 hours). This area offers an overview of the administration of justice. Course work is defined as junior-and senior-level course work up to 50 additional hours in administration of justice (except in the general administration of justice track, where a minimum of 15 hours of electives are required).
minimum of 24 hours of supportive course work in one or more of the following areas: sociology, social work, psychology, minority studies, American studies, political science, anthropology, chemistry, biological sciences, geology or physics. With their adviser's assistance and approval; students may select courses from these areas that best relate to their particular administration of justice specialty area. (Note: These courses may be chosen to satisfy certain sections of The Wronton State University general education requirements as well as the administration of justice requirements.)

Certificate of Emphasis in Cross-Cultural Communications to Administration of Justice. The emphasis in cross-cultural communications in administration of justice is designed to provide learning experiences that will prepare practitioners to bring about 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 and a variety of minority groups.

All students majoring in administration of justice (including all fields of specialization) may opt to obtain the Certificate of Emphasis in Cross-Cultural Communications for Administration of Justice in addition to the administration of justice major. Those students seeking this certificate must satisfactorily complete Min. Stud. 210 and one of the following: Min. Stud. 331, 332, 333 or 234. Also, students must take 12 additional hours in minority studies course work, nine of which must be in upper-division courses.

Minor. The minor consists of at least 18 hours of administration of justice courses, including AJ 100 and four upper-division courses.

Associate of Science

The Associate of Science degree in administration of justice is awarded to students who complete the 64-hour, two-year program. Although it is being phased out, students presently enrolled will be accommodated. The requirements for the degree are summarized below:

I. General Education Course Requirements (30 hours)

- Eng. 101, College English I, 3 hours
- Eng. 102, College English II, 3 hours

II. Professional Curriculum (12 hours)

- AJ 100Q, Introduction to Administration of Justice, 3 hours
- AJ 143, Police in the Community, 3 hours
- AJ 201, Agency Administration I, 3 hours
- AJ 220Q, Criminal Law, 3 hours
- III. Elective Hours (22 hours)

Lower-Division Courses

AJ 100Q or departmental consent is prerequisite for all administration of justice courses unless otherwise noted.

100Q. Introduction to the Administration of Justice. (3). An introduction to the philosophy and history of law enforcement, identifying multiple facets of the administration of justice, system, including the police, the courts, correctional agencies and the offender. The administration of justice role is studied as it relates to the individual and to society. Through visitation and contact with administration of justice agencies, the student is acquainted with the responsibilities and problems of personal development for an administration of justice career. A 29 1000 0 2105

143. Police in the Community. (3). Rights and duties of citizens, constitutional provisions affecting law enforcement officers, emphasizing due process, search and seizure and informant identity are explored. Interview and interrogation techniques and procedures used in all phases of contact within the community structure are examined. A 29 143 0 2105

201. Agency Administration I. (3). A survey of management models, administrative techniques and patterns of organizational structure characteristic of fire service agencies. A 29 201 0 2105

202. Fire Services Administration I. (3). A survey of management models, administrative techniques and patterns of organizational structure characteristic of fire service agencies. A 29 201 0 2105

2200. Criminal Law. (3). History, scope and nature of law; parties to crime, classification of offenses; acts and intent; capacity to commit crime and defenses. Elements of major criminal statutes and an overview of criminal processes and rules of evidence are examined. A 29 2200 0 2105

Upper-Division Courses

3030. Contemporary Issues in Criminal Justice. (3). An analysis of criminal justice in a changing society. Topics are explored that are most relevant to contemporary issues and trends in law enforcement, courts and corrections. A 29 3030 9 2105

320. Criminal Procedure. (3). Criminal procedure in the administration of justice system, including rights of accused, initiation of prosecution, rules of arrest, search and seizure, and the exclusionary rule. A 29 320 0 2105

340. Investigative Technology. (3). Departmental fees. An analysis of technology and systems utilized in both criminal and traffic investigation using crime scene investigating procedures, various methods of personal identification, investigative photography and traffic accident and safety investigative systems. Emphasis is placed on field research and evidentiary aspects of investigative technology. A 29 340 1 2105

343. Special Investigation. (3). Care, collection and preservation of evidence. Sources of information and locating subjects, crime scene recording and investigative techniques applicable to specific offenses are studied. A 29 343 1 2105

344. Criminalistics and Scientific Crime Detection. (3). Departmental fee. Scientific aids available to law enforcement officers, including forensic chemistry, physics and microanalysis. Investigative procedures from crime scene through court presentation are studied. A 29 344 1 2105

345. Investigative Photography. (3). Departmental fee. Basic photography theory and practice as applied to criminal investigation and criminalistics. Students take develop photos, develop negatives, develop prints, present evidence and take photos in actual cases. A 29 345 1 2105

370. Analysis of Security Administration. (3). A course of study for interested students and practitioners of security management. The theories and philosophy of security, personal security measures and crime prevention policies of business, security firms, military services and government agencies are discussed. Open to all interested students in any major field of study. A 29 370 0 2105

3820. Women in the Administration of Justice. (3). Cross-listed as WS 3820. A course designed to examine the role of women within the criminal justice system. It is approached from two perspectives: (1) those employed by the criminal justice system; (2) those women incarcerated by the criminal justice system. Emphasis is placed on personal experiences unique to women in the history of law enforcement and corrections. A 29 3820 0 2105

403. Senior Seminar. (3). An intensive study of the theory and operation of the total criminal justice system. Required of all administration of justice majors. Prerequisite: senior standing and departmental consent. A 29 403 0 2105

421. Individual Directed Study. (1-3). Study in a specialized area of the administration of justice system with emphasis on the student's research project. Repeatable for credit not to exceed a total of six hours. Prerequisites: 15 hours in the administration of justice core and departmental consent. A 29 421 3 2105

422. Internship. (3). Supervised field placement with a governmental or private law enforcement, court, correctional, juvenile justice, forensic science or security agency. The internship is designed to provide a learning experience in which the student can integrate and apply knowledge and skills gained from the administration of justice curriculum. Interns are required to work 36 hours for three hours credit; there is a maximum of six hours

Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communications, 3 hours

Humanities, 6-9 hours

Social sciences, 6-9 hours

Science or mathematics (including one laboratory course), 6-9 hours

Upper-Division Courses

3030. Contemporary Issues in Criminal Justice. (3). An analysis of criminal justice in a changing society. Topics are explored that are most relevant to contemporary issues and trends in law enforcement, courts and corrections. A 29 3030 9 2105

320. Criminal Procedure. (3). Criminal procedure in the administration of justice system, including rights of accused, initiation of prosecution, rules of arrest, search and seizure, and the exclusionary rule. A 29 320 0 2105

340. Investigative Technology. (3). Departmental fees. An analysis of technology and systems utilized in both criminal and traffic investigation using crime scene investigating procedures, various methods of personal identification, investigative photography and traffic accident and safety investigative systems. Emphasis is placed on field research and evidentiary aspects of investigative technology. A 29 340 1 2105

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3820. Women in the Administration of Justice. (3). Cross-listed as WS 3820. A course designed to examine the role of women within the criminal justice system. It is approached from two perspectives: (1) those employed by the criminal justice system; (2) those women incarcerated by the criminal justice system. Emphasis is placed on personal experiences unique to women in the history of law enforcement and corrections. A 29 3820 0 2105

403. Senior Seminar. (3). An intensive study of the theory and operation of the total criminal justice system. Required of all administration of justice majors. Prerequisite: senior standing and departmental consent. A 29 403 0 2105

421. Individual Directed Study. (1-3). Study in a specialized area of the administration of justice system with emphasis on the student's research project. Repeatable for credit not to exceed a total of six hours. Prerequisites: 15 hours in the administration of justice core and departmental consent. A 29 421 3 2105

422. Internship. (3). Supervised field placement with a governmental or private law enforcement, court, correctional, juvenile justice, forensic science or security agency. The internship is designed to provide a learning experience in which the student can integrate and apply knowledge and skills gained from the administration of justice curriculum. Interns are required to work 36 hours for three hours credit; there is a maximum of six hours
credit. Prerequisites: 15 hours in administration of justice, junior or senior standing, consent of the criminal justice agency and internship coordinator's consent. A 29 422 3 2105

445. Special Topics. (3-6). Group project and inquiry through the student investigation under faculty supervision of administration of justice topics, including law enforcement, corrections and the judicial process. Repeatable for credit, not to exceed a total of six hours. A 29 445 3 2105

481. Cooperative Education. (1-6). This course offers the student the opportunity for 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 departmental Cooperative Education Coordinator. Prerequisites: administration of justice major, 15 hours in administration of justice courses, junior or senior standing, consent of the criminal justice agency. Offered Cr/NoR only. A 29 481 3 2105

Courses for Graduate/Undergraduate Credit

501. Agency Administration II. (3). An intensive examination of a variety of emerging administrative and management innovative concepts and processes related to the determination and implementation of management philosophy for the administration of justice agency and its individual practitioners are reviewed. A 29 501 3 2105

510. ADP in Administration of Justice. (3). A survey of use and potential of automated data processing in police, courts and correctional agencies. The ethical and legal problems confronting society and agencies of the justice system occasioned by the use of computers as information-gathering and storage instruments are examined, as well as the advantages of using ADP in basic and applied research in the administration of justice. A 29 510 1 2105

512. Research Methods. (3). An introduction to statistical methods including experimental design, the analysis of statistical processes and related procedures. A study is made of the general methodology of research as it pertains to the administration of justice. A 29 512 2 2105

520. Criminal Evidence. (3). Concepts of criminal evidence rules as they pertain to the kinds and degrees of evidence—procedures for admitting or excluding evidence; witness and privileged communications; hearsay; burden of proof and presumptions. Emphasis is placed on the rules of evidence that govern the administration of justice process. A 29 520 3 2105

521. Law and the Administration of Justice Process. (3). Examination of recent judicial interpretations of legal rules and procedures related to the rules of evidence, substantive law and administrative law. An in-depth study of statutory provisions is made with emphasis on the conflict of laws and legal trends affecting the administration of justice personnel. A 29 521 2 2105

533. Juvenile Justice. (3). An analysis of decision-making processes in juvenile justice, the content of juvenile law and Supreme Court decisions affecting juvenile justice, as well as specific select problems in the administration of juvenile justice. A 29 533 3 2105

560. Community Prevention Programs. (3). An analysis of typologies, philosophies and techniques of crime prevention and protecting community-based crime prevention programs. Emphasis is placed on a variety of governmental and nongovernmental community support and action programs, which, although not traditionally identified as such, appropriately contribute to the administration of justice process. Program categories to be analyzed include citizen involvement (volun­ teer, civic, lay and other groups) and educational, religious and family welfare and youth services. A 29 560 2 2105

570. Security Staff Supervision. (3). Assessment of qualities of human beings in different systems under different headings. Analysis using actual cases and appraisals of the concept of loyalty, security and suitability of personnel in governmental or private agencies. Prerequisite: AJ 370 or departmental consent. A 29 570 2 2105

572. Security Technology. (3). Physical security hazards, threats, sabotage and pilferage problems as they affect the governmental, nongovernmental and private sectors. Technical actions taken by security officers to counter them. Emphasis is on research in the development of security technology hardware and software. Prerequisite: AJ 370 or instructor's consent. A 29 572 2 2105

580. Forensic Anthropology. (3). Cross­ cultural examination of skeletal evidence. This course encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition and skeletal system. It covers the process of collection, preservation, marking, transportation, referral, laboratory analysis, classification and identification with an emphasis in anthropological interpretation. A 29 680 0 2202

566. Conflict Resolution in the Administration of Justice. (3). An analysis of community and government roles in the administration of justice, and related legal and policy issues. Emphasis is placed on the role of the mediator between offenders and victims of crime and between other groups and individuals in conflict. A 29 580 3 2105

610. The Victim in the Administration of Justice. (3). An examination of the relationship of 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. A 29 610 0 2202

633. Planning in the Administration of Justice. (3). Analysis of planning techniques related to the procedures, personnel, facilities, and specialized equipment, budget and extra-agency activities. Prerequisite: AJ 201 or departmental consent. A 29 633 3 2105

585. Public and Community Relations. (3). Analysis of techniques with emphasis on the role of public and community relations programs that are designed to optimize the agency's public relations capability. Special emphasis is placed on the unique characteristics of both public and community relations. A 29 636 3 2105

599. Techniques of Agency Staff Supervision (3). Analysis of personnel supervision, training, and evaluation techniques utilized by administration of justice agencies with emphasis on techniques that optimize the agency-practitioner work relationship. Prerequisite: AJ 201. A 29 639 2 2105

641. Forensic Psychiatry. (3). Analysis of the role of psychiatry in the administration of justice process. Emphasis is placed on introducing the student to concepts and procedures of forensic psychiatry. A 29 641 2 2105

643. Forensic Science. (3). Analysis of the medical role of prevention, detection and treatment as related to the administration of justice process. Emphasis is placed on the role of specialized areas, such as pathology and psychiatry, which have significant effect on segments of the administration of justice process. A 29 643 3 2105

646. Seminar on Investigation Theory and Practice. (3). Analysis and discussion of investigative theory and practice with special emphasis on technological innovation and current judicial perspective. Prerequisites: AJ 343 and 344. A 29 646 3 2105

652. Field Corrections Techniques. (3). Analysis of the techniques of probation, parole, after-care supervision and related services. Special emphasis is placed on field corrections techniques as they relate to other segments of the administration of justice system. A 29 652 1 2105

566. Institutional Corrections Techniques. (3). Analysis of the techniques of institutional correctional practice, including diagnosing deterrents, treatment, education, and other related treatment models. Special emphasis is placed on institutional corrections techniques as they relate to other segments of the administration of justice system. A 29 656 1 2105

599. Techniques of Prevention Program Development. (3). An analysis of the techniques utilized to organize and develop traditional and projected crime prevention and related governmental and nongovernmental sponsored programs. Special emphasis is placed on the techniques of identifying exist­ ing community services resources and subsequently increasing their level of involvement in the administration of justice process. Prerequisite: AJ 201 or departmental consent. A 29 670 0 2105

670. Seminar—Security, Theory and Practice. (3). An advanced seminar that emphasizes the relationships between theories underlying contemporary security practice. Special emphasis is placed on the application of institutional theory that supports institutional corrections. Prerequisite: AJ 370 or departmental consent. A 29 670 2 2105

680Q. Administration of Justice: Transna­ tional and Comparative Perspectives. (3). Primarily designed for students interested in international, comparative and community perspectives and crime prevention strategies employed by different societies throughout the world. The role of the United Nations' Treatments of Offenders and Crime Prevention is incorporated. A 29 680Q 0 2105

750. Workshops in Administration of Justice. (3). Prerequisite: AJ 1000 or instructor's consent. A 29 750 2 2105

781. Cooperative Education. (1-6). This course provides the student with a paid field experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by the departmental Cooperative Education Coordinator. Prerequisites: administration of justice major, 15 hours in administration of justice courses, junior or senior standing consent of the criminal justice agency. Offered Cr/NoR only. A 29 481 3 2105
placement that integrates theory with a planned and supervised professional experience designed to enhance the student's academic program. Students will work with a faculty member in the formulation and completion of an academic project related to the field experience. The cooperative education experience must be an integral part of the student's graduate program. Individualized programs must be formulated in consultation with and approved by the respective departmental coordinator. Open only to AJ graduate students. Offered Cr/NCr only. A 29 781 3 2105

Courses for Graduate Students Only

800. General Seminar on the Administration of Justice. (3). An overview and integration of major propositions, concepts, assumptions, history and methods from the various fields of administration of justice, including law enforcement, the courts, corrections and legislative control. The possible contribution of other community agencies is also explored. A 29 800 0 2105

601. Judicial Process and the Administration of Justice. (3). The review and discussion of local, state, and federal criminal statutes and court decisions as they apply to the administration of justice process. A 29 801 0 2105

802. Advanced Field Corrections Methods. (3). An in-depth analysis of the methods of field corrections including parole, probation and after-care supervision. Particular attention is given to the relationship that field corrections has to the larger administration of justice system. A 29 802 0 2105

803. Advanced Institutional Corrections Methods. (3). A course analyzing basic methods utilized in the organization and accomplishment of objectives in correctional institutions. Along with the more traditional correctional institutions, the seminar reviews methods utilized in diagnostic centers, halfway houses, and other treatment models. A 29 803 0 2105


805. Seminar on Principles of Evidence and Proof. (3). An in-depth examination of different types of legal proof that are presented at court trials. Included in the examination are the mediums of witnesses, records, documents, concrete objects, etc. A 29 805 9 2105

806. Seminar on Agency Administration. (3). A comparative survey and analysis of administrative management systems and procedures, organizations and functions of effective agency organization. Administrative skills related to operations and personnel both within and outside the agencies are considered. A 29 806 0 2105

811. Research Methods for the Administration of Justice. (3). A study of selection and formation of research problems; the study of design in the research project, including hypotheses and scale construction and sampling procedures; and a review of methods and the nature of the research process, analysis and interpretation. Prerequisite: AJ 512 or equivalent. A 29 811 0 2105

812. Seminar on the Application of Criminological Theory. (3). An in-depth analysis of the major theories of criminology and of their implications to the administration of the justice process. Emphasis is placed on the integration of a consistent, valid and individual frame of reference being developed by the student. A 29 812 9 2105

814. Seminar on Critical Issues in Criminal Justice. (3). An overview of recent and emerging issues in the criminal justice system. Examples include the role of police, courts, and corrections and police-community relations. Emphasis will be placed on the impact on the criminal justice system. A 29 814 9 2105

821. Seminar in Criminalistics. (3). Departmental fee. Review and discussion concerning techniques and ethics involved in the application of the physical sciences, including chemistry, biological sciences, mathematics and physical anthropology, to the investigation of crime. A 29 821 9 2105

822. Automated Data Processing in the Administration of Justice. (3). An advanced seminar concerning the methods, purposes, possibilities and problems encountered in the establishment and utilization of automated information and computerized data-processing. Special attention is given to the implications that automated information systems have upon police-public relationships. A 29 822 9 2105

823. Forensic Science Seminar. (3). The extensive examination of the wide field of issues in which medicine comes into relation with the law. It involves certification of the dead, the study of violent and unnatural deaths, scientific criminal investigation, drug detection, the duty of the medical examiner, procedures in courts of law and consideration of medical ethics or proper standards. A 29 823 9 2105

824. Seminar on Administration of Justice Education and Training. (3). Analysis of the specialized methods and techniques and technological innovations utilized in the administration of justice educational and training process. A 29 824 9 2105

827. Seminar on Environmental Protection. (3). An in-depth analysis of emerging federal, state and local legislation; administrative policies; and administrative policy as related to environmental protection. The roles of the administration of justice agencies and a variety of governmental and nongovernmental policies are examined as they relate to prevention investigation and enforcement aspects of environmental protection. Special emphasis is placed upon the contribution administration of justice agencies can make toward development and implementation of effective environmental public education and assistance programs. A 29 827 9 2105

832. Seminar on Agency-Community Relations. (3). An in-depth analysis of the role of the administrative agency in relation to community decide on and selected public officials in existing community problems. Special emphasis is placed upon a multiplicity of approaches for developing new and redefining existing lines of communication between the agency and its community. A 29 832 9 2105

American Studies

American Studies is an interdisciplinary approach to American culture which seeks to see the national experience as a whole rather than from a single perspective. The program involves students in an examination of American culture and society—its character and values, its intellect and behavior. It studies its institutions, geographical and physical regions, myths and stereotypes, everyday life, literature, films, music, art, mass media and material culture. A collaboration of scholars working in different academic disciplines, American studies is not so much a subject as an outlook—a broad, open-minded perspective upon the nation's past, present and future. The American experience can be best understood when students pursue the American character across academic disciplines and gather insights from each of them. The result will be an awareness of the multiplicity of forces that molds American culture. "Americans" deal with the complex and often contradictory patterns of civilization and society and are prepared for a variety of careers in the arts, business, education and government, as well as for graduate and professional training.

The student should plan an individualized program of study with a departmental adviser after completing nine hours of course work in American studies. A senior paper in AS 699 is required. While suggested for all students, AS 210G does not count toward the major. American studies students are encouraged to fulfill University general studies requirements from courses which include the following: Econ. 101G,

Major. The American studies major consists of 36 hours distributed as follows:

I. 24 hours of American studies courses from these areas—AS 100 (3 hours); 3 hours from AS 110, 160Q, 210, 213 or 275Q; 3 hours from AS 315, 350, 400 or 450; 3 hours from AS 499A, 499B, 499C or 499D; 3 hours from AS 512, 521, 522 or 540; and 4 hours from AS 601, 602, 698 or 699

II. 6 hours in American studies electives from any area

III. 6 hours from at least 2 of the following 3 groups:


Social Sciences. Poli. Sci. 121Q, 216, 315, 316, 318, 319, 358Q, 540; Anthro, 511, 540, 533; Min. Stud. 100, 240Q, 260; Soc. 220Q, 226, 315Q, 316, 3380

Others. Art Hist. 524, 528; Econ. 201; Educ. 234; Geog. 520; Music 162; Phys. Ed. 112, 302

Minor. A minor in Fairmount College of Liberal Arts and Sciences consists of 15 hours, including Amer. Stud. 100 plus at least six other upper-division hours.

Lower-Division Courses

100. Introduction to American Studies. (3). The course 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 are invited to apply the techniques of interdisciplinary research to their own experience. Research approaches studied include quantitative analysis, semiotics, structuralism, literary formula theory and others: Film, popular literature, ethnic and sex roles, cultural myths, television, fashion, sports and advertising are among the topics discussed. A 11 100 0313

110. Business History of the United States. (3). Cross-listed as Econ. 110. A 11 110 0313

150. Workshop in American Studies. (1-3). A course designed to provide specialized instruction using a variable format in an area of American studies' relevant subject. A 11 150 0313

160Q. Introduction to Entrepreneurship. (3). An introductory course that is 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 will be given to the elementary concepts of planning, financing, starting and managing a new business. A 11 160Q 0 0313

201G. The American Hero. (3). Defines historical, cultural and environmental conditions that fostered the image of many of America's folk heroes. Representative heroes from colonial times to the present are examined to see how they symbolize the American character. A 11 201G 0 0313

210Q. Crime in America. (3). A study of crime in America from colonial times to the present. Topics explored are the evolution of crime, crime as depicted in literature, crime as depicted in popular entertainment and popular attitudes toward crime and criminals. A 11 210Q 0 0313

213. American Popular Culture. (3). Cross-listed as Hist. 213. A 11 213 0 0313

275Q. Studies in Popular Literature. (3). Cross-listed as Eng. 275Q. A course devoted to study of various forms of popular literature (e.g., popular entertainment and various forms of popular literature). A 11 275Q 0 0313

281. Cooperative Education in American Studies. (1-15). The course may be designed around any American studies course and will be offered through a Cooperative Education program. Offered Cr/NC only. A 11 281 0 0313

Upper-Division Courses

315. Special Topics in American Studies. (1-3). An analysis of special topics in American studies. Repeatable for credit. A 11 315 0313

342. American Folklore. (3). Cross-listed as Eng. 342. A survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folk music, customs and crafts with some ethnic varieties; the unwritten materials of popular culture. A 11 342 0 0313

350Q. American Sports Culture. (3). American sports reflect and influence our values, cultural institutions and society. The relationship between media and sports: the "business" of intercollegiate athletics, the evolution of American sports and women's participation in sports and other topics will concern students to understand the impact of sports that has upon our American culture. A 11 350Q 0 0313

400. Success in America. (3). The examination of success in America and how it has evolved through three centuries of definition and change. How success has changed and the causes and different values (money, fame, happiness and others) associated with success will be examined in a variety of literary, biographical, historical and ethnic sources. A 11 400 0 0313

450. The 1950s in America. (3). The basic objective of this course is to promote greater understanding of the diverse developments affecting the American scene in the period 1945-1960. This period is referred to as the "fifties," it is often regarded today with fond nostalgia. The course examines major cultural currents of the time. A 11 450 0 0313

451. Cooperative Education in American Studies. (3). The course will permit American studies students to participate in the Cooperative Education program. Offered Cr/NC only. A 11 451 0 0313

499A. American Film Culture. (3). Using films as sources and resources of attitudes, values and beliefs, the course studies a variety of American films as a chronological order to examine such topics as attitudes toward blacks and women at various periods, crime and prohibition, patriotism in WWII and Cold War mentality and the rebellious youth culture of the Vietnam era. The collective American mentality during the distribution of these films is evaluated. A 11 499A 0 0313

499B. Women in American Film. (3). The changing roles of women in 20th century American society can be understood by how they have been depicted in American films, which both create cultural values and reflect them. Topics include the popular attitudes toward crime and criminals. A 11 499B 0 0313

499C. The Western. (3). The western and frontier film serve both as popular forms of entertainment and as distinctive literary and cinematic genres. Depicting American folk heroes. Representative heroes from colonial times to the present are examined to see how they symbolize the American character. A 11 499C 0 0313

499D. Kansas in Film. (3). The visual images of Kansas, as portrayed in Hollywood films, will be studied in order to understand how a sense of place complete with stereotypes and fables can be created by feature-length movies. A 11 499D 0 0313

Courses for Graduate/Undergraduate Credit

512. Twentieth Century Problems in American Studies. (3). An analysis and a study of problems in various disciplines that influence American development. A 11 512 0 0313

520. American Studies Through the Media. (1-3). Prerequisite: Consent of instructor. Three hours of study required by the Department of American Studies which are offered through various media—radio, television, newspapers and film. Areas of American studies emphasis vary from course to course. A 11 520 0 0313

521. The American Great Plains. (3). Both an environmental and cultural consideration of this area from an interdisciplinary approach concerning the settlement of this area and the results of its development. Literature, politics, folklore and arts and other products of this region will be studied to gain a sense of this geographical and cultural entity. A 11 521 0 0313

522. The American Southwest. (3). The background of the settlement of the American Southwest, the impact of the commingling of three different cultures and the evolving of a fourth culture. A 11 522 0 0313

601. Directed Readings in American Studies. (1-3). Prerequisite: Six hours of American studies course work or its equivalent and instructor's consent. A 11 601 0 0313

602. Directed Readings in American Studies. (1-3). Prerequisite: Six hours of American studies course work or its equivalent and instructor's consent. A 11 602 0 0313

698. Introduction to Research. (3). Bibliography, methodology and the philosophy of
Anthropology

A major in anthropology consists of at least 30 hours, including Anthro. 101Q, 102Q or 124Q; and 647, an area course, such as Anthro. 307, 312, 506 or 511; and one course in archaeology: Anthro. 305Q, 325, 501, 508Q, 513 or 536. Students who have previous graduate work in anthropology should take Anthro. 526. (Anthro. 1003, 126G and 749 do not count toward the major.)

Certain courses in related departments may be counted toward an anthropology major if they meet the particular needs of students and are approved by their advisors. No more than six hours from another department may be counted.

Minor. A minor consists of 15 hours of anthropology (including at least six hours of upper-division work) chosen in consultation with the student's major advisor.

Lower-Division Courses

100G. Anthropology of Modern Life. (3) Anthropological perspectives on the behavior and institutions of contemporary man with particular emphasis on the mass culture of the United States. A 28 100G 0 2202

101Q. Biological Anthropology. (3) This course provides an introduction to the biological evolution and behavioral development of humans. Students are introduced to the basic concepts of population genetics, evolution, human ecology and culture along with the types of data and modes of analysis currently used in biological anthropology and archaeology. These are used to formulate explanations of the physical and cultural development of humans and primates in the last 70 million years. Present day variations in biological and behavioral traits also are discussed. A 28 101Q 0 2202

102Q. Cultural Anthropology. (3) The meaning of culture, its significance for human beings and its diverse forms among peoples of the world, past and present. A 28 102Q 0 2202

124Q. General Anthropology. (3) An introduction to the fields of physical anthropology, archaeology, linguistics and an analysis of the concepts of society and culture with special emphasis on nonliterate peoples of the world. A 28 124Q 0 2202

126G. Popular Archaeology. (3) Archaeology for everyone—its mysteries, romance and applications. Roles of interested non-specialist hobbyist, technician and professional are compared. Emphasis on the excavation in the public eye and mind. A 28 126G 0 2203

127. Magic, Witchcraft and Religion. (3) Cross-listed as Religion 127. An examination of various concerns concerning the realm of the supernatural as held by primitive people. This course relates such religious and magical beliefs—and the resultant practices—to the larger patterns of cultural context. A 28 127 0 2202

150. Workshop in Anthropology. (1-3). A course designed to provide specialized instruction using a variable format in a subject relevant to American studies. Repeatable for credit. A 11 750 2 0313

Upper-Division Courses

303. Peoples and Cultures of the World. (3) A survey of the cultural configurations of nonliterate peoples of aboriginal America, Asia, Oceania and Africa. Prerequisite: Anthro. 102Q or 124Q. A 28 303 0 2202

305Q. World Archaeology. (3) The 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 ideas and complex societies. A 28 305Q 0 2203

307. Peoples of Africa. (3) A description and analysis of the culture areas of Africa south of the Sahara Desert from ethnographic and ethnographic sources. A 28 307 0 2202

312. Peoples of Asia. (3) Study of tribal cultures and civilizations of Asia in terms of major culture areas, racial varieties and linguistic patterns. A 28 312 0 2202

313. Archaeology of East Asia. (3) A broad survey of archaeology throughout eastern Asia from the early Neolithic formations at Keping and Java to the development of Chinese and Southeast Asian civilizations. Special attention will focus on China (through the Han Dynasty), southeast Asia and Australia/New Guinea. Recent archaeological finds of the People's Republic of China will be included. A 28 313 0 2203

318. Psychological Anthropology. (3) The relationship of individual psychology (personality, emotion, cognition), both normal and abnormal, to group membership and cultural context. A 28 318 0 2202

323. Primitive Folklore. (3) Survey of the oral literature of Africa, the Americas and the Pacific. The role of myths, tales, riddles and proverbs in reflecting a people's value and world view is explored. A 28 323 0 2202

328. Medical Anthropology. (3) Medical anthropology studies the health beliefs and behaviors of various human societies, especially in, but not limited to, those outside the western, scientific tradition. Attitudes toward illness, curing practices, the roles of healers and therapists and the attitudes of the community toward the ill are among the areas covered. A 28 328 0 2202

335. Archaeology of North America. (3) A survey of the prehistoric cultures of North America north of Mexico from the earliest peopling of the continent to the time of European colonization. A 28 335 0 2203

351. Law, Politics and Society. (3) The study of legal and political systems in non-Western societies. Topics covered include the origin of the state, precivilian law and politics, the impact of colonialism and problems in state building. A 28 351 0 2202

401. Cooperative Education in Anthropology. (1-4). This course is designed to provide the student with practical experience that will complement the student's academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. Offered Credit or No Credit only. A 28 401 0 2202

498. Readings in Anthropology. (2-3). Repeatable up to six hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology. A 28 498 3 2202

Courses for Graduate/Undergraduate Credit

501. Approach to Archaeology. (3) Lab fee. An introduction to the problems of studying past cultures. Special attention is focused on methodology and techniques available to archaeologists and the theoretical rationales leading to sound interpretations of the structure of extinct cultures. Prerequisite: Anthro. 101Q or 124Q or equivalent. A 28 501 0 2203

502. Introduction to Archaeological Laboratory Techniques. (1-3). Maximum of three hours can be counted as major directed work in passing the course for the processing of archaeological materials. Students obtain 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: Anthro. 101Q or 124Q or equivalent. A 28 502 1 2203

503. Approach to Cultural Anthropology. (3). Offered every fall semester, the course is an introduction to major current directions in the study of culture and of cultures: symbol systems which structure social, political, economic and religious institutions, personology, the arts and bodies of knowledge. Controversies that presently animate discussions of the role, methods and content of modern anthropology will be explored. Prerequisites: Anthro. 102Q, 124Q or equivalent. A 28 503 0 2202

505. Approaches to Biological Anthropology. (3). Offered every spring semester, the course is an intensive study of three central topics in biological anthropology: evolutionary theory, paleoanthropology and modern human variation. Prerequisites: will be made in human theories, methods and issues. Required of all graduate students in anthropology. Prerequi-
A survey of the archaeology of the Great Plains area from the protohistoric period to the present. Prerequisites: six hours of anthropology and departmental consent. A 28 610 0 2203

An introduction to archaeological theory since World War II, including development of modern archaeological theory, cultural evolution, gender, and structuralism. Prerequisites: six hours of anthropology and departmental consent. A 28 613 0 2203

A critical examination of the biological aspects of human variation, stressing human adaptations. Prerequisites: Anthro. 101Q and Bio. 100. A 28 556 1 2202

A course dealing with human skeletal and dental materials and their relationship to the historical and cultural setting. Topics in lecture and laboratory sessions include bone and tooth identifications, measurement and analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: Anthro. 101O or equivalent. A 28 557 0 2202

Introduction to Linguistics. (3). Cross-listed as Ling. 577. Principles of descriptive and historical linguistics: phonetics and phonology, morphology and syntax. The course encompasses the varieties of languages, including both structuralism and functionalism. Modern Standard German and its development from Proto-Germanic. A 28 577 0 1505

Topics in Anthropology. (3). Detailed study of topics in anthropology with particular emphasis being established according to the expertise of the various instructors. A 28 597 3 2202

Forensic Anthropology. (3). Cross-listed as Bio. 556. The course encompasses the identification and analysis of human skeletal remains. Emphasis is placed on forensic anthropology, including the use of biological evidence in legal proceedings. A 28 556 0 2200

The archaeological laboratory analysis of prehistoric sites. Experiments in the identification of prehistoric artifacts and the reconstruction of prehistoric cultures. Students analyze archaeological materials, including ceramic, lithic, faunal and osteological remains. A 28 602 1 2203

Museum Methods. (3). Cross-listed as Anthro. 606. The course encompasses the education and management of museums, as well as career opportunities in the field of museum studies. Prerequisite: Anthro. 101O or instructor's consent. A 28 606 0 2202

Field Methods in Anthropology. (3-6). A maximum of six hours can be counted as anthropology hours toward either degree. A course that instructs the student in archaeological and ethnological field methods through actual participation in a field research program. The project is submitted on the specific summer session and varies from year to year. Prerequisite: instructor's consent. A 28 690 2 2202

Educational Anthropology. (3). A course dealing with the basic concepts of anthropology and their application to social science units in the elementary and secondary schools. The course explores the nature of individual differences in the classroom, the problems they pose for the classroom teacher, and the possibilities for educational reform. Prerequisite: undergraduate major or graduate student. A 28 749 0 2202

Workshop. (1-4). Short-term courses with special focus on anthropological prob-.
of the programs within the Department of careers as possible for assignment to a faculty academic adviser.

Courses for Graduate Students Only

801. Seminar in Archaeology. (3). Comprehensive analysis of archaeological data in emphasis on theoretical problems of interpretation and reconstruction. Repeatable up to six hours. Prerequisite: Anthro. 501 or departmental consent. A 28 801. 9 2202

802. Methods in Anthropology. (2-3). Designed to develop 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. A 28 802. 9 2202

820. Seminar in Physical Anthropology. (3). Analysis of fossil, skeletal, and modern biological differences among people. Emphasis is placed on methods and techniques of analysis with a consideration of current interpretive models. Prerequisite: Anthro. 556 or 557 or departmental consent. A 28 820. 9 2202

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. A 28 837. 9 2202

847. Colloquium in Anthropology. (1-2). SU grade only. Repeatable for a maximum of three hours. To provide graduate students with seminar-style experience in recent research in all of the subfields of anthropology. Course also 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. A 28 847. 9 3303

848. Recent Developments in Anthropology. (3). A review of the latest discoveries and interpretations in the science of man. Repeatable up to six hours. Prerequisite: five hours of anthropology. A 28 848. 9 2202

870. Independent Reading. (2-3). Repeatable up to six hours. Prerequisite: departmental consent. A 28 870. 3 2202

875-876. Thesis. (2-3). A 28 875. 4 2202; A 28 876. 4 2202

Biological Sciences

The biological sciences department offers a broad and flexible curriculum leading to the Bachelor of Arts (BA) or the Bachelor of Sciences (BS) degrees with a major in biological sciences and an emphasis either in microbiology or organismal biology and ecology. The department also participates in a field major which leads to a BS degree in biochemistry.

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 adviser.

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. A major in biological sciences leading to the Bachelor of Sciences (BS) requires a minimum of 40 semester hours of biological sciences course work. The candidates for the major under either degree must: (1) complete the major core courses, consisting of BioI. 203Q, 204 and 584; (2) select either a microbiology or an organism biology and ecology emphasis and fulfill the requirements for the chosen emphasis; and (3) maintain an overall grade point average of 2.000 in all biological sciences course work. Students pursuing a BA may take 40 semester hours of biological sciences course work for credit; while those pursuing a BS may take 50 semester hours of biological sciences course work for credit.

Microbiology Emphasis—Students selecting this emphasis must complete the following, in addition to the major core courses: (1) BioI. 330, (2) a minimum of 16 semester hours for the BS or 11 semester hours for the BA selected from among the courses listed under the division of microbiology below; and (3) for the BS (but not for the BA), a minimum of five semester hours selected from among interdivisional courses and/or those listed under the division of organismal biology and ecology. In addition, all students must complete the following chemistry course work or its equivalent: (1) Chem. 111Q and 112Q or 123Q and 124Q; and (2) any two from among Chem. 523 (unless Chem. 123Q and 124Q are taken), 531 and 532.

Organational Biology and Ecology Emphasis—Students selecting this emphasis must complete the following, in addition to the major core courses: (1) either BioI. 320, or BioI. 505 and 506, or BioI. 534 and 535; (2) either BioI. 502, 520, 524, 527, 528, 532, 540, 544 or 650; (3) BioI. 418 and either BioI. 560, 575, 577 or 578; and (4) for the BS (but not for the BA), a minimum of seven semester hours of elective biological sciences courses selected from those listed under either division and/or from interdivisional courses. In addition, all students must complete the following chemistry course work or its equivalent: (1) either Chem. 111Q and 112Q or Chem. 123Q and 124Q; and (2) Chem. 531.

Students preparing for the secondary teaching profession and majoring in biological sciences should complete the requirements of the organismal biology and ecology emphasis in order to qualify for the state teaching certificate.

Minor. A minor in biological sciences requires a minimum of 20 semester hours. Candidates for the minor must: (1) complete the major's core courses [BioI. 203Q, 204 and 584]; (2) complete a minimum of six additional semester hours of elective courses chosen from among the upper-division courses available for major credit; (3) complete at least one lecture/laboratory or lecture/field course among those taken to satisfy the elective course requirement; and (4) maintain an overall grade point average of 2.000 in all biological sciences course work.

Biochemistry Field Major. The departments of biological sciences and chemistry participate jointly in this program. Required courses are: BioI. 203Q, 204, 500 and 584; Chem. 111Q, 112Q, 523, 531, 532, 662, 663, 664 and 665; Phys. 213 and 214; and Math. 112 or 111 and 122. Also required are BioI. 666 and 669 (two enrollments) which are cross-listed in the chemistry department and 21 elective hours chosen from among those approved for the biochemistry field major (see academic adviser or departmental offices for approved courses).

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

105G. The Human Organism. (4). 3R; 2L. (Day and evening sections offered fall and spring semesters; day section offered eight-week Summer Session.) A course designed to introduce the nonscience major to certain biological principles as they relate to the human organism, to provide biological information and understanding on subjects which are relevant to the student's own well-being and role as a world citizen and to increase awareness of the human place in the biosphere. The program of instruction is supplemented and reinforced with a laboratory experience which is appropriate for the non-science major and the theme of the course. Credit earned in this course may not be applied toward the requirements for a major or minor in biological sciences and credit is not given for both BioI. 102G and BioI. 105G. Students repeating BioI. 100G (no longer
offered) should enroll in this course. A 12 105G 1 0401

120Q. Introduction to Microbiology. (4).
3R; 2L. (Day sections offered fall and spring semesters and eight-week Summer Session; evening section offered fall semester.) Fundamentals of microbiology with emphasis on microorganisms important in sanitation and disease. A 12 1200 1 0411

225. Human Anatomy. (3). 2R; 2L. (Day sections offered fall and spring semesters and eight-week Summer Session; evening section offered fall semester.) Elementary human anatomy. A 12 225 1 0412

226. Elementary Human Physiology. (3).
3R. (Day sections offered fall and spring semester and eight-week Summer Session; evening section offered spring semester.) A laboratory in which some of the principles of human physiology are demonstrated. A 12 226 0 0410

227. Elementary Human Physiology Laboratory. (1). 3L. (Day sections offered fall and spring semester; evening section offered spring semester.) A laboratory in which some of the principles of human physiology are demonstrated in an experimental setting. A 12 227 1 0410

Upper-Division Courses

310. The Biology of Human Reproduction and Fetal Development. (4). (Offered on irregular basis as staffing permits.) The major goal of this course is to present biological information from the fields of anatomy, embryology, physiology and endocrinology as it relates to human reproduction. Each topic is presented initially at an introductory level and developed subsequently to include the results of recent findings in each of the fields. Lectures and readings cover such subjects as: (1) the development and maturation of the reproductive system; (2) reproduction in biologic systems, (3) the anatomy and physiology of the male and female reproductive tracts; (4) the biology of fertilization, embryonic development, pregnancy and lactation; and (5) the art of contraception and the factors affecting fertility. Prerequisite: Biol. 109G, 109G, 2030 or 225. A 12 310 0 0410

370Q. Ecology and Man. (3). (Day section offered fall semester in even-numbered years and spring semester; evening section offered fall semester.) The main goal of the course is to provide information which will allow the student to appreciate the complex interaction relationship among the human population, natural resources and pollution. The course seeks to (1) provide a basis for interpreting (and acting upon) environmental problems through an understanding of basic ecological concepts; (2) provide a basis for understanding the kind of problems that will be encountered in solving environmental problems, including those that are technically uncomplicated; and (3) educate the student, as a responsible citizen, to the possibilities for meaningful input into the solution of such problems and to the importance of a basic knowledge in science, engineering, political science and economics. Students wishing to repeat Biol. 570 (no longer offered) should enroll in this course. A 12 3700 Q 0 0420

470. Applied Human Physiology. (4). 3R; 3L. (Offered fall semester only.) Enrollment restricted to students in the physical therapy program and to physical education majors as space permits. Advanced course in human physiology stressing applications of physiological and psychological principles. Prerequisite: Biol. 226. A 12 470 1 0410

Courses for Graduate/Undergraduate Credit

509G. Foundations of Human Heredity. (4). Introduction to the mechanisms and societal significances of development, transmission and population genetics of humans. Attention given to inborn errors of metabolism, development and the role of genetic counseling and genetic engineering in their management. Course is intended for students majoring outside of the natural sciences and does not carry credit toward a biological sciences major or minor. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: junior standing. A 12 509G Q 0 0417

516Q. Biology of Aging. (3). Cross-listed as Geron. 518. (Offered as staffing permits.) An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence with emphasis on man. Students earning graduate credit are expected to 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. A 12 516Q Q 0 0410

Interdivisional Courses

Lower-Division Courses

150, Biology Workshop. (1). A 12 150 2 0401

203Q. Introduction to Organismal Biology. (5). 4R; 3L. (Day sections offered fall and spring semesters; evening section offered fall semester only.) An introduction to the fundamental concepts of biology as they apply to the study of the organism. The course includes the advantages and problems of a multicellular habit: homeostatic systems involving nervous and hormonal control; nutrition; reproduction, circulation, use and cycling in plants, animals and communities; and sexual and asexual reproduction and inheritance in plants, animals and communities. The laboratory stresses evolutionary trends in the plant and animal kingdoms and the ecological relationships of plants and animals. Students who wish to repeat Biol. 114 (no longer offered) should enroll in this course. Prerequisite: Biol. 103G, 109G, 2030 or 225. A 12 2030 Q 0 0401

204. Introduction to Cellular Biology. (5).
4R; 3L. (Day sections offered fall and spring semester; evening section offered spring semester only.) A continuation of Biol. 203 in which the principles of cellular biology are presented and the cellular and molecular bases of phenomena discussed in Biol. 203 are further developed. Topics include: the structure and function of cells as organisms; chemical basis of inheritance; nutrition; reproduction, circulation, use and cycling in the cell regulation of cellular activities by proteins, enzymes, hormones and cyclic nucleotides; and the development of specialized cells by considering cellular differentiation phenomena in plant and animal development. The laboratory is designed to demonstrate the principles of cellular biology and to develop the student's skill in the experimental method and the communication of scientific information. Students wishing to repeat Biol. 570 (no longer offered) should enroll in this course. Prerequisites: Biol. 203G and Chemistry 1030, 1110 or 1230. A 12 204 1 0401

Upper-Division Course

481. Cooperative Education. (2-4). This course is designed to complement and enhance the student's academic program by providing an opportunity to apply knowledge gained through coursework to job-related situations. For information contact the coordinator of undergraduate studies or the Cooperative Education program office. No more than four credit hours earned in Biol. 481 may be applied toward satisfying the credit hour requirements for a major in biological sciences. Prerequisite: applicant and Cooperative Education position approved by the departmental affairs committee. Offered OnC/N only. A 12 481 Q 0 0498

Courses for Graduate/Undergraduate Credit

500Q. Cell Physiology. (3). (Offered fall semester in even-numbered years.) This course is designed to bridge the gap between molecules and organisms by focusing on the function and structure, as it relates to function, of the basic unit of life. Topics include a detailed treatment of individual cellular components and processes, the cytoskeleton, membrane transport, control of gene expression, gross cell communication, and a consideration of cellular evolution. In addition, some discussion is devoted to the contemporary techniques used to study cells. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 204 and Chem. 351. A 12 500 Q 0 0417

573. Statistical Applications in Biology. (3). (Offered spring semester only.) A course designed to supplement Stat. 370 by providing experience with practical applications of statistical theory to biological data. The course includes computations on data derived from both the primary literature and independently designed research projects. The design of experiments to answer specific hypotheses, the treatment of non-normally distributed data sets and non-homogeneous experimental test units and the use of packaged computer programs for certain statistical tests are emphasized. Access to calculators with at least two memory banks is strongly encouraged. Students earning graduate credit are expected to complete an additional statistical analysis assignment involving the use of the computing facilities. Prerequisites: Stat. 370. A 12 573 Q 0 0419

584. Genetics. (4). The mechanisms of heredity. The genetic basis of plants and animals with a critical review of the concept of the gene. Students seeking graduate credit are expected to complete reading assignments in the technical literature resulting in several written reports or a comprehensive term paper chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 584 Q 0 0422

666. Special Topics in Biochemistry. (3). (Offered spring semester in even-num-
bered years.) A course designed primarily for students who choose the biochemistry field major. A small number of current problems in biochemistry are discussed in depth. Reading published research papers in the field will be required. Students earning graduate credit are expected to 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. A 12 666 0 0414

669. Research in Biochemistry. (2). A course designed primarily for students who choose the biochemistry field major. Participation in a biochemistry research project under the direction of a faculty member and a written report summarizing the results is required. May be repeated once for credit. Prerequisites: Biol. 416 or 500, Chem. 662 or 663 and Chem. 664 or 665. A 12 669 0 0414

750. Biology Workshop. (1-3). A 12 750 0 0401

780. Molecular Genetics. (3). (Offered on irregular basis as demand warrants. Contact department for information.) Studies of the physiochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. Prerequisites or corequisites: Bioi. 584 or instructor's consent. A 12 780 0 0422

798. Biology Seminar. (2). Reviews of current research in biological sciences. Repeatable once for credit. A 12 798 0 0401

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. A 12 890 0 0499

891. Thesis. (2). S/U grade only. Students must be enrolled in this course during the semester in which the thesis is defended. A 12 891 0 0499

Microbiology

Upper-Division Course

330. General Microbiology. (5). 3R; 6L. (Offered fall and spring semesters.) Introduction to the structure, function, systematics, ecology and population dynamics of microorganisms with emphasis on prokaryotes. Students wishing to repeat Biol. 550 (no longer offered) should enroll in this course. Prerequisites: Biol. 204 and Chem. 1120. A 12 330 1 0411

Courses for Graduate/Undergraduate Credit

531. Food Microbiology. (4). 2R; 4L. (Offered on irregular basis as demand warrants. Contact department for information.) This course examines the role and significance of microorganisms in foods. Included are factors that affect microbial growth; detection of microorganisms in foods; food spoilage; food preservation by use of chemicals, radiation, high and low temperature, drying and fermentation; food-borne microorganisms and intoxications; and the microbial basis of food sanitation, control and inspection. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Additional, graduate student responses on essay examinations are read with greater expectations with respect to clarity, quantity and quality of information presented. Prerequisite: Biol. 330. A 12 531 0 0411

552. Mycology. (4). 2R; 4L. (Offered spring semester in odd-numbered years.) The structure, development and reproduction of fungi with emphasis on the cytology and physiology of forms of scientific and economic importance. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 552 0 0411

590. Immunobiology. (3). (Offered fall semester only.) The nature of antigens and antibodies and their interactions. Cellular and humoral aspects of immunologic phenomena are included. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites or corequisites: Biol. 590, Chem. 531 or instructor's consent. A 12 590 0 0416

654. Pathogenic Microbiology. (4). 2R; 4L. (Offered spring semester only.) An introduction to the important pathogenic microorganisms and their relationships to health and disease in man. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 330. A 12 654 1 0411

658. Microbial Physiology. (3). (Offered fall semester in odd-numbered years.) The physiology and introduction to the basic techniques involved in the study of microbial physiology. Students earning graduate credit are expected to design and perform an additional experiment in consultation with the instructor and present the results in written form using the format of a scientific journal chosen in consultation with the instructor. Prerequisites: Biol. 330 and Chem. 531. A 12 658 0 0411

659. Microbial Physiology Laboratory. (3). 6L. (Offered fall semester in odd-numbered years.) An introduction to the basic techniques involved in the study of microbial physiology. Students earning graduate credit are expected to design and perform an additional experiment in consultation with the instructor and present the results in written form using the format of a scientific journal chosen in consultation with the instructor. Prerequisites: Biol. 330 and Chem. 531. A 12 659 1 0411

660. Topics in Microbiology. (2-4). Lab fee. No more than a total of 8 hours earned from Biol. 610, 640 and 650 may be applied toward major and graduation requirements. Students must complete a Directed Independent Study Abstract form and obtain departmental approval prior to enrollment. Prerequisite: Biol. 330. A 12 660 0 0407

756. Microbial Genetics. (4). (Offered on irregular basis as demand warrants. Contact department for information.) The relationship between development, metabolism and genetics in microorganism growth and development. Students earning graduate credit are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 590 and instructor's consent. A 12 756 0 0422

790. Advanced Immunology. (3). (Offered on irregular basis as demand warrants. Contact department for information.) Contemporary problems in immunologic research. Lectures, assigned readings and reports are included. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 590 and instructor's consent. A 12 790 0 0416

Organismal Biology and Ecology

Upper-Division Courses

320. Animal Physiology. (5). 3R; 4L. Lab fee. (Offered fall semester only.) An introduction to the physiological mechanisms that control animal functions. Topics covered include: respiration; circulation; nutrition, digestion and energy metabolism; thermoregulation; osmoregulation and excretion; muscular movement and locomotion; sensation; reproduction, and the integration of functions. Examples are taken from throughout the animal kingdom. Prerequisites: Biol. 204 and Chem. 112. A 12 320 1 0410

418. The Biology of Ecosystems. (3). (Offered fall and spring semesters.) Principles underlying the interactions of living organisms and their environment from the biosphere to the population level of organization. Prerequisite: Biol. 204. A 12 418 0 0420

Courses for Graduate/Undergraduate Credit

502. Vascular Plants. (4). 2R; 6L. (Offered fall semester in odd-numbered years.) An introduction to the structure, reproduction and evolution of the major groups of living and extinct vascular plants. An introduction to flowering plant systematics is included. Students earning graduate credit are expected to 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. A 12 502 1 0402

505. Plant Physiology. (4). (Offered fall semester in even-numbered years.) An introduction to the physiology of plants. The growth and development, including water relations, long distance transport processes, mineral nutrition, photosynthesis and respiration are emphasized. Topics are selected to develop the chemical and environmental regulation of developmental processes. Concurrent enrollment in Biol. 506 is optional. Students earning graduate credit are expected to perform a primary literature survey on a topic selected in consultation with the instructor and deliver a 30-minute oral presentation to the class. Prerequisites: Biol. 204 and Chem. 1120. A 12 505 0 0406

506. Plant Physiology Laboratory. (2). 4L. (Offered fall semester in even-numbered years.)
years.) An introduction to the techniques of experimental plant physiology. An emphasis is placed on experimental design, the use of elementary statistics in the analysis of results, drawing conclusions from experimental results and the written communication of experimental findings. Phenomena considered include photosynthesis, respiration, translocation, mineral nutrition and the control of plant growth and development by environmental and chemical factors. Students earning graduate credit are expected to perform an additional experiment in consultation with the instructor and present the results in written form using the format of the journal Plant Physiology. Prerequisite or corequisite: Biol. 505. A 12 506 10406

520. Invertebrate Zoology. (4). 2R; 3L. (Offered fall semester in even-numbered years.) A comparative study of the morphology and phylogeny of the invertebrates with emphasis on the basic body types and their major variations. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 520 1 0407

524. Vertebrate Zoology. (4). 2R; 4L. (Offered fall semester in even-numbered years.) A laboratory course that is designed to present a broad introduction to the vertebrates and their evolution, morphological, natural history and special characters of vertebrate animals. Students earning graduate credit are expected to 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. A 12 524 1 0407

527. Comparative Anatomy. (5). 3R; 4L. (Offered fall semester only.) An intensive study of the comparative anatomy of chordates with emphasis on vertebrate anatomy. Students earning graduate credit are expected to 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. A 12 527 1 0412

528. Parasitology. (3). 2R; 4L. (Offered fall semester only.) The parasites of man and other vertebrate hosts. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 528 1 0417

532. Entomology. (5). 3R; 4L. (Offered fall semester in even-numbered years.) An introduction to the morphology, physiology, life cycles, behavior, ecology and economic significance of insects. Students earning graduate credit are expected to 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 study project. Prerequisite: Biol. 204. A 12 532 1 0421

534. Mammalian Physiology. (3). (Offered spring semester of odd numbered years.) An organ systems approach to mammalian—primarily human—physiology. Emphasis is placed upon nervous and endocrine control systems and their role in homeostatic functions. Students earning graduate credit are expected to submit a term paper based upon library research on a topic in mammalian physiology in consultation with the instructor. Prerequisites: Biol. 204 and Chem. 531 or instructor consent. A 12 534 0 0410

535. Mammalian Physiology Laboratory. (3). 4L. (Offered spring semester of odd numbered years.) An empirical approach to mammalian physiology. Students seeking graduate credit are expected to submit an additional laboratory report relating the results of an laboratory experiment to those found in the current technical literature. Prerequisite: concurrent or prior enrollment in Biol. 534. A 12 535 1 0410

540. Comparative Embryology. (4). 2R; 4L. (Offered fall semester in even-numbered years.) Gametogenesis, fertilization and developmental processes in animals with emphasis on vertebrates. Students earning graduate credit are expected to complete additional assignments chosen in consultation with the instructor. Prerequisite: Biol. 204. Biol. 527 is also recommended. A 12 540 1 0427

544. Histology. (4). 2R; 4L. (Offered spring semester in even-numbered years.) The microscopic anatomy of vertebrate tissues with emphasis on mammals. Students earning graduate credit are expected to complete additional assignments chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 544 1 0413

560. Plant Ecology. (4). 2R; 6L. (Offered spring semester in even-numbered years.) Principles and patterns of plant distribution and of adaptation of plants to particular habitats. Emphasis is put on the experimental approach to plant ecology. Field trips are an integral part of the laboratory. Prerequisite: Biol. 204. A 12 560 1 0420

575. Field Ecology. (3). 9L. (Offered fall semester only.) Techniques for analysis of field phenomena using techniques and their applications chosen in consultation with the instructor. Field trips and their reports are required. Students earning graduate credit are expected to produce an individual project on comparative community structure and the results as a technical paper. Prerequisite: instructor's consent. A 12 575 1 0420

578. Limnology. (5). 2R; 6L. (Offered spring semester in even-numbered years.) Introduction to the biological and physical processes that operate in lakes, streams and estuaries. Emphasis is placed upon the limnological properties of two communities chosen in consultation with the instructor. Students are expected to perform an experimental study of a specific taxon in a lake. The results of this investigation are reported as a technical paper. Prerequisites: Biol. 204 and instructor's consent. A 12 578 1 0420

610. Topics in Botany. (2-4). No more than a total of six credit hours earned from among Biol. 610, 640 and 660 may be applied toward major and graduation requirements. Students must complete a Directed Independent Study Abstract form and obtain departmental approval prior to enrollment. Prerequisite: Biol. 204. A 12 610 4 0407

620. Animal Behavior. (3). (Offered fall semester only.) A survey of animal behavior, including human, with major emphasis on the analysis of behavior as a concept of physiological processes. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204 or departmental consent. A 12 620 0 0410

630. Sociobiology. (3). (Offered fall semester in odd-numbered years.) A systematic study of the biological basis of social behavior. The course focuses on animal societies, their population, structure, castes and communication and the underlying physiology. Students earning graduate credit are expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204 or departmental consent. A 12 630 0 0407

640. Topics in Zoology. (2-4). No more than a total of six credit hours earned from among Biol. 610, 640 and 660 may be applied toward major and graduation requirements. Students must complete a Directed Independent Study Abstract form and obtain departmental approval prior to enrollment. Prerequisites: Biol. 204. A 12 640 4 0407

671. Evolutionary Ecology. (4). 3R; 2L. (Offered fall semester in even-numbered years.) A synthesis of basic principles in population genetics and ecology is presented as a framework for the study of topics in evolutionary ecology. Emphasis includes (1) the maintenance and structure of population genetic variation; (2) mating structure and the evolution of the adaptive unity of population; (3) individual, kin, group selection; (4) population demographic structure; (5) population regulation and dispersal; (6) life history strategies in heterogeneous environments; and (7) demographic and genetic covariance. Basic techniques in population ecology are taught on several short field trips throughout the semester. Students earning graduate credit are expected to participate in a weekly seminar in addition to class hours. Prerequisite: Biol. 584. Biol. 418 also is recommended. A 12 671 1 0420

728. Physiological Basis of Behavior. (3). A modern approach to coordination of physiological processes which are involved in nervous and endocrine function. Prerequisite: Biol. 730 or instructor's consent. A 12 728 0 0410

Chemistry

The chemistry department offers a broad and flexible curriculum leading to a variety of degrees and options. Bachelor of Science (BS) in chemists. Bachelor of Science in chemistry—chemical physics option, Bachelor of Arts (BA) in chemistry, biochemistry field major (BS) and chemistry/business field major (BS). Bachelor of Science in Chemistry. This program requires Chem. 302, 505, 514, 524, 532, 545, 547 and 615 and their necessary prerequisites, including Math. 344 and Phys. 314, 315 and 316 or their equivalents. An additional ten credit hours of professional elective courses must be taken. At least four credit hours of these courses must be selected from chemistry courses above 610 (701 is excluded). Courses that will satisfy the professional elective requirement are: (a) Chem. 680 and 689, (b) most elective chemistry courses above 600, (c) numerical methods: Chem. 602, Math. 551, CS 501 and 675, (d) electronics: Chem. 625 and 725, Eng. 492, (e) mathematics courses with Math. 344 prerequisite; (f) physics courses with Phys. 314 prereq-
The curriculum for the BS in chemistry is approved by the American Chemical Society for the professional training of chemists. Students completing the program receive certification from the American Chemical Society. Students should consult with an adviser for details.

**Bachelor of Science in Chemistry—Chemical Physics Option:** Students may elect to participate in this option, which is a joint program with the Department of Physics. Students participating in this option are expected to satisfy the regular BS in chemistry requirements and take six credit hours of upper-division physics courses from Phys. 551, 621, 631, 712 and 714 or other approved courses. All students must take Chem. 642.

Students completing this option are eligible for certification by the American Chemical Society.

**Bachelor of Science in Chemical Science:** Students in premedical, pre-dental, pre-veterinary, pre-pharmacy, pre-optometry or other professional programs may desire this option for which the following courses are required: Chem. 514, 524, 532 and 545 and their necessary prerequisites; Math 144 or 242Q and one year of physics; six additional credit hours of chemistry courses numbered above 500, Chem. 605 is recommended and ten credit hours of Biol. 203Q and 204Q.

This program is designed for students not expecting to become professional chemists and therefore does not necessarily meet standards of certification by the American Chemical Society or entry requirements for graduate work in chemistry.

**Bachelor of Arts in Chemistry:** This degree requires Chem. 524, 532, 545, 546 and 547 and the necessary prerequisites, including Math. 344 and one year of physics or their equivalents. Students with a substantial interest in the biological sciences may satisfy the BA requirements by substituting Chem. 662 or 663 for Chem. 546.

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 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 departments 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, 500 and 584; 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 bio-chemistry electives.

**Chemistry/Business Field Major:** The Charles M. Bues 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: Acctg. 210 and 220; Econ. 2010 and 2020Q; Bus. Law 435; Fin. 340; Mgmt. 360; and Mktrg. 300, 405 and 608. In addition, approximately 30 hours of chemistry and mathematics are required: Chem. 111Q, 112Q, 523, 531 or 662, 531 or 532 and 603 and Math. 114 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. 523, 531 and 545. A 2.00 GPA is required.

Advising: All students pursuing one of the above degrees 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. Some courses are not offered on a regular basis. Students should consult advisers.

**Minimum Requirements in Chemistry Programs**

**Bachelor of Science**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 302</td>
<td>1</td>
</tr>
<tr>
<td>Chem. 505</td>
<td>1</td>
</tr>
<tr>
<td>Chem. 514</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523, 524</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 545, 546</td>
<td>6</td>
</tr>
<tr>
<td>Chem. 547</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 615</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 600-800</td>
<td>4</td>
</tr>
<tr>
<td>Phys. 313, 314, 315, 316</td>
<td>10</td>
</tr>
<tr>
<td>Math. 112, 242Q, 243, 344</td>
<td>18</td>
</tr>
<tr>
<td>Professional elective</td>
<td>6</td>
</tr>
</tbody>
</table>

*Part of the required ten hours of professional elective courses (see description above).

**Recommended Course Sequence**

**Freshman**

<table>
<thead>
<tr>
<th>Fall Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 112, Precalculus Mathematics</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 112Q, General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q, Calculus</td>
<td>5</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Fall Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 302, Microcomputing for Chemists</td>
<td>1</td>
</tr>
<tr>
<td>Chem. 531, Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 243, Calculus</td>
<td>5</td>
</tr>
<tr>
<td>Phys. 313Q, University Physics</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 532, Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>Phys. 314Q, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>Phys. 315Q, University Physics Lab I</td>
<td>1</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Fall Courses</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chem. 514, Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 523, Analytical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Phys. 316Q, University Physics Lab II</td>
<td>1</td>
</tr>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Courses</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Chem. 545, Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 505, Chemical Literature</td>
<td>1</td>
</tr>
<tr>
<td>Chem. 524, Instrumental Methods of Chemical Analysis</td>
<td>4</td>
</tr>
<tr>
<td>Biological science</td>
<td></td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Fall Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 546, Physical Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry course above 610</td>
<td>4</td>
</tr>
<tr>
<td>Professional elective</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 615, Advanced Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 547, Physical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Professional elective</td>
<td>3</td>
</tr>
</tbody>
</table>
Chem. 533-534 and 531. This course does not meet the needs of chemistry majors or premed students. Prerequisite: Chem. 1120 or equivalent. A 13 533 0 1907

634. Elementary Organic Chemistry Laboratory (1). Lab fee. This hands-on laboratory course to provide pertinent experiences in the laboratory to fortify the survey lecture course Chem. 533. Prerequisite or corequisite: Chem. 533. A 13 534 1 1907

540. Elementary Physical Chemistry (6). An introductory treatment of thermodynamics, kinetics, quantum chemistry, spectroscopy andstatistical thermodynamics for students not intending to become professional chemists. In contrast to the more formal theoretical approach, this course presents the basic principles through a series of experiments and discussions of chemical phenomena. Prerequisites: Chem. 1120 or equivalent. Math. 2420 or equivalent and one semester of physics. A 13 540 0 1908

545. Physical Chemistry (3). Thermodynamics, gases, first law, thermodynamics, second law, chemical equilibrium, chemical kinetics, spectroscopy, chemical equilibria, electrochemistry, and surface chemistry are studied. Prerequisites: Chem. 1120, Math. 3443 or equivalent and one semester of college physics. A 13 545 0 1908

546. Physical Chemistry (3). Kinetic theory, kinetics, transport phenomena, quantum mechanics, spectroscopy and statistical thermodynamics. Prerequisites: one year of college physics and Math. 344. A 13 546 0 1908

547. Physical Chemistry Laboratory (2). Lab fee. Physical chemistry experiments that illustrate principles learned in Chem. 545 and 546. Prerequisite: Chem. 545 or 546. A 13 547 1 1908

611. Introduction to Biochemistry (3). A brief history of biochemistry, emphasizing the development of molecular biology; chemistry of biological molecules—proteins, carbohydrates, lipids, nucleic acids and vitamins, molecular basis of bioenergetics and metabolism and storage, transfer and control of genetic information. This course meets the needs of majors from health-related programs and science education curriculum. Prerequisite: Chem. 531 or 533 or one semester of organic chemistry. A 13 561 0 0141

602. Numerical Methods (2). 1R; 3L. Applications of numerical methods to problems in chemistry and physics. Topics include: curve fitting, interpolation, extrapolation and smoothing of experimental data, numerical differentiation and integration and computer programs for solution of chemical problems. (departmental consent). A 13 502 1 1905

603. Industrial Chemistry (3). The course is designed to bridge the industrial-academic gap. Topics covered include petroleum chemistry; sources of primary petrochemicals, inorganic chemistry; industrial processes; pollution control; properties and uses of polymers and perfluorocarbons, air pollutants, etc. Topics vary depending on chemical industries and the need for new technology. A 13 503 1 1905

605. Medicinal Chemistry (3). For students interested in chemistry related to the design, development and use 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. Topics include the structure and significance of the compound and its role in metabolism. Prerequisites: Chem. 532 or equivalent. A 13 605 0 1905

613. Inorganic Chemistry Laboratory (2). Lab fee. Experimental methods of inorganic chemistry. Prerequisite: Chem. 514 or concurrent enrollment. A 13 613 1 1906

515. Advanced Inorganic Chemistry (3). Topics that will be covered include: molecular symmetry, molecular orbitals, crystal field theory, electronic spectra of inorganic compounds, coordination and organometallic chemistry, boranes, inorganic ring systems and polymers, inorganic biochemistry and biorganic inorganic interactions and solid state chemistry. Prerequisite: Chem. 514 and 531. A 13 515 0 1906

524. Analytical Chemistry Laboratory (3). 2R; 3L. Lab fee. Fundamentals of absorption and emission spectroscopy, spectrophotometry, nuclear magnetic resonance, polarography, voltammetry and coulometry. Prerequisite: Chem. 524. A 13 624 1 1909

525. Electronics (2). 1R; 4L. Lab fee. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: instructor’s consent. A 13 625 1 1909

638. Advanced Organic Chemistry (3). Topics include stereochemistry, conformational analysis, mass spectrometry, nuclear magnetic resonance, polarography, voltammetry and coulometry. Prerequisite: Chem. 532 and 546. A 13 638 0 1907

641. Advanced Physical Chemistry (3). Introduction to quantum chemistry, atomic and molecular spectra, statistical thermodynamics and reaction rate theory. Prerequisite: Chem. 546. A 13 641 0 1908

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. Standard experimental and theoretical techniques used in research in the area are discussed by a team of chemists and physicists. Prerequisite: Chem. 641 or instructor’s consent. A 13 642 0 1905

662. Biochemistry of Cell Constituents. Catalysis, Oxidation, Photosynthesis. An introductory course to provide a working knowledge of the fundamental concepts of the central carbon cycle, carbohydrate, glycogen, lipid, nucleic acid, nucleoprotein and elementary biophysical methods. Prerequisite: Chem. 514. A 13 662 0 1905

700. Chemistry Seminar. (1) S/U grade only. Students are given credit for attending seminars presented in various areas of chemistry in the university. Students must sign up for the seminar at least one semester before the beginning of the seminar. A 13 700 9 1905

701. Chemistry Colloquium. (1). S/U grade only. Students are given credit for attending seminars presented by outstanding chemists from other institutions and faculty. Repeatable for credit. A 13 701 9 1905

705. Molecular Symmetry. (1). A study of...
An S/U - The Master of Arts in communication listings in this Catalog. The Master of Arts in communication studies encompasses cross-cultural communication and theoretical basis for spectroscopy and spectroscopic determinations of molecular structure. Prerequisite: Chem. 741 or equivalent. Corequisite: Chem. 705 or equivalent. A 13 713 0 1906

724. Analytical Spectroscopy. (3). Absorption (UV, visible, IR and atomic), emission, flame emission and atomic absorption spectrometry, molecular fluorescence and phosphorescence techniques: Raman, nuclear magnetic resonance and electron spin resonance spectroscopy, X-ray crystallography and X-ray methods. Lectures and discussions on theory and practice are given. Particular emphasis is placed upon instrumentation and the acquisition of artifact-free data. A 13 723 0 1909

725. Digital Computers in Chemical Instrumentation. (3). An introduction to the use of the small digital computer in the laboratory. Laboratories with digital logic, data acquisition techniques and the on-line digital computer in instrumentation. Laboratory experience covers the design of digital logic circuits, interfacing of chemical instruments, and the digital computer and programming the small digital computer. A 13 725 1 1905

735. Physical Organic Chemistry. (3). An examination of molecular orbital theory; conservation of orbital symmetry, aromaticity and anti-aromaticity; symmetry characters, character tables, symmetry classification of molecules and representations of groups. A 13 735 0 1907


741. Quantum Chemistry. (3). Theoretical basis of atomic and molecular structure. Topics include the postulates of quantum mechanics, high level solutions for the molecular-in-a-box and the hydrogen atom, variation and perturbation techniques, electron spin, Hartree-Fock, and configuration-iteration methods, molecular orbitals, wave functions and virial and Hellmann-Feynman theorems. Prerequisite: Math. 344 or equivalent. Corequisite: Chem. 705 or equivalent. A 13 741 0 1906

742. Chemical Kinetics. (3). A description of reacting systems, including the mathematical and experimental characteristics of simple and complex kinetic systems. The theories of chemical kinetics are discussed, as well as the kinetics of homogeneous reactions in the gas state, heterogeneous reactions and selected topics of current interest. A 13 742 0 1906

745. Chemical Thermodynamics. (3). A presentation of the basic laws of thermodynamics and the classical and experimental characteristics of standard and measurement. Required of all students. A 13 801 0 1906

747. Physical Organic Chemistry. (3). An introduction to electronic and vibrational spectroscopy, magnetic susceptibility, EPR, NMR, Mossbauer spectroscopy and X-ray crystallography as applied to inorganic systems. Emphasis is placed upon interpretation of results for understanding the electronic and molecular structure of compounds. Prerequisite: Chem. 705 or equivalent. A 13 713 0 1906

771. Enzyme Mechanisms. (3). An introduction to the study of enzyme mechanisms. Modern approaches include steady-state, relaxation and computer modeling. Prerequisite: one semester of undergraduate biochemistry. A 13 761 0 0414

772. Structure and Function of Nucleic Acids. (3). The study of monomers and polynucleotides, including chemical and physical structure, macromolecular organization of RNAs and DNAs, biosynthesis of purines and pyrimidines, replication, gene action, transcription, translation, role, mode of operation and the dimensional structure of transfer RNAs, protein biosynthesis, modification of biochemical functions of the cell by drugs, cancer and radiation; enzymatic, chemical and physical probes for the study of structure-function interrelationship of nucleic acids; and biochemistry of viruses. Prerequisite: one semester of undergraduate biochemistry. A 13 762 0 0414

773. Structure-Function Analysis of Biomolecules. (3). An examination of the physical and chemical properties of biomolecules. Topics include analysis of radiotopes; autoradiography; primary, secondary and tertiary structural analysis; equilibrium binding and reaction kinetics, high performance liquid chromatography, gel electrophoresis, and spectroscopic, immunological and ligand binding methods. Prerequisites, one semester of undergraduate biochemistry and Chem. 546. A 13 763 0 0414

Courses for Graduate Students Only

890. Research in Chemistry. (2-12). S/U grade only. Research for the student planning to receive a MS. Research is directed by a faculty member. Repeatable for credit. A 13 890 4 1906

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. A 13 990 4 1906

Communications

Students interested in communications should see the speech, minority studies, linguistics and journalism listings in this Catalog. The Master of Arts in communications (MA) is offered as an interdisciplinary program. Information on the MA can be found in The Wichita State University Graduate School Bulletin.

Courses for Graduate Students Only

801. Introduction to Communications Research. (2). An introduction to the nature and scope of communication research as it applies to communication theory, mass communication, cross-cultural communication and theoretical framework designed to increase one's understanding of real physical systems. The molecular viewpoint is given through Boltzmann statistics. The interrelation between classical thermodynamics and experimental mechanics is discussed. A 13 745 0 1908

746. Molecular Spectroscopy. (3). The theoretical basis for spectroscopy and spectroscopic determinations of molecular structure. Topics include polyatomic electronic 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. A 13 746 0 1908

723. Analytical Spectroscopy. (3). Absorption (UV, visible, IR and atomic), emission, flame emission and atomic absorption spectrometry, molecular fluorescence and phosphorescence techniques: Raman, nuclear magnetic resonance and electron spin resonance spectroscopy, X-ray crystallography and X-ray methods. Lectures and discussions on theory and practice are given. Particular emphasis is placed upon instrumentation and the acquisition of artifact-free data. A 13 723 0 1909

724. Electroanalytical Chemistry. (3). Topics: polarography, polarography, chronocoulometry and coulometry; reversible and irreversible diffusion controlled processes; CE (chemical reaction before electrical reaction), EC (electrical reaction before chemical reaction) and catalytic reaction; organic and polarography and voltammetry. A 13 724 0 1909

725. Digital Computers in Chemical Instrumentation. (3). An introduction to the use of the small digital computer in the laboratory. Laboratories include digital logic, data acquisition techniques and the on-line digital computer in instrumentation. Laboratory experience covers the design of digital logic circuits, interfacing of chemical instruments, and the digital computer and programming the small digital computer. A 13 725 1 1905

735. Physical Organic Chemistry. (3). An examination of molecular orbital theory; conservation of orbital symmetry, aromaticity and anti-aromaticity; symmetry characters, character tables, symmetry classification of molecules and representations of groups. A 13 735 0 1907


802. Historical and Qualitative Methodologies in Communication Research. (2). An introduction to historical, critical and observational methodologies in communication research. The course emphasizes historical, critical and observational research with particular emphasis on those forms of research common to communication studies. Prerequisite: Communication 801. A 32 802 0 0601

803. Empirical/Quantitative Research Methodology in Communication. (2). An introduction to empirical research methods in communication. The course emphasizes both experimental and nonexperimental research with particular emphasis on those forms of research common to communication studies. Students study research design, methods and reporting techniques. Prerequisite: Communication 801. A 32 803 0 0601

870. Directed Research. (2-3). Directed research culminating in a written research paper on a specific investigation, project or production. Supervised by a committee of three graduate faculty members with the committee chair acting as instructor of record and awarding the grade. Required of all Master of Arts in Communications (MAC) degree students who select the nonthesis option. Study should be in the student's area of emphasis. Course should be taken after completion of 24 hours of graduate work ap-
Computer Science

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 industry or government. The BS degree is especially useful for scientific applications or preparation for graduate study in computer science.

Math Requirements: Students earning the BS degree must complete a minimum of 15 hours of upper-division computer science courses (100-level or above) for the degree. Students earning the BA degree must complete a minimum of nine hours of upper-division computer science courses.

Mathematics: Math 111 (or equivalent) and 211. These courses are prerequisites to the required computer science courses.

Math Sequence Electives: Both the BS and BA degrees in computer science require students complete 15 hours of sequence electives. These 15 hours of associated course work give students some knowledge of a field where computer science is useful. Areas most frequently chosen are such computer science fields as artificial intelligence, software engineering, and systems analysis or related fields such as business, electrical engineering, and mathematics. All sequence electives must be approved by the departmental adviser.

Major: Bachelor of Science (BS). This degree requires a minimum of 40 hours of computer science and 16 hours of mathematics, including the following courses:

- Computer Science: 140, 200Q, 212, 216, 300, 405, 420, 485, 501, 510, 540, 560 and an additional computer science language.
- Mathematics: 112 (or equivalent), 242Q, 243, 211, 351Q.

Sequence Electives: 15 hours of course work chosen in consultation with the departmental academic adviser. (See above for details.)

Minor: The minor requires a minimum of 15 hours of upper-division computer science coursework, including the following courses:

- Computer Science: 140, 200Q, 212, six hours of upper-division computer science, course work and an additional course of the student's choice.
- Mathematics: Math 111 (or equivalent) and 211. These courses are prerequisites to the required computer science courses.

Note: To enroll in a computer science course, students must earn a grade of "C" or better in Eng. 101 and one of the following: Math 109, 111, 112 or 211. Exceptions to this prerequisite are the following courses designed for majors:

- CS 105, 110D, and 150.

Model Program for BS in Computer Science

Freshman Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 140, Introduction to Computer Hardware</td>
<td>3</td>
</tr>
<tr>
<td>Math. 112, Precalculus Mathematics (or equivalent)</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q, Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>CS 200Q, Introduction to Programming</td>
<td>2</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hist. 131Q or 132Q, History of the United States, or Pol. Sci. 121Q, American Politics</td>
<td>3</td>
</tr>
<tr>
<td>CS 212, PASCAL Programming</td>
<td>3</td>
</tr>
<tr>
<td>Math. 211, Elementary Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>CS 300, Fundamental Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CS 216, Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>Math. 243, Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>Social and behavioral science Q/G</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Q/G (literature)</td>
<td>3</td>
</tr>
<tr>
<td>Natural science Q/G</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>1-3</td>
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Junior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 340, Computer Organization and Programming</td>
<td>3</td>
</tr>
<tr>
<td>CS 405, File Processing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CS 420, Concepts of Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>Sequence electives for computer science</td>
<td>6</td>
</tr>
</tbody>
</table>

Graduate Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 331Q, Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral science Q/G</td>
<td>3</td>
</tr>
<tr>
<td>CS 501, Numerical Programming Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CS 540, Operating Systems and Architecture I</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Q/G</td>
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</table>

Senior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>CS 560, Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 510, Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>CS 465, Debugging Techniques</td>
<td>3</td>
</tr>
<tr>
<td>Sequence electives for computer science</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavior science elective</td>
<td>3</td>
</tr>
<tr>
<td>CS language</td>
<td>3</td>
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<td>Natural science electives</td>
<td>6-8</td>
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<td>Course</td>
<td>Hrs</td>
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<tr>
<td>--------------------------------------------</td>
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</tr>
<tr>
<td>CS 190, COBOL Language</td>
<td>3</td>
</tr>
<tr>
<td>CS 205, BASIC Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>CS 207, C Language</td>
<td>2</td>
</tr>
<tr>
<td>CS 212, PASCAL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CS 214, LISP Programming</td>
<td>3</td>
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<tr>
<td>CS 319, 2000Q or EE 198 and Math. 109, 111 or 112; or departmental consent. A 34 214 1 0704</td>
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<tr>
<td>CS 321, Ada Language</td>
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<td>CS 326, Assembly Language Programming</td>
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<td>CS 322, Introduction to Programming with Pascal</td>
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<td>CS 105, An Introduction to Computers</td>
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<td>CS 107, Computer Organization and Prog</td>
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<td>CS 140, Introduction to Digital Computer Hardware</td>
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<td>CS 150, Workshop</td>
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<td>CS 190, Introduction to Programming for Business</td>
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<td>CS 209, Introduction to Programming</td>
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<td>CS 202, PL/I Language</td>
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<td>CS 203, APL Programming</td>
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<td>CS 204, Introduction to Programming with C</td>
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<td>CS 206, BASIC Language Programming</td>
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<tr>
<td>CS 340, Microcomputing for Scientists and Engineers</td>
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| CS 345, Introduction to Computer Graphics  | 3   | An introduction to interactive computer graphics which presents the basic
405. File Processing Techniques. (3). 2R; 2L. Extending the student's knowledge of algorithm and data structure design to include file I/O processing. Topics include file blocking, sequential access and updating, external sorting, random access, data base, indexes, list file structure and trees. Prerequisite: CS 300 with a grade of "C" or better. A 3 4 0 4 5 1 0 7 0 4

410. Programming Languages. (3). Program design and programming languages, including scope of declarations, storage allocation, grouping of statements, binding time of constituents, subroutines and tasks. Prerequisite: CS 300 with a grade of "C" or better. A 3 4 5 1 0 7 0 4

512. Systems Programming. (5). 2R; 2L. A study of system software including assemblers, disassemblers, microprocessors, loaders, file systems, language translators, and debuggers. Practical experience in building system software through programming laboratory exercises. Prerequisite: CS 405 or equivalent with a "C" or better grade. A 3 5 1 2 1 0 7 0 4

515. Compiler/Interpreter Techniques. (3). 2R; 2L. Review of programming language structures, translation and implementation. Compiler structure with emphasis on the generation of program code, program optimization, error messages and optimization techniques. Prerequisite: CS 510. A 3 5 1 5 1 0 7 0 4

527. The History of Computing. (3). Cross-listed as Hist. 527. This course is a study of the development of automatic computing machines and related techniques. Of interest are the design and construction of these machines. Prerequisites: CS 140 and 300 and Math. 3310; with grades of "C" or better. A 3 4 2 0 0 7 0 7 1

481. Cooperative Education in Computer Science. (1-3). The goal of this course is to provide the student with 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. A 3 4 8 1 2 0 7 0 1

485. Debugging Techniques. (2). A study of the methods of locating errors in computer programs. Topics include code verification, test data selection, compiler options and debugging software. The student will apply the material by assisting other students for three hours each week in a debugging practicum. Prerequisites: CS 340 and 405. A 3 3 8 0 4 1 0 7 0 4

497. Special Topics. (1-3). Special topics of current interest in computer science. Prerequisite: departmental consent. A 3 4 9 7 0 7 0 1

498. Individual Projects. (2-3). Repeatable for a total of six hours of credit. Graded S/U only. Prerequisite: departmental consent. A 3 4 9 8 4 7 0 7 0 1

Courses for Graduate/Undergraduate Credit

501. Numerical Programming Techniques. (3). 2R; 2L. A study of the programming techniques used to solve nonlinear equations, interpolation, integrate and solve systems of linear equations. The implications of finite precision floating point arithmetic are discussed. Techniques for initial and boundary value problems in ordinary differential equations are also covered. Selected algorithms are implemented on the computer. Prerequisites: Math. 243 and CS 300 with grades of "C" or better. A 3 4 5 0 1 1 0 7 0 4

510. Programming Languages. (3). Formal definition of programming languages, including syntax and semantics. Also examined are underlying properties of algorithmic languages, including scope of declarations, storage allocation, grouping of statements, the relevance of Goden's theorem and other results in the domain of computability are discussed. 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. A 3 5 7 4 1 7 0 7 0 4

580. Introduction to Software Engineering. (3). 2R; 2L. An introduction to the body of knowledge, presently available tools and currently accepted practices regarding the process of program development. These topics are studied from several different viewpoints, ranging from the individual program statement to a large programming project. Prerequisites: CS 340 and 405 and three of the CS courses numbered 201 through 218. A 3 5 8 0 1 7 0 7 0 4

611. ADA and Software Engineering. (3). 2R; 2L. An in-depth study of the programming language ADA with an emphasis on understanding the software engineering principles of the language. Focus is on the novel features the language has to offer such as packages, generics, separate compilation and multitasking structures. Laboratories are designed to reinforce textbook knowledge of the language. Prerequisite: CS 510. A 3 6 1 1 1 7 0 7 0 4

640. VLSI Systems Design. (3). 2R; 2L. Topics include an introduction to VLSI system design, MOS switch, integrated system fabrication processes, modern computer system architectures, implementation of integrated system design, overview of an LSI computer system, design of integrated system controllers, and system timing and highly concurrent systems. Prerequisite: CS 340 or equivalent. A 3 6 4 0 1 7 0 7 0 4

641. Small Systems Architecture. (3). A course on minicomputers and microcomputers and on how small computers are used to construct larger ones. Includes general concepts of computer organization and architecture; study of how microprocessors are used to build computer systems, the differences between large computers and small computers and the special features of small computers, such as horizontal and vertical microprogramming; use of display terminals, cassette tapes, disk drives, microcomputers and small networks of small computers, and trends in small computer use and design. Prerequisite: CS 340 OR EE 594. A 3 6 4 0 1 7 0 7 0 4

642. Computer Communication Networks. (3). 2R; 2L. Introduction to computer communication networks, including topics such as network protocols, data transmission, network topologies, connectivity analysis, delay analysis for networks of M/M/1 queues, network architectures, protocol hierarchies, design issues for the Internet infrastructure model and protocol descriptions for present computer communication networks. Prerequisite: CS 340 or equivalent. A 3 6 4 2 1 7 0 7 0 4

644. On-Line Computer Systems. (3). Characteristics of dedicated, business-oriented computer systems, as contrasted with multiprogrammed computer systems. Study focuses on hardware requirements, design methodologies for application programs and data bases and characteristics of typical operating systems. Prerequisites: CS 340 and 405 and Math. 3310 or equivalent. A 3 6 4 4 2 7 0 7 0 4

675. Numerical Methods. (3). A continuation of CS 501 emphasizing the theoretical
aspects of the algorithms treated. The course includes the solution of the eigenvalue problem, approximation and numerical solution of partial differential equations. Prerequisites: CS 501 and Math 511. A 34 675 0 0704

684. Applications Systems Analysis. (3). A study of the methods for analyzing business systems, problems, and other large-scale applications of the computer. At the crossroads of computer technology, management science and human relations, systems analysis is a key role in the education of the well-trained computer applications analyst. Topics include systems design, cost benefit, data base, distributed processing, project management, and documentation. Prerequisites: CS 495 or equivalent, plus programming experience with departmental consent. A 34 684 0 0705

697. Selected Topics. (1-3). Selected topics of current interest. Repeatable for credit with departmental consent. Prerequisite: departmental consent. A 34 697 0 0701

720. Theoretical Foundations of Computer and Information Sciences. (3). This course provides an advanced-level introduction to the theoretical bases of computer science and related concepts in information science. Computer science theory includes the various models of finite state machines, both deterministic and non-deterministic, and the concepts of decidability, computability and formal language theory. Topics in information science include basic coding theory, cybernetics and models of the human brain and their relevance to machine intelligence. Prerequisite: CS 420 or graduate standing. A 34 720 0 0701

750. Workshop in Computer Science. (1-5). Short-term courses with special focus on introducing computer science concepts. Repeatable for credit. Prerequisite: departmental consent. A 34 750 0 0701

771. Artificial Intelligence. (3). Heuristic versus algorithmic methods, principles of heuristic approach and cognitive processes. Also covered are objectives and methods of artificial intelligence research and simulation of cognitive behavior. A survey of appropriate examples from various areas of artificial intelligence research is included. Prerequisite: CS 300. A 34 771 0 0704

773. Pattern Recognition. (3). An introduction to pattern recognition and image processing, including clustering algorithms, cluster validity, texture extraction, classifier design, Bayes decision theory, parameter estimation, discriminant functions, syntactic pattern recognition, image enhancement, image registration, FFT, texture and application in various fields. Prerequisites: CS 212 and 300 and Math. 311 or 511, 243 and 3310 with grades of “C” or better. Math. 370 recommended but not required. A 34 773 0 0707

776. Expert Systems. (3). Planning, construction and application of expert systems. Major aspects of expert system design are discussed. The limitations of expert system technology are illustrated and various examples, including data representation, knowledge bases, inference engines, user interfaces, and expert system shells, are explained. Emphasis is on explaining with uncertainty. Basics of a production system language are introduced. Prerequisite: CS 580 or instructor’s consent. A 34 776 0 0799

798. Individual Projects. (1-3). Allows beginning graduate students and mature undergraduate students to pursue individual projects of current interest in computer science. Graded S/U only. Prerequisite: departmental consent. A 34 798 0 0701

Courses for Graduate Students Only

805. Compiler Theory. (3). Theory of compilation of programming languages. Finite state machine machines, transfer and control structures, phrase-structure grammars, abstract syntax and semantic. Prerequisite: CS 420. A 34 805 0 0704

810. Programming Languages: Advanced Concepts. (3). An advanced study of programming language structures and design. Data and control access in closed and open abstraction. Concurrent programming structures. Formal specifications of syntax and semantics, including models for describing programming languages. Prerequisites: CS 510 and 720. A 34 810 0 0704

821. Analysis of Algorithms. (3). Introduction to the techniques used to analyze both specific algorithms and classes of algorithms. Use of recursive techniques, including Knuth’s timer and random access methods. Programming in Haskell. Specific techniques, such as divide-and-conquer, recurrence equations and dynamic programming, are studied. Applications to set operations, hashing, graph searching, transitive closure and string matching are analyzed. Prerequisites: CS 490 and either 420 or graduate standing. A 34 821 0 0702

841. Advanced Computer Architecture. (3). A study of advanced topics in computer architecture like parallel processing, stack architectures, computer performance evaluation. Specific languages, such as FORTRAN, COBOL, and assembly language design. Prerequisite: CS 510 and 720. A 34 810 0 0704

842. Operating Systems Concepts. (3). A comprehensive study of the design of executive software for systems ranging from simple multiprogramming to multiprocessor and network environments. Concepts of concurrent and parallel processes, related problems of intra- and inter-system communication, synchronization and integrity are addressed. General principles of resource management as related single-processor and multiprocessor operating systems are addressed. Prerequisite: CS 540. A 34 842 0 0702

843. Distributed Computing Systems. (3). A study of hardware and software features of on-line multiple computer systems with an emphasis on network design and telecommunications. Topics include distributed data bases, interprocessor communication, coordination and synchronization versus distribution. Study of analysis of computer systems is included. Prerequisite: CS 540 or 64 or EE 694. A 34 843 0 0703

862. Principles of Data Base Design. (3). An advanced treatment of the principles of data base design. The following issues are addressed: logical design, including relational model; physical design, including new technological advances in implementing very large data bases, security and integrity of data, and distributed data base networks. Prerequisite: CS 560. A 34 862 0 0702

872. Machine Learning and Discovery. (3). An advanced study of computer programs that learn, improve performance and make discoveries. Topics include learning, probabilistic 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. The course includes participation in a group project such as developing a computer learning system. Prerequisites: CS 771 or 214 or 574, or CS 214 and 773. A 34 872 0 0709

873. Computer Vision. (3). An introduction to computer vision, a rapidly growing subfield of artificial intelligence. Includes the understanding or description of images by a computer or robot. Two-dimensional Fourier analysis, scene matching and understanding, texture, motion, shape recognition, relational and network environments. Concepts of connectivity and relational model; physical design, including new technological advances in implementing very large data bases, security and integrity of data, and distributed data base networks. Prerequisite: CS 560. A 34 862 0 0702

874. Simulation and Modeling. (3). An up-to-date treatment of the important aspects of computer simulation, including data generation and testing, construction and verification of simulation models, simulation with high-level programming languages and simulation with GPSS. Prerequisites: CS 300 or AE 327, Math. 344 and Stat. 571 or IE 354. A 34 874 0 0799

882. Software Testing and Reliability. (3). A study of the ingredients of software quality assurance and their interactions, characteristics of software quality and methods of measurement, software reliability models and program testing and tools for software development and testing. Methods for proving program correctness and comparison. Prerequisite: CS 560. A 34 882 0 0705

890. Graduate Seminar. (2). A series of seminars on topics of current research interest in computer science. Participants are required to present one or two seminars on topic(s) to be selected with the approval of their graduate advisers. Repeatable up to four credit hours. Graded S/U only. Prerequisite: departmental consent. A 34 890 0 0701

891. Practicum. (3). An intensive applied learning experience, involving the analysis and solution of a significant practical problem in an industrial or corporate setting. A capstone experience. Students are required to participate in a departmental seminar where their practicum experiences are shared with other students and faculty. Graded S/U. Prerequisite: departmental consent. A 34 891 0 0701

892. Thesis. (1-6). May be repeated for up to six credits of credit. Graded S/U only. Prerequisite: departmental consent. A 34 892 0 0701

893. Individual Reading. (1-5). Graded S/U only. Prerequisite: departmental consent. A 34 893 0 0701

898. Special Topics. (2-3). Topics of current interest to advanced students of computer science. Repeatable for credit with depart-
Economics

Major: The economics major in Fairmount College of Liberal Arts and Sciences consists of a minimum of 31 hours and a maximum of 41 hours. Econ. 201Q, 202Q, 231, 301, 302 and 340 are required along with Math. 111 and 144. Math. 112 may be accepted in lieu of Math. 111. Students who plan to continue their study of economics in a PhD program should consult an adviser in the Department of Economics and, in most cases, include additional mathematics courses.

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. 100, 101G, 200G 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 adviser in the College of Education for program planning.

Courses: Economics courses are listed in the College of Business Administration section of the Catalog.

English Language and Literature

English Language and Literature

Major: A major consists of 33 hours, three of which may, with departmental consent, be taken in a cognate subject (such as foreign literature, theater, etc.) offered in a course by another department. The course work must be distributed as follows:

I. Basic Requirements (12 hours)
   Eng. 272Q*, 310*, 3200*, or 3300, 274 or 315

II. Major Requirements (21 hours with at least 15 upper-division) from Eng. 223, 224Q, 262Q, 275Q, 285Q, 2900, 3200, 3300Q, 3400Q, 342, 345, 355, 450, 503, 504, 512, 513, 514, 515, 521, 522, 524, 526, 527, 532, 533, 535, 536, 580, 610 and 685Q

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*, 3200*, or 3300Q*, 274 or 315

II. Major Requirements (3 hours)
   Eng. 2850 (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 Eng. 301, 303, 401, 403, 517, 518, 555, 556, 604, 605 (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 consists of 15 hours and requires Eng. 310, 3200 or 3300Q 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.

Composition

Noncredit Course

011. Syntax, Logic and Organization (3). Offered Cr/NCr only. Designed for students who wish to review the basic elements of written English, this course combines lecture, small-group discussion and individual tutoring. For students whose ACT scores are 16 below on ACT-English, or when placement test scores do not qualify them for Eng. 101. Credit cannot be applied for graduation. A 14 011 0 1501

Lower-Division Courses

101. College English I. (3). A course emphasizing reading, listening, writing and thinking abilities, as well as library skills. Prerequisite: qualifying score on ACT or placement exam. A 14 101 0 1501

102. College English II. (3). A course emphasizing critical reading, research, and argumentation. Eng. 102 should be taken sequentially with Eng. 101 in the freshman year. Prerequisite: Eng. 101, with a grade of "C" or better. A 14 102 0 1501

103. Reading, Thinking and Writing. (3). A third semester of English composition. Writing assignments are based on literature read during the semester. Reading material varies from instructor to instructor, but generally follows a specific theme. Prerequisite: Eng. 101 and 102. A 14 103 0 1501

150. Workshop. (1-4). Repeatable for credit. Material varies according to the needs of students. A 14 150 2 1502

210. Composition: Business, Professional and Technical Writing. (3). Prerequisites: Eng. 101 and 102 or instructor's consent. A 14 210 0 0631

Upper-Division Course

481. Cooperative Education. (1-3). This course is designed to provide 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. A 14 481 0 1507
Courses for Graduate/Undergraduate Credit

510. Peer Tutoring. (2). Explores strategies for using peer tutoring and collaborative learning to teach composition. Special emphasis is given to diagnosis and evaluation of students' reading and writing abilities, conducting individual and group conferences, the writing process, the basic elements of Standard Written English and the theories of second language and dialect acquisition. Concurrent enrollment in Eng. 511 recommended. This course or equivalent preparation required of all intending to serve as tutors in the writing lab. Prerequisite: instructor's consent. A 14 510 0 1507

511. Tutorial Practicum. (1). Required of all students intending to serve as tutors in the writing lab, this course provides supervised tutoring experience. Prerequisite: previous or concurrent enrollment in Eng. 510. A 14 511 2 1507

680. Theory and Practice in Composition. (3). Introduction to theories of rhetoric, research in composition and writing programs and practices in schools and colleges. Students investigate the process of writing, analyze various areas and samples of school writing and develop their own writing skills by writing, revising, and evaluating their own and others' work. The course is designed especially for prospective and practicing teachers and may not be taken for credit by students with credit in Eng. 780. A 14 680 0 1507

685Q. Advanced Composition. (3). This course explores the relationships among contemporary issues, problem-solving and communication. The first objective of the course is to engage students in interdisciplinary inquiry into some aspect of social policy, inquiry when asked students to apply the analytical approaches of their major fields to current issues of broad, general interest. The second objective of the course is to develop students' abilities to communicate their knowledge and assumptions about this issue to a variety of audiences and for a variety of purposes. Prerequisites: Eng. 101 and 102 and upper-division standing. A 14 685Q 0 1507

780. Advanced Theory and Practice in Composition. (3). Designed for teaching assistants in English. Review of new theories of rhetoric, recent research in composition and new promising developments in composition programs in schools and colleges. Students are given practice in advanced writing problems, situations and techniques and may propose projects for further special study. A 14 780 0 1501

Creative Writing

Lower-Division Course

285Q. Introduction to Creative Writing. (3). An introductory course for students interested in the techniques and practices of imaginative writing in its varied forms. This course may be used to fulfill the general education requirement only as an elective (studio and performance). Prerequisites: Eng. 101 and 102. A 14 285Q 0 1507

Upper-Division Courses

301. Creative Writing: Prose Fiction. (3). May be repeated for up to six hours of credit. Prerequisite: Eng. 285Q with a grade of "B" or better. A 14 301 0 1507

303. Creative Writing: Poetry. (3). May be repeated for up to six hours of credit. Prerequisite: Eng. 285Q with a grade of "B" or better. A 14 303 0 1507

401. Advanced Creative Writing: Prose Fiction. (3). An advanced course for students developing the skills of writing, revising, and polishing prose fiction. Prerequisites: Eng. 285Q and at least three hours of Eng. 301. A 14 401 0 1507

403. Advanced Creative Writing: Poetry. (3). An advanced course for students developing the skills of writing, revising, and polishing poetry. Prerequisites: Eng. 285Q and at least three hours of Eng. 303. A 14 403 0 1507

Courses for Graduate/Undergraduate Credit

517-518. Playwriting I and II. (3; 3). Cross-listed as Speech 517 and 518. Not repeatable for credit. A 14 517 0 1507; A 14 518 0 1507

585. Writer's Tutorial: Prose Fiction. (3). Tutorial work in creative writing in prose fiction. Prerequisite: consent of creative writing director. A 14 585 0 1507

586. Writer's Tutorial: Poetry. (3). Tutorial work in creative writing in poetry. Prerequisite: consent of creative writing director. A 14 586 0 1507

604. Writing Seminar: Fiction. (3). An advanced course designed primarily for the nongraduate student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of short fiction. Not credited toward the MFA degree. Prerequisites: six hours of undergraduate creative writing or instructor consent based on submitted manuscript. Departmental consent required for undergraduate enrollment. A 14 604 0 1507

605. Writing Seminar: Poetry. (3). An advanced course designed primarily for the nongraduate student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of poetry. Not credited toward the MFA degree. Prerequisites: six hours of undergraduate creative writing or instructor consent based on submitted manuscript. Departmental consent required for undergraduate enrollment. A 14 605 0 1507

675. Master of Fine Arts Essay. (1-6). A 14 675 0 1507

875. Writer's Tutorial: Poetry. (3). S/U grade only. Tutorial work in creative writing in poetry. Prerequisite: writing writer. A 14 875 0 1507

Linguistics

Upper-Division Course

351. Introduction to English Linguistics. (3). Cross-listed as Ling. 351. Introduction to theoretical linguistics, including phonological and grammatical concepts. A 14 351 0 1505

Courses for Graduate/Undergraduate Credit

665. History of the English Language. (3). Cross-listed as Ling. 665. Linguistic and cultural investigation of the development of English. Prerequisite: Eng. 315 or Ling. 577 or departmental consent. A 14 665 0 1505

667. English Syntax. (3). Cross-listed as Ling. 667 and Anthro. 667. A study of the basic principles of English syntax, covering the major facts of English sentence construction and relating them to linguistic theory. Prerequisite: Eng. 315 or equivalent or departmental consent. A 14 667 0 1505

672. Studies in Language Variety. (3). Cross-listed as Ling. 672. An introduction to the study of language variety with special attention to regional and class dialect in America and methods of studying it. May be repeated for credit when content changes. Prerequisite: Eng. 315 or Ling. 577 or departmental consent. A 14 672 0 1505

727. Teaching English as a Second Language. (2-3). Cross-listed as Ling. 727 and CDS 727. Current methods of teaching English to non-native speakers are discussed. Students learn to analyze interlanguage patterns and design appropriate teaching units for class and language laboratory use. A 14 727 0 1220

740. Graduate Studies in Linguistics. (3). Selected topics in theories of language and methods of linguistic study. With departmental consent, this course is repeatable for credit. A 14 740 0 1505

Literature

Lower-Division Courses

220G. The Literary Heritage: English Masterpieces. (3). This course is intended to introduce the lower-division general student to selections from the English masterpieces that constitute the literary heritage. A 14 220G 0 1502

223. Books and Ideas. (3). Reading, discussing, and writing about literature from all periods and cultures (fiction, poetry, drama and essays). Designed especially for non-English majors; not credited toward an MFA major or minor. A 14 223 0 1502

2240. 20th Century British and American Literature. (3). The major works of important British and American authors of the 20th century. A 14 2240 0 1502

230G. Exploring Literature. (3). Perceptive reading of literature in its major traditional periods and in its various genres (especially fiction, drama and poetry). The object is to develop the appreciation and understanding of literature: what it is, what it does and how it does it. Readings are selected with care to the needs and interests of non-
English majors and a cultural rather than a technical approach is employed. A 14 230G 0 1502

232G. Themes in American Literature. (3). Instruction in perceptive reading through the study of representative works in American fiction, poetry, drama and the essay. Emphasis is on understanding and appreciation of central themes and dominant ideas. Multimedia presentations and two closely correlated to the representative works being studied, amplify the scope and range of literature per se. Media include films, recordings and readings. A 14 233G 0 1502

252Q. Modern American Writers. (3). A survey of important works by major American writers since World War I. A 14 250G 0 1502

262Q. American Writers of the 19th Century. (3). A course devoted to 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. A 14 262Q 0 1502

272Q. Origins of the Western Literary Tradition. (3). A study of the literary forms that first appear in classical and Biblical literature and in early literature in the Near East. Readings from mythology, the classics and selected books of the Bible. A 14 272Q 0 1502

274. The Language of Literature. (3). An examination of the principles and problems of literary interpretation that are especially related to language structure. A 14 274Q 0 1502

275Q. Studies in Popular Literature. (3). Cross-listed as Amer. Stud. 310. A course devoted to study of various forms of popular literature (e.g., revolutionary literature, science fiction, western fiction, detective novel) with an emphasis both on the literary merits of the work and the way it reflects popular tastes and values. Repeatable for credit with change of content. A 14 275Q 0 1503

290Q. The Bible as Literature. (3). The Bible is studied as a literary artifact through extensive readings in both Old and New Testament literature. In studying the Bible, students are exposed to the literary forms of early religious literature and their role in the growth of Western literature. A 14 290Q 0 1501

Upper-Division Courses

307G. Narrative in Literature and Film. (3). 2R/2L. A comparative aesthetic analysis of the art of narration in literature and especially in film. A 14 307G 0 1501

310. The Nature of Poetry. (3). Designed to acquaint the student with the variety of poetic forms and techniques. Considerations of culture, history and poetic theory are noted as background to the works under study, but the course primarily emphasizes the characteristics of poetry as a literary communication. A 14 310Q 0 1502

320Q. The Nature of Drama. (3). A course designed to acquaint the student with the literature of drama as a form of literary expression. While introducing the student to a variety of plays drawn from different cultures and historical periods, the course focuses primarily on the characteristics of drama, giving some attention to dramatic history and theory. A 14 320Q 0 1502

330Q. The Nature of Fiction. (3). A course designed to acquaint the student with narrative fiction in a variety of forms, the short story, the novella and the novel, from the German Romantic period to the present. Discussions may include such topics as the historical evolution of American fiction, the development of the novel and romance, the transcendental period and the rise of regional and western literatures. A 14 330Q 0 1502

334Q. Major Plays of Shakespeare. (3). Designed for students who wish to study the major works of Shakespeare's career in one semester. Students who take this course may take Eng. 515 once for credit. A 14 334Q 0 1502

342. American Folklore. (3). Cross-listed as Amer. Stud. 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. A 14 342Q 0 1502

345. Studies in Comparative Literature. (3). A survey course designed to acquaint the student with the major modes that have shaped the Western literary tradition with emphasis on the contrasting 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. A 14 345Q 0 1502

365. Afro-American Literature. (3). A survey course designed to acquaint the student with the most significant Afro-American writers from the 1700s to the present. Lectures cover 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: Eng. 101 and 102. A 14 365Q 0 1502

400Q. The Literary Imagination: Epic, Romance, Tragedy, Comedy. (3). A course designed to acquaint the general student with the major modes that have shaped the Western literary tradition. It focuses on the ten- der and the modern. The major kinds of fictions that sustain the human demand for various forms of literary pleasure—pleasure that derives from the experience of love and war on a heroic scale (epic and romance) and finding laughter (tragedy and comedy) and human folly (comedy and satire). The course also acquaints students with the nature of literary inquiry by approaching works from a variety of critical perspectives. A 14 400Q 0 1502

459. Independent Reading. (1-3). Designed for majors and nonmajors who wish to pursue special reading or research projects in areas not normally covered in course work. Repeatable for credit. Prerequisite: departmental consent. A 14 459S 0 1502

Courses for Graduate/Undergraduate Credit

503. Studies in American Literature I. (3). A course in the major fiction, poetry and nonfiction prose of the English literary magazine period. Discussions may include such topics as the historical evolution of American letters, the development of the novel and romance, the transcendental period and the rise of regional literatures. A 14 503Q 0 1502

504. Studies in American Literature II. (3). Fiction, poetry and drama from the late 19th century to World War II. Readings may also include literary criticism and other types of nonfiction prose. Discussions may cover themes, topics and literary forms inspired by the social and cultural movements and events of the first half of the 20th century. A 14 504Q 0 1502

512. Studies in Fiction. (3). Subjects to be announced each semester. Repeatable for credit. A 14 512Q 0 1502

513. Studies in Poetry. (3). Subjects to be announced each semester. Repeatable for credit. A 14 513Q 0 1502

514. Studies in Drama. (3). Subjects to be announced each semester. Repeatable for credit. A 14 514Q 0 1502

515. Studies in Shakespeare. (3). Subjects to be announced each semester. Repeatable for credit, except by students who take Eng. 340. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 515Q 0 1502

521. Readings in Medieval Literature. (3). Engilsh and Continental literature, 12th to 16th century. Chaucer, Malory, The Pearl, medieval lyric, drama, epic, romance and saga. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 521Q 0 1502

522. Readings in Renaissance Literature. (3). Sidney, Spenser, Shakespeare (poetry), Donne, Jonson, Marlowe and their contemporaries. Prerequisites: junior standing and one college literature course, or instructor's consent. A 14 522Q 0 1502

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. A 14 524Q 0 1502

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. A 14 526Q 0 1502

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. A 14 527Q 0 1502

532. Studies in British Literature (to 1950). (3). English and Irish literature of the first half of the 20th century. Subjects to be announced each semester. Repeatable for credit. A 14 532Q 0 1502

533. Studies in Contemporary Literature. (3). Modern literature of the British, primarily British and American, since 1950. Subjects to be announced each semester. Repeatable for credit. A 14 533Q 0 1502

535. Images of Women in Literature. (3). Cross-listed as WS 535. Women characters as stereotypes, archetypes and fully developed human beings in the works of various authors. A 14 535Q 0 1502

536. Writing by Women. (3). Cross-listed as WS 536Q. The work of major women writers, both British and American, in poetry and prose. A 14 536Q 0 1502
Courses for Graduate Students Only

800. Introduction to Graduate Study in English. (3). Especially designed to prepare students to perform effectively in graduate classes in English. The course is 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. 14 800 0 1502

817. Graduate Readings in 20th Century British Literature. (3). Yeats, Joyce, Lawrence, Auden, Spender and their contemporaries. A 14 817 9 1502

821. Graduate Readings in American Literature I. (3). From the beginnings to 1870 with emphasis on Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson. A 14 821 9 1502

822. Graduate Readings in American Literature II. (3). From 1870 to 1920 with emphasis on James, Twain, Crane, Dreiser, Robinson and Frost. A 14 822 9 1502

823. Graduate Readings in American Literature III. (3). From 1920 to 1970, including Eliot, Stevens, Hemingway, Faulkner and their contemporaries. A 14 823 9 1502

825. Theories of Rhetoric: Classical. (3). Cross-listed as Speech 830. An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Principal emphasis is on Isocrates, Plato, Aristotle, Quintilian, Cicero and Longinus. A 14 825 9 1502

826. Theories of Rhetoric: Renaissance to Early Modern. (3). Cross-listed as Speech 831. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analysis is made of the rhetorical systems associated with such figur es as Augustine, Petronius, Pushkin, Shevchenko, Stendhal, Tolstoy, John Quincy Adams, Blair, Campbell and Whately. A 14 826 9 1502

830. Graduate Studies in Drama. (3). Selected topics in the history and nature of dramatic literature. A 14 830 9 1502

832. Graduate Studies in Fiction. (3). Selected topics in the development of the form and content of prose fiction. A 14 832 9 1502

834. Graduate Studies in Poetry. (3). Selected topics in forms, techniques and history of poetry. A 14 834 9 1502

840. Graduate Studies in Criticism. (3). Selected topics in the theory and practice of literary criticism. A 14 840 9 1502

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. A 14 845 9 1502

855. Directed Reading. (2-3). Designed for graduate students who want to pursue special research in areas not normally covered in course work. Repeatable for credit with departmental consent. A 14 855 3 1502

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. A 14 860 9 1502

870. Master's Essay. (2-3). A 14 870 4 1502

875. MFA Essay. (3-6). A 14 875 4 1502

Film Studies

The film studies minor at The 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 15 semester hours from the courses listed below, selected with the approval of the coordinator of film studies.

The Wichita State University does not at this time offer a film studies major.

French (See Modern and Classical Languages and Literatures)

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 are available. Contact the Department of Geology for further information.

The geology program emphasizes field and laboratory skills in sedimentology/stratigraphy and related fields. Particular attention is directed to solving problems of mineral exploration, mineral-resource evaluation and depletion and the environment.

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. 1110, General Geology
2. Geol. 312, Historical Geology; 320, Mineralogy; and 324, Petrology
3. Geol. 540, Field Mapping; 544, Structural Geology; and 570, Biogeology
4. Nine additional hours of upper-division geology electives or other sciences with prior written approval of the department.

Required supporting sciences for the BA are:

1. Any approved course in biological sciences
2. Any one of the following groups
   a. Chem. 111Q or 123Q, and Phys. 213Q and 214Q (or 311 and 312)
   b. Chem. 111Q and 112Q (or 123Q and 124Q) and Phys. 213Q or 311
3. Math. 242Q, 243 and 370
4. CS 200/201 (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; 320, Mineralogy; and 324, Petrology
3. Geol. 523, Igneous and Metamorphic Geology, or 526, Sedimentary Geology; 540, Field Mapping; 544, Structural Geology; 552, Physical Stratigraphy; 560, Geomorphology; 570, Biogeology; and 581, Numerical Geology.

4. Geol. 640, Field Geology

An applied geology course that includes either Geol. 620, Geochemistry, 650, Geohydrology, 660, Geophysics, 680, Economic Geology; or 682, Petroleum Geology.

5. One additional course from the 500-level courses and above.

Required supporting sciences for the BS degree are:

1. All those courses listed for the BA degree.
2. Chem. 112Q (or 124Q) or Physics 214Q (or 312), to complete a one-year sequence each in chemistry and physics.

BA candidates must meet the language requirements of Fairmount College of Liberal Arts and Sciences. BS candidates must elect one of the following options: (a) ten hours of modern language, (b) an additional nine hours of computer science/mathematics or (c) an additional nine hours of statistics/computer science. Students electing options (b) or (c) must get prior written approval from the department chairperson for an approved program of courses. Election of one of the two options for language requirements will not alter existing departmental mathematics requirements.

Geology Minor. A minor in geology consists of at least 15 hours of geology, including Geol. 111Q, Generals, Geology.

Geography Minor. A minor in geography consists of at least 15 hours, including Geog. 125Q or 201 or the equivalent. It is suggested that students minoring in geology or geography consult with the department in selecting courses most appropriate to their major field of study.

Nonmajor and Nonminor Students. A nonmajor or nonminor student who wishes to achieve the broadest terminal background knowledge of geology is advised to take Geol. 111Q, General Geology, and 312, Historical Geology. Similar advice is offered to the potential major whose decision to elect geology is pending.

Geology

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. A 16 101Q 0 1901

110Q. General Geology. (4), 3R; 2L. Lab fee. An overview of the earth; the concepts of its origin, composition, materials, structure, landscapes and history, and natural processes operating within the earth's environment. Field trips into the earth laboratory may be required. A 16 111Q 1 1914

150. Workshop. (1-4). Short-term courses with special focus on geological problems. Prerequisite: instructor's consent. A 16 150 2 1914

Upper-Division Courses

300G. Energy, Resources and Environment. (3). An examination of man's effects on his environment and man's dependence on earth resources in meeting his needs. The significance of availability and location of energy and mineral resources will be examined relative to the protection and improvement of man's environment and minerals for a high standard of living. Some emphasis on urban geography. A 16 300G 0 1914

302Q. Earth and Space Sciences. (3), 2R; 2L. Lab fee. A general survey of man's physical environment, including elements of geology, geography, meteorology, climatology, and astronomy. Prerequisite: instructor's consent. A 16 302Q 1 1917

310. Oceanography. (3). 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 of the sea and man's effect on the marine environment. A 16 310 0 1914

312. Historical Geology. (3), 2R; 3L. Lab fee. A systematic review of earth history and its preservation in the rock record using field evidence for sequences of biological and tectonic events in selected areas. Also included are the origin and evolution of life. Field trips may be required. Prerequisite: Geol. 111Q or 302Q or equivalent. A 16 312 1 1914

320. Mineralogy. (3), 1R; 6L. Lab fee. Elementary crystallography. A study of the origin, composition and structure of the rock-forming minerals with laboratory emphasis on recognition of their common conditions and applications, associations and identification. Field trips may be required. Prerequisite: Geol. 111Q. A 16 320 1 1914

324. Petrology. (3). 1R; 6L. Lab fee. The origin, distribution, occurrence, description and classification of igneous and metamorphic rocks. Laboratory emphasis on the identification of rocks. Field trips may be required. Prerequisite: Geol. 320. A 16 324 1 1914

410. Honors in Geology. (3). Senior thesis for departmental honors. The independent study of a topic of field problems may be required. Prerequisite: acceptance by the Emory Lindquist Honors Program and departmental approval. A 16 410 4 1914

430. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geologic influence. The course is given upon demand and may be repeated for credit when course locality and content differ. Where appropriate, travel, lodging and board costs are charged. A 16 430 2 1914

Courses for Graduate/Undergraduate Credit

501. Raw Materials of Antiquity. (3). 2R; 2L. Lab fee. Nature of rocks, minerals and metallic ores used in prehistory and ancient times. Also included are 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; and mining and metallurgical processes of antiquity. Prerequisite: Anthro. 501 or equivalent or instructor's consent. A 16 501 1 1914

520. Optical Mineralogy. (3). 1R; 6L. Lab fee. Optical properties of amorphous and crystalline materials in polarized light. Use of the petrographic microscope in the quantitative determination of rock-forming minerals and mineraloids in thin section is used and immersion oil methods are introduced. Prerequisite: Geol. 320. A 16 520 1 1914

523. Igneous and Metamorphic Geology. (3). 2R; 3L. The evolutions of igneous and metamorphic rocks, their structures and the physicochemical processes controlling their origin, Petrochemical calculations, systematic petrographic examination and classification of igneous and metamorphic minerals and rock suites. Field trips may be required. Prerequisite: Geol. 520. A 16 523 1 1914

524. Petrography. (3), 1R; 6L. Lab fee. Description, classification and analysis of plutonic and volcanic igneous rocks, granulite and foliated metamorphic rocks; clastic and chemical sedimentary rocks; and well cuttings with the petrographic microscope. Prerequisite: Geol. 520. A 16 524 1 1914

526. Sedimentary Geology. (3). 2R; 3L. Lab fee. Origin, classification, primary structures and physicochemical processes controlling deposition of sedimentary rocks, especially carbonates. An analysis of modern and ancient sedimentary depositional environments is included, as is a systematic petrographic study of sedimentary rocks in thin section, insoluble residues and heavy-mineral analysis. Field trips may be required. Prerequisite: Geol. 324. A 16 526 1 1914

540. Field Mapping Methods. (3). 9L. Lab fee. Field mapping methods with special reference to use of level, compass, barometer, alidade and air photos. Field trips are required. Prerequisite: Geol. 201 or Geol. 111Q. A 16 540 1 1914

544. Structural Geology. (3), 2R; 3L. Lab fee. 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. Field trips are required. Prerequisites: Math. 112 or 123 and Geol. 552 (or taken concurrently) A 16 544 1 1914
552. Physical Stratigraphy. (3). 2R; 3L Lab fee. Description, classification, correlation, and interpretation of stratiographic rock units and the origin of primary structures of clastic sedimentary rocks. Laboratory emphasis is on binocular microscopic examination of thin sections and on analysis of fossils and of detrital sediments and clastic sedimentary rocks. Field instruction in stratigraphic mapping methods is required. Prerequisites: Geol. 320 and 540 or equivalent. A 16 552 1 1914

560. Geomorphology. (3). 2R; 3L Lab fee. Identification and interpretation of the genesis of landforms and a critical examination of processes producing the landforms, including elements of quantitative geomorphology. Field trips are required at the option of the instructor. Prerequisite: Geol. 111 Q. A 16 560 1 1914

562. Regional Geology of the United States. (3). A detailed regional survey of the general geology, geomorphology, stratigraphy and structural geology and their interrelationships. Field trips are required at the option of the instructor. Prerequisite: Geol. 560 or instructor's consent. A 16 562 0 1914

564. Map and Airphoto Interpretation. (3). 2R; 3L Lab fee. Elements of map and aerial photographic composition; interpretation and application of maps and photos in geology, geography, urban planning, land-use inventory and engineering works. Remote-sensing methods are introduced. Field trips are required at the option of the instructor. Prerequisite: Geol. 111 Q, Geog. 201 or equivalent. A 16 564 1 1914

570. Biogeology. (3). 2R; 3L Lab fee. Systematic survey of major fossil biogeochemical materials, analysis of the origin and evolution of life and paleoecological interpretation of ancient environments and climates. Handouts and binocular microscopic examination is made of major fossil biogeochemical materials. Application of analyzed fossil data to the development of paleobiological and paleoecological paleozoology and paleoecography is included. Examples are cited from fields of invertebrate, vertebrate and micro-paleobiology. Museum and field trips may be required. Prerequisite: Geol. 312 or 552. A 16 570 1 1918

574. Special Studies in Biogeology. (3). 2R; 3L Lab fee. A systematic study in selected areas of biogeology and paleontology. Course content differs, upon demand, to provide in-depth analysis in the fields of: (a) invertebrate paleontology, (b) vertebrate paleontology, (c) micropaleontology, (d) palynology and (e) paleoecology. Appropriate laboratory instruction is given in the systematic, taxonomy and biogeological relationships within the selected fields listed. Field trips may be required. Repeatable for credit to cover all five areas listed. A 16 574 1 1918

581. Numerical Geology. (3). 2R; 3L Lab fee. Treatment of numerical data in geology, including univariate and bivariate statistics and elementary programming in FORTRAN. A study of geological data and computer techniques used to analyze them as well as case histories of applications, are emphasized. Prerequisites: Geol. 111 Q, Math. 370, CS 200/201 or permission of instructor. A 16 581 1 1914

620. Geochemistry. (3). The chemistry of earth materials and the important geochemical processes and cycles operating on and within the earth through time. Prerequisites: Geol. 324 and Chem. 112. A 16 620 0 1915

630. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geologic investigation. The course is given upon demand and may be repeated for credit when course locality and content differ. Where appropriate, travel, lodging and board costs are charged. A 16 630 2 1914

640. Field Geology. (6). Field investigation of sedimentary, igneous and metamorphic rock units and their structures. The application of mapping methods in solving geologic problems is included. This course is held at an off-campus field camp for five weeks (including weekends). Preparation of geologic columns, sections, maps and accompanying written reports are due on campus during the sixth week. Prerequisite: 12 credits of advanced geology, preferably including a field-mapping methods course or instructor's consent. Offered jointly with Kansas State University. A 16 640 1 1914

650. Geohydrology. (3). 2R; 3L Lab fee. The hydrologic cycle, physical and chemical properties of water, fluid flow through permeable geologic and geomorphic materials, evaluation of precipitation, groundwater; water quality and pollution; and water law. Prerequisites: Geol. 552 and Math. 243 or instructor's consent. A 16 650 1 1914

657. Earth Science Instructional Methods. (3). Practice in teaching an introductory course in the earth sciences. Developing and preparing, implementing the latest scientific laboratory techniques and evaluating their effectiveness. May be taken more than once if content and objectives differ. Prerequisite: senior standing and permission of the department chairman. A 16 657 0 1914

660. Geophysics. (3). 2R; 3L Lab fee. The fundamentals of geophysical exploration. Prerequisites: Geol. 544 and Phys. 214 or equivalent. A 16 660 1 1916

668. Economic Geology. (3). 2R; 3L Lab fee. Occurrence of metallic and nonmetallic economic minerals and the physical and chemical conditions governing their origin, application of analyzed data and industrial minerals and materials of mineral beneficiation. Prerequisite: Geol. 324. A 16 668 1 1914

672. Petroleum Geology. (3). 2R; 3L Lab fee. The origin, migration and accumulation of oil and gas in the earth's crust, as well as the distribution and significant features of modern fields, and energy alternatives and impacts. Field trips may be required. Prerequisite: Geol. 544. A 16 672 1 1914

684. Subsurface Geology. (3). 2R; 3L Lab fee. All aspects of subsurface geology, including laboratory, logging, testing and treatment, valuation and mapping methods. Field trips are required at the option of the instructor. Prerequisite: Geol. 682 and Phys. 214Q or equivalent. A 16 684 1 1914

690. Special Studies in Geology. (1-3). Systematic study in selected areas of geology. Course content differs and is repeatable for credit. Laboratory work or field trips may be required at the option of the instructor. Offered upon demand. Prerequisite: instructor's consent. A 16 690 2 1914

698. 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. Independent study in selected areas of geology with a written final report required. Prerequisites: consent of sponsoring faculty. A 16 698 3 1914

701. Seminar. (1). Current topics in geology. Reports on current student and faculty research. Prerequisite: open to all graduate students. A 16 701 9 1914

750. Workshop in Geology. (1-3). Short-term courses with special focus on geologic problems. Prerequisites: graduate standing and/or instructor's consent. A 16 750 2 1914

Courses for Graduate Students Only

800. Research in Geology. (3). 9L Lab fee. Research in special areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (l) stratigraphy, (j) geophysics and (k) petroleum. Required of all new degree-seeking graduate students. A 16 800 4 1914

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: permission of instructor. A 16 808 9 1914

810. Advanced Graduate Studies in Geology. (1-6). Systematic study in a selected topic of professional or applied geology. The course is given upon demand and may be repeated for credit when course content differs. Field trips may be required. Prerequisites: graduate standing, consent of instructor and two years of professional postgraduate practice in geology. A 16 810 9 1914

820. Geochronology. (3). 2R; 3L Lab fee. Theory of age-dating techniques for geologic and archaeological materials. Stratigraphic chronology, radiometric, geologic, chemical and biological-roles processes; evolution of techniques and evaluating their effectiveness. Prerequisite: graduate standing in geology or anthropology (archaeology). A 16 820 1 1914

823. Igneous and Metamorphic Petrology. (3). 1R; 4L Lab fee. Mineral paragenesis, bulk chemical compositions, physical-chemical relationships, textures, structures, origins and classifications of igneous and metamorphic rocks. Thin-section studies to facilitate rock identification and the distribution of petrogenetic relationships. Field trips may be required. Prerequisite: Geol. 523. A 16 823 1 1914

826. Sedimentary Petrology. (3). 2R; 3L Lab fee. Detailed study of sedimentary rocks and their origins. Determinations of mineral compositions, textures, structures, fabrics and petrogenetic relationships are facilitated by the use of thin sections, peels and geochemical analyses. Field trips may be required. Prerequisite: Geol. 526. A 16 826 2 1914

830. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area or region of geologic significance. The course is given upon demand and may be repeated for credit when course locality and content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisites: summer field geology (or equivalent) and instructor's consent. A 16 830 2 1914


840. Geotectonics. (3). Physical and geological principles of crustal deformation and tectonic interpretation. The relationship of interior earth processes to crustal deformation is studied with special reference to global tectonics. Field trips may be required. Prerequisite: instructor’s consent. A 16 840 0 1914

852. Field Stratigraphy. (3). 2R; 3L. Lab fee. Advanced concepts and principles of stratigraphic analysis and interpretation with emphasis on original sources and current research investigations. Field problem and field trips are required. Prerequisite: Geol 544 and 552 or instructor’s consent. A 16 852 1 1914

870. Advanced Biogeography. (3). 2R; 3L. Lab fee. Palaeoecological reconstruction of ancient plant/animal communities and environments with emphasis on community structure, biostatigraphy, synthesis of total raw data and problem solving. Field trips may be required. Prerequisite: a course in biogeography or equivalent. A 16 870 1 1918

880. Mineral Deposits. (3). 2R; 3L. Lab fee. An advanced treatment of the occurrence, classification and origin of metallic ore deposits; applied bioturbation of selected ore-host rock suites, mineralogy of opaque ore minerals and their textures. Field trips may be required. Prerequisite: Geol 650. A 16 880 1 1914


Geography

Only courses 201 and 235 are intended as physical science courses. All other geography courses are intended as social science offerings.

Lower-Division Courses

1250. Principles of Human Geography. (3). An introductory course that examines the development of human and cultural landscapes. A 16 1250 Q 2 2206

150. Workshop in Geography. (1–4). Short-term courses with special focus on geographical problems. Prerequisite: instructor’s consent. A 16 150 2 2206

201. Physical Geography. (3). 2R; 3L. Lab fee. Emphasis upon 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. A 16 201 1 1917

210. World Geography. (3). A general survey of world geography, including an analysis of the political, economic, historical and human geography of the major world regions. A 16 210Q C 2 2206

235. Meteorology. (3). 2R; 2L. Lab fee. An introductory survey of the atmosphere and its properties and the various phenomena of weather. Greater emphasis on the relevant principles of physical, dynamic, synoptic and applied meteorology is included. This course does not apply toward a major or minor in geography.

Field trips are required at the option of the instructor. Prerequisite: instructor’s consent. A 16 235 1 1913

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. A 16 262Q Q 2 2206

Upper-Division Courses

320. Field Studies in Geography. (1–6). Off-campus, systematic field study in a selected area of geographic significance. The course is given upon demand and may be repeated for credit when the course locality and content differ. Where appropriate, travel, lodging and board costs are charged. A 16 320 2 2206


Courses for Graduate/Undergraduate Credit

510. World Geography. (3). A general survey of world geography, including an analysis of the physical, political, economic, historical and human geography of the major world regions. A 16 510 2 2206

520. Geography of the United States and Canada. (3). Physical, political, economic, historical and human geography of the United States and Canada. A 16 520 0 2206

530. Geography of Latin America. (3). Physical, political, economic, historical and human geography of Latin America. A 16 530 0 2206

542. Geography of Europe. (3). Physical, political, economic, historical and human geography of Europe. A 16 542 0 2206

550. Geography of Africa. (3). Physical, political, economic, historical and human geography of Africa. A 16 550 0 2206

572. Geography of Asia. (3). Physical, political, economic, historical and human geography of Asia. A 16 572 0 2206

580. Economic Geography. (3). A geographical analysis of the distribution and utilization of basic world resources. A 16 580 0 2206

585. Mineral Resources. (3). Economic geography of the earth’s resources and distribution and utilization of metals, industrial and chemical minerals, fertilizers, building materials, fossil fuels and water. A 16 585 0 2206

620. Field Studies in Geography. (2–6). Off-campus, systematic field study in a selected area of geographic significance. The course is given upon demand and may be repeated for credit when the course locality and content differ. Where appropriate, travel, lodging and board costs are charged. A 16 620 2 2206

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. A 16 630 0 2206

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 urban space; land-use analysis and approaches to urban planning; and problems of urban ecology. A 16 670 1 2214

681. Mineral Crises of Antiquity. (3). An earth-resource viewpoint of the events of civilization from prehistory through the 19th century. The role of mineral wealth in the affairs of man from prehistoric Grand Prexige through the Copper, Bronze and Iron Ages; the Greek, Roman and Danubian Empires and related mineral resources of Europe and Africa; the gold-silver wealth of early Latin America; the mineral resources of modern America; and the development of the American West through copper, silver and gold. Prerequisite: upper-division or graduate standing. A 16 681 0 2206

696. Special Studies in Geography. (1–3). 3R or 2R; 3L. Lab fee. Lab fee is included when appropriate. Systematic study in a selected area of topical interest in geography. The course is given on demand and is repeatable for credit when the course locality and content differ. Field trips may be required. Prerequisite: instructor consent. A 16 696 3 2206

750. Workshop in Geography. (1–4). Short-term courses with special focus on geographical problems. Prerequisite: instructor’s consent. A 16 750 2 2206

Course for Graduate Students Only

820. Field Studies in Geography. (2–6). Off-campus, systematic field study in a selected area of geographic significance. The course is given upon demand and may be repeated for credit when the course locality and content differ. Where appropriate, travel, lodging and board costs are charged. Prerequisite: instructor’s consent. A 16 820 2 2206

Gerontology

Field Major and Minor

Students majoring or minoring in gerontology undertake a multidisciplinary program of study which draws upon the knowledge and skills of faculty members in 12 different departments in four colleges at Wichita State. Special emphasis is placed on the economic, biological, psychological and sociological aspects of aging. In addition, students can gain an understanding of aging from the perspectives of anthropology, the health-related professions, political science and social work, among others.

For the bachelor’s degree major, students must take at least 30 hours in gerontology, including Genr 700Q, 303, 404, 501, 513 and 518; and 12 hours of electives approved by the gerontology program advisor from listed courses.
The bachelor's degree in gerontology requires at least 15 hours, including Geron. 100Q, nine hours selected from Geron. 303, 404, 513 and 518, and three hours of electives from the listed courses.

The gerontology major combines interdisciplinary academic preparation with application of classroom knowledge through a field placement in the community. This internship experience is designed to permit the student to apply and test ideas developed in the classroom and is tailored to the student's career interest.

Lower-Division Courses

100Q. Introduction to Gerontology. (3). Introduction to the field of gerontology, including basic concepts, issues and approaches. P 15 100Q 0 2201

150. Workshop in Gerontology. (1-3). A course designed to provide specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit. P 15 150 2 2201

Upper-Division Courses

303. Economic Problems of Aging. (3). Cross-listed as Econ. 303. P 15 303 0 2204

334Q. Developmental Psychology. (3). Cross-listed as Psych. 334Q. P 15 334Q 0 2206

404. Psychology of Aging. (3). Cross-listed as Psych. 404. P 15 404 0 2208

430. Concepts of Loss. (3). Cross-listed as Nurs. 430. P 15 430 0 1203

481. Cooperative Education. (3-6). Same as Geron. 501 but offered as part of the Cooperative Education program. See Geron. 501 for description and prerequisites. P 15 481 2 2209

Courses for Graduate/Undergraduate Credit

501. Internship in Gerontology. (3-6). To provide a specially designed field experience for students who need or desire training that will enhance their professional abilities and skills in gerontology and for whom academic credit is appropriate. As part of the internship, students collectively meet one hour a week with the field placement supervisor. Repeatable for credit to a total of six hours. Prerequisite: 12 hours of gerontology credit and instructor's consent. P 15 501 2 2201

502. Older People and Organizations. (3). Cross-listed as Soc. 502. This course examines the agencies and organizations that deal with or are comprised of the elderly. The course focuses primarily on social networks and the participation of the elderly as they develop new roles are examined. Prerequisite: Soc. 111Q or instructor's consent. P 15 502 0 2206


512. Issues in Minority Aging. (3). Cross-listed as Min. Stud. 512. Prerequisites: Min. Stud. 100, Geron. 100Q, Soc. 111Q or instructor's consent. P 15 512 0 2209

513. Sociology of Aging. (3). Cross-listed as Soc. 513. P 15 513 0 2201

514. Anthropological Perspectives in Gerontology. (3). Cross-listed as Anthro. 514. P 15 514 0 2202

5180. Biology of Aging. (3). Cross-listed as Biol. 518. P 15 5180 0 0410

537. The Social Consequences of Disability. (3). Cross-listed as Sociol. 537. P 15 537 0 2204

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. Emphasis is on knowledge and skills in applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to six hours. Prerequisites: instructor's consent. P 15 550 0 2201

590. Legal Aspects of Health Care Administration. (3). Cross-listed as HAE. 590. P 15 590 0 1202

610. Aging: Personal, Social and Professional Perspectives. (3). Cross-listed as SW 610. P 15 610 0 2104

663. Economic Insecurity. (3). Cross-listed as Econ. 663. P 15 663 0 2201

698. 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. P 15 698 0 2201

731. Growth and Development IV: Adults and Aging. (3). Cross-listed as IS. 731. P 15 731 0 0622

750. Workshop in Gerontology. (1-3). A course designed to provide specialized instruction, using a variable format in a gerontologically relevant subject. Repeatable for credit. P 15 750 2 2201

781. Cooperative Education. (3-6). Same as Geron. 810 but offered as part of the Cooperative Education program. See Geron. 810 for description and prerequisites. P 15 781 2 2200

Courses for Graduate Students Only

798. Multidisciplinary Perspectives on Aging. (3). Introduction to the advanced study of the process of aging from a multidisciplinary point of view. Does not count for degree in gerontology. Prerequisite: admission to graduate school. Not open to students with an undergraduate minor in gerontology. P 15 798 0 2201

800. Seminar in Gerontology I. (3). Advanced study of the theories of aging from a multidisciplinary perspective with emphasis upon social gerontology. Prerequisite: Geron. 798 or 12 hours of gerontology credit or instructor's consent. P 15 800 0 2201

801. Field Research in Gerontology. (3). An examination of the methods of participative observation and interview as approaches to understanding aging and the aged. Students gain practical experience in these methods through individual fieldwork projects. Prerequisite: Geron. 798, 12 hours of gerontology credit or instructor's consent. P 15 801 0 2201

802. Policymaking for Gerontologists. (3). The making of policy by gerontologists through analysis, planning and implementation. This course assumes knowledge of aging programs. Prerequisite: Geron. 798, 12 hours of gerontology credit or instructor's consent. P 15 802 0 2201

810. Advanced Gerontology Internship. (3-6). The internship is designed to integrate academic gerontology and practical experience with an emphasis upon application of research findings. Students are assigned to an agency or organization engaged in planning, administering or providing direct services to older people. As part of the internship, the intern is required to submit and be examined upon a comprehensive internship paper. Prerequisite: 12 hours of gerontology credit and instructor's consent prior to registration. P 15 810 2 2201

820. Thesis. (1-3). Repeatable, but total credit hours counted toward degree shall not exceed four hours. P 15 820 4 2201

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 five areas of concentration: the ancient and medieval world, modern Europe, England, the United States and general history.

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 29 hours. History majors must specialize in one of the following areas:

1. Ancient and medieval history—requires Hist. 101G plus one additional lower-division course.

2. Modern European history—requires Hist. 102G plus one additional lower-division course.

3. English history—requires Hist. 113 or 114 plus one additional lower-division course.

4. U.S. history—requires Hist. 131Q or 132Q plus one additional lower-division course.

5. General history—requires two lower-division courses.
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. 300 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. Hist. 106G and Hist. 330G may not be used toward the history major.

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). An introductory history of the human experience during the past five centuries, with attention given to the major world regions of Europe, Asia, Africa, and the Americas, as well as Europe. A 18 100G 0 2205

101G & 102G. History of Western Civilization. (4 & 4). Departmental fee. A 101G: prehistory to 1648. 102G: 1648 to the present. A 18 101G 0 2205 & A 18 102G 0 2205

105 & 106. The Way It Was: Western Civilization. (5 & 5). Departmental fee. A 105: an examination of selected topics in the history of Western civilization from antiquity to the 17th century through the use of commercial motion pictures and lectures and discussions with faculty members on the topics dealt with in the films. A 106: continuation from the 17th century to the present. Not open to history majors or to those with credit in Hist. 101G and 102G. A 18 105G 0 2205 & A 18 106G 0 2205

108G. A History of Lost Civilizations. (3). A comparative examination of lost civilizations of both the Old World and New World, including the Sumerians, Hittites, Moors, Mycenaecians, Etruscans, Moabites-Daro, Knymers, Incas, Mayas and Aztecs. A 18 108G 0 2205

111 & 112. History of Latin America. (3 & 3). 111: a study of Spanish and Portuguese colonization of America. 112: an examination of the national period from the wars of independence to the present. A 18 111G 0 2205 & A 18 112G 0 2205

113 & 114. English History. (3 & 3). 113: from the earliest times to the beginning of the Stuart period, emphasizing the origin and development of institutions, customs and nationalism. 114: from the beginning of the Stuart period to the present. A 18 113G 0 2205 & A 18 114G 0 2205

131Q & 132Q. History of the United States. (4 & 4). 131: survey from the colonial period through the Civil War. 132: survey from Reconstruction to the present. A 18 131Q 0 2205 & A 18 132Q 0 2205

150. Workshop in History. (2-3). A 18 150Q 0 2205

200. Women Thoughout Western Civilization. (3). Cross-listed as WS 200. A survey of the position women have occupied from colonial times to the present with special emphasis on the media explosion since the Civil War. This course 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 showcases to the more serious business of politics and finance. A 18 200G 0 2205

213. American Popular Culture. (3). Cross-listed as Amer. Stud. 213. An examination of popular culture from colonial times to the present with special emphasis on the body explosion since the Civil War. This course 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 showcases to the more serious business of politics and finance. A 18 213G 0 2205

220. The World: A Television History. (3). A comparative view of major world developments from the stone age to modern times. Emphasis will be on the origins of civilization in Europe, Asia, Africa and the Americas; urbanization; empire-building; the great religious and ethical traditions; trade; capitalism; industrialization and colonialism. The course will consist of two thirty-minute televised sessions each week accompanied by discussion, and a half-hour in-class exercise the next day. A 18 220G 0 2205

222. East Asia. (3). Cross-listed as Pol. Sci. 2220 and Rel. 2220. A survey of basic topics on China, Korea and Japan, including history, culture, society, philosophy, religion, politics and economics. This course is taught by a team of instructors from several departments. A 18 222G 0 2205

225. Your Family in History. (3). A course designed to bridge 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. A 18 225G 0 2205

Upper-Division Courses

300. Introduction to Historical Research and Writing. (3). Basic instruction in research methodology, composition and criticism. This course is required of history majors. A 18 300G 0 2205

310. Special Topics in History. (2-3). Repeatable twice for credit. Prerequisite: departmental consent. A 18 310G 0 2205

312. History of Engineering and Technology. (3). An examination of the growth and development of the practice of engineering from the earliest times to the present. The contribution of engineers to the growth of civilization is examined and the impact of their particular technological innovations is analyzed in light of their political, social and economic history. A 18 312G 0 2205

322 & 323. The Far East. (3 & 3). A survey of the social, economic and political development of the Far East with emphasis on

Courses for Graduate/Undergraduate Credit

501. The American Colonies. (3). Colonization of the New World with emphasis on the British colonies and their development. A 18 501G 0 2205

502. The American Revolution and the Early Republic. (3). Examination of selected phases of the revolutionary, confederation and federal periods. A 18 502G 0 2205

503. The Age of Jefferson and Jackson. (3). Political, economic and cultural development of the United States from the election of Thomas Jefferson to the end of the Mexican War with emphasis on the growth of American nationalism. A 18 503G 0 2205

604. Civil War and Reconstruction. (3). A 18 604G 0 2205

605. America's Gilded Age, 1877 to 1900. (3). Emphasis on industrial and urban problems and the foundations of class and conflict between the 1890's and World War II. A 18 605G 0 2205


607. The United States: the 20th Century, 1929-1945. (3). The Great Depression, the New Deal and World War II. A 18 607G 0 2205

608. The United States: the 20th Century, Since 1945. (3). The history of the United States: from the Truman through the Nixon administrations. A 18 608G 0 2205

515. Economic History of the United States. (3). Cross-listed as Econ. 627. A 18 515G 0 2205

516. Origins of the Industrial State. (3). Cross-listed as Econ. 626. U.S. economic development and policy from the Civil War to the present. Emphasis is on changes in the organization and concentration of business. A 18 516G 0 2205

517 & 518. Constitutional History of the United States. (3 & 3). 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. A 18 517G 0 2205 & A 18 518G 0 2205


481. Cooperative Education. A cooperative program would cover work done at museums or archival divisions of libraries. Cannot be included for a history major or minor. Offered for Cr/NCr only. Prerequisite: departmental consent. A 18 481G 0 2205
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>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. A 18 519 0 2205</td>
</tr>
<tr>
<td>520</td>
<td>Social and Intellectual History of the United States. (3) The significant social and intellectual currents from the middle of the 19th century to the present with special reference to the relationship between ideas and social structure. A 18 520 0 2205</td>
</tr>
<tr>
<td>521 &amp; 522</td>
<td>Diplomatic History of the United States. (3 &amp; 3) Diplomatic affairs from the beginning of the 17th century to the present. A 18 521 0 2205 &amp; A 18 522 0 2205</td>
</tr>
<tr>
<td>523</td>
<td>History of Modern China. (3) Historical survey of China from the Qing dynasty (Manchu) to the present with emphasis on geography, religion, politics, international relations and the impact of foreign ideologies on Chinese society. A 18 523 0 2205</td>
</tr>
<tr>
<td>524</td>
<td>History of Modern Japan. (3) The history of modern Japan from the establishment of the Tokugawa Shogunate in 1603 to the modern postwar period. A 18 524 0 2205</td>
</tr>
<tr>
<td>527</td>
<td>History of Computing. (3) Cross-listed as CS 527. A study of the development of automatic computing machines and their mechanisms of control and programming. A 18 527 0 2205</td>
</tr>
<tr>
<td>529</td>
<td>Indians of Kansas. (3) The history of Indian occupation of the Kansas region from initial white contact to the present. Emphasis is given to Indian-white relations in the 19th century, forced removal of the emigrant tribes inter tribal and intra tribal problems and consequent legal and cultural problems. A 18 529 0 2205</td>
</tr>
<tr>
<td>530</td>
<td>The American Woman in History. (3) Cross-listed as WS 530. Examination of the history, status and changing role of women in American society. A 18 530 0 2205</td>
</tr>
<tr>
<td>531</td>
<td>Afro-American History. (3) Afro-American life, culture and history from the 17th century to the present. A 18 531 0 2205</td>
</tr>
<tr>
<td>533</td>
<td>The American City: from Village to Metropolis. (3) A study of urbanization and urban life from colonial times to the present—changing life-styles and thought patterns, urban architecture, ethnic assimilation, immigration of early cities and town, and industrialization. A 18 533 0 2205</td>
</tr>
<tr>
<td>534</td>
<td>History of the Old South. (3) An examination of Southern civilization prior to the American Civil War. A 18 534 0 2205</td>
</tr>
<tr>
<td>535</td>
<td>History of Kansas. (3) The history of the Kansas region from Spanish exploration to the present, with special emphasis on the period after 1854. A 18 535 0 2205</td>
</tr>
<tr>
<td>537</td>
<td>The Trans-Mississippi West. (3) Spanish, French and Anglo-American exploration and settlement west of the Mississippi River from the 16th century to about 1810. A 18 537 0 2205</td>
</tr>
<tr>
<td>539</td>
<td>Indian-White Relations in North America. (3) Indian life, culture and history from the 17th century to the present with emphasis upon the impact of federal Indian policy since 1800. A 18 539 0 2205</td>
</tr>
<tr>
<td>540</td>
<td>Recent Indian Policy in the United States. (3) History of the American Indian since the General Allotment Act. Emphasis is given to the general Allotment Act. Emphasis is given to the process of assimilation and the changing role of the Indian in the contemporary political and legal problems. A 18 540 0 2205</td>
</tr>
<tr>
<td>541</td>
<td>Modern France. (3) The history of the major trends in French history from the time of Napoleon to de Gaulle with emphasis upon French attempts to adjust politically, socially, economically and culturally to the changing conditions of modern times. A 18 541 0 2205</td>
</tr>
<tr>
<td>545</td>
<td>Neithert War Nor Peace: The World Since 1945. (3) A 18 545C 0 2205</td>
</tr>
<tr>
<td>553</td>
<td>History of Mexico. (3) Pre-Columbian Mesamerica; 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. A 18 553 0 2205</td>
</tr>
<tr>
<td>558</td>
<td>The Ancient Near East. (3) An examination of contemporary life in the USSR: religion, politics, international relations, and dissidents in Soviet society, the press, literature, art, health care and prospects for the country's future. A 18 558 0 2205</td>
</tr>
<tr>
<td>559</td>
<td>Jewish History. (3 &amp; 3) A survey of Jewish history from its origins in the Hellenic world to the fall of the Roman Empire through the Crusades. A 18 559 0 2205 &amp; A 18 560 0 2205</td>
</tr>
<tr>
<td>562 &amp; 563</td>
<td>Roman History. (3 &amp; 3) A study of the Roman Republic and Empire. A 18 562 0 2205 &amp; A 18 563 0 2205</td>
</tr>
<tr>
<td>565</td>
<td>Byzantine History. (3) A survey of Byzantine history from its origins in the late Roman world to its fall in 1453 with an investigation of its major institutions and foreign relations. A 18 565 0 2205</td>
</tr>
<tr>
<td>566 &amp; 567</td>
<td>Medieval History. (3 &amp; 3) A study of the history of the modern world from the fall of the Roman Empire through the Crusades, the Middle Ages to 1500. A 18 566 0 2205 &amp; A 18 567 0 2205</td>
</tr>
<tr>
<td>568</td>
<td>Medieval Social and Intellectual History. (2) Survey of the social and intellectual history of Europe from the 4th to the 15th century. A 18 568 0 2205</td>
</tr>
<tr>
<td>569</td>
<td>Medieval England. (3) An examination of the political, social, economic, and intellectual history of the British Isles from the 1st century A.D. to the 15th century A.D. A 18 569 0 2205</td>
</tr>
<tr>
<td>574</td>
<td>History of Christianity to the Reformation. (3) A study of the history of the church, its development in early antiquity and its growth in the medieval centuries. The emphasis, in the early period, is on the relation between the church and the Roman state and, in the medieval era, on the growth of the papacy and the church's role in society. A 18 574 0 2205</td>
</tr>
<tr>
<td>575</td>
<td>The Italian Renaissance. (3) Italian history from the 14th through the 16th centuries, with emphasis upon cultural achievements. A 18 575C 0 2205</td>
</tr>
<tr>
<td>576</td>
<td>The Reformation. (3) Cross-listed as Rel. 476. The great religious changes in the 16th century in the political, social and cultural contexts. A 18 576 0 2205</td>
</tr>
<tr>
<td>579</td>
<td>Europe Under the Old Regime. 1648-1787. (3) The aristocratic Old Regime, societies in confrontation with modern forces of mobility, industrialization, nationalism, ideology and economic change. A 18 579 0 2205</td>
</tr>
<tr>
<td>580</td>
<td>Europe in the Age of Revolution, 1787-1815. (3) The impact of the Old Regime, revolutions of 1789 and 1815, the challenges of the French Revolution and counter-revolution, nationalism, liberalism, and the change. A 18 580 0 2205</td>
</tr>
<tr>
<td>581</td>
<td>Europe, 1815-1870. (3) A 18 581 0 2205</td>
</tr>
<tr>
<td>582</td>
<td>Europe, 1879-1914. (3) A 18 582 0 2205</td>
</tr>
<tr>
<td>583</td>
<td>Europe, 1914-1945. (3) A 18 583 0 2205</td>
</tr>
<tr>
<td>589</td>
<td>History of Russia. (3) The political and cultural history of Imperial Russia from the 15th century to the present. A 18 589 0 2205</td>
</tr>
<tr>
<td>591</td>
<td>History of the Soviet Union. (3) A survey of Soviet history from the Bolshevik Revolution to the present. A 18 591 0 2205</td>
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<tr>
<td>592</td>
<td>The Soviet Union Today. (3) An examination of contemporary life in the USSR: history, 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. A 18 592 0 2205</td>
</tr>
<tr>
<td>595</td>
<td>History of Eastern Europe. (3) The development of the Balkan, Czech, Magyar, Polish, Romanian and Yugoslav peoples. A 18 595 0 2205</td>
</tr>
<tr>
<td>596</td>
<td>History of Russian Thought. (3) Russian cultural and intellectual history from 1881 to the present. The rise of modern Russian revolutionary ideologies, NEP culture, socialist realism, Stalinism, the thaw, the contemporary situation. A 18 596 0 2205</td>
</tr>
<tr>
<td>610 &amp; 611</td>
<td>Social and Intellectual History of Europe. (3 &amp; 3) A 18 610 0 2205 &amp; A 18 611 0 2205</td>
</tr>
<tr>
<td>612 &amp; 613</td>
<td>European Diplomatic History. (3 &amp; 3) European international politics and diplomatic practices, with emphasis on the major crises and their resolution, the Conference of Europe to World War I, the Cold War and decolonization of South Asia and the Middle East, and their effect on major power involvement. A 18 612 0 2205 &amp; A 18 613 0 2205</td>
</tr>
<tr>
<td>614</td>
<td>Economic History of Europe. (3) Cross-listed as Econ. 625. A 18 614 0 2205</td>
</tr>
<tr>
<td>615</td>
<td>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. A 18 615 0 2205</td>
</tr>
<tr>
<td>616</td>
<td>Germans and Jews. (3) The history of antisemitism in central Europe, 19th and 20th centuries. A 18 616 0 2205</td>
</tr>
<tr>
<td>617</td>
<td>The Holocaust. (3) The origins and development of the concentration camp system in Nazi Germany and its transition into a death camp system. A 18 617 0 2205</td>
</tr>
<tr>
<td>620</td>
<td>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. Repeatable with instructor's permission. A 18 620 0 2205</td>
</tr>
</tbody>
</table>
Interdisciplinary Liberal Arts and Sciences Program

Lower-Division Courses

2220. East Asia. (3). A survey of basic topics on China, Korea, and Japan, covering the period from 3000 B.C. to the present, including geography, prehistory, history, culture, anthropology, society, philosophy, religion, politics, and the economics of each country. The course is taught by a team of instructors from several departments. A 10 2220 0 4901

281. Cooperative Education. (1-4). The course provides employment opportunities or approves current employment, when appropriate, to integrate academic theory with planned professional experience. Individual programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. Offered Cr/NCR only. A 33 281 2 4903

Upper-Division Courses

300. Peace and War: Global Issues. (3). An introduction to the study of conditions which had led to war or peace in the past and which may do so now in a nuclear age. Diverse views are presented on worldwide issues from the perspectives of the natural and social sciences, the arts and humanities, and applied studies. A 33 300 0 4093

395. Travel Seminar. (1-4). An interdisciplinary travel seminar: a study of culture that includes observations of art and architecture, lectures and discussions of political, social and economic problems, and visits to various historic places of interest. A 10 395 9 4903

481. Cooperative Education. (1-4). The course 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. A 33 481 2 4903

Courses for Graduate Students Only

800. Seminar: Research Goals, Strategies, and Writing. (3). An introduction to research goals, methods and sources in the humanities, social sciences, and natural sciences, with special attention to the opportunities and problems of integrating research activities involving more than one discipline. Required of all students in the Master of Arts in Liberal Studies Program. A 33 800 4 4999

875. Thesis. (1-6). A course for students who are finishing the Master of Arts in Liberal Studies Program (MAI). The student must write and defend a thesis. A 33 875 4 4999

885. Terminal Project. (2-6). A course for students who are finishing the Master of Arts in Liberal Studies Program and involved in a terminal project.

The terminal project may have many aspects such as field work, practicum, 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. A 33 885 4 4999

Italian (See Modern and Classical Languages and Literatures)

Journalism

Courses are designed to give graduates a thorough grounding in the skills they need to become valued members in newspaper, broadcasting, advertising, public relations or other related work.

Major. The major in journalism consists of 30 hours, including Journ. 200, and a concentration of not fewer than 15 hours in one additional field of study in a college of Wichita State. In addition, one of the following sequences must be completed:


2. Radio-Television—Journ. 322, 522 and 500: Speech 114, 221 or 222, 214 and 606; plus six hours in upper-division journalism and speech electives

3. Advertising-Public Relations—Journ. 1150, 325, 350, 510, 525, 550, 560, 625 and one journalism elective or Speech 637 or 770. Public relations students may substitute Journ. 502 for Journ. 525. The outside concentration for this sequence consists of Psych. 304 and Mkt. 300, 405, 607 and one other marketing course.

Minor. A minor in journalism requires at least 15 hours, including Journ. 200.

Lower-Division Courses

1150. Introduction to Mass Communications. (3). A survey of the media of mass communication and the role each plays in society. Special consideration is given to the freedom and responsibilities of the mass media. A 19 1150 0 0691

150. Journalism Workshop. A course designed to provide specialized instruction, using a variable format, in a journalistically relevant subject. A 19 150 2 0699

200. Beginning News Writing. (3). CR; 4L. Required for the major in journalism, the course includes writing of news reports, and writing of various types of news stories with emphasis on achieving accuracy and good writing. Reasonable typing competence
A detailed study of mass media, and will be broadcast over WSU Cable Channel 13. May be repeated for credit with advisor's consent. Prerequisite: Journ. 522, Speech 522 or instructor's consent. A 19 822 2 0603

6.25. Advertising and PR Campaigns. (3). Instruction and practice in constructing total advertising and public relations campaigns from market analysis and media selection to creation of the completed package. Prerequisite: Journ. 502, 525 or departmental consent, A 19 825 0 0604

6.45. Special Topics in Journalism. (1-3). Directed individual research in various aspects of journalism and mass communication or related topics: communications theory, news editing, advertising and broadcasting. Repeatable for credit when topics differ substantially. Prerequisites: senior standing and departmental consent, A 19 645 3 0601

6.90. Journalism Internship. (3-6). On-the-job experience and training in news, advertising, public relations or radio or television broadcasting. Prerequisite: departmental consent. A 19 690 2 0601

7.15. World Press. (3). A comparative study of press and broadcast systems around the world with emphasis on press freedoms and cross-cultural communication. Prerequisite: senior standing. A 19 715 0 0601

7.20Q. 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. A 19 720Q 0 0601

7.70. Journalism Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a journalistically relevant subject. A 19 770 2 0699

Latin and Greek (See Modern and Classical Languages and Literatures)

Linguistics

The Bachelor of Arts degree in linguistics is being phased out beginning in 1987; however, students presently enrolled in the program will be accommodated. An emphasis in linguistics will be available through the general studies program.

Major. A major in linguistics consists of a minimum of 24 hours from the courses listed below, including at least nine hours from Group A and at least one phonetics course—Ling. 218 or 223, Fr.
505 or Span. 505. A major must be combined with either a minor in a foreign language or the 111-112 sequence in two different foreign languages and three hours beyond 112 in one of them, or the equivalent.

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 Courses

110G. Learning Another Language, (3). An overview of the methods and techniques of language learning. Not counted toward a major. A 10 110G 0 1505

151G. The Nature of Language, (3). 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. A 10 151G 0 1505

218. Linguistics. Phonetics: Theory and Application, (2). Cross-listed as CDS 218. A 10 218 0 1220

223. Linguistics. Phonetics and Phonology, (3). The production and transmission of speech sounds and their role in linguistic structure. Principles of articulatory and acoustic phonetics with transcription exercises, phonemic and distinctive feature phonologies are also studied. A 10 223 0 1505

Upper-Division Course

315. Linguistics. Introduction to English Linguistics, (3). Cross-listed as Eng. 315. A 10 315 0 1505

Courses for Graduate/Undergraduate Credit


680. Comparatives Linguistics, (3). Methods of establishing genetic relationships between languages and reconstructing proto-languages. The course includes a survey of the major language families of the world and typological comparisons of languages and the problem of language universals. Prerequisite: Ling. 315 or 577. A 10 680 0 1505

682. Linguistics. Structure of a Selected Non-Indo-European Language, (3). The language offered depends on student demand and availability of staff. The course may sometimes be conducted as a field methods course and is repeatable for credit when different languages are offered. Prerequisite: Ling. 315 or 577. A 10 682 0 1505

Group B—Linguistic Study of Specific Languages or Language Groups

Courses for Graduate/Undergraduate Credit

610. English: Old English, (3). Cross-listed as Eng. 610. A 10 610 0 1505


505. French: Advanced Phonetics and Phonology, (2). Cross-listed as Fr. 505. A 10 505 0 1102

505. Spanish: Spanish Phonetics, (2). Cross-listed as Span. 505. A 10 505 0 1105

579. German Linguistics in the Teaching of German, (3). Cross-listed as Ger. 579. A 10 579 0 1505

651. Anthropology. Language and Culture, (3). Cross-listed as Anthro. 651. A 10 651 0 2202

727. CDS. Teaching English as a Second Language, (2-3). Cross-listed as CDS 727 and Eng. 727. A 10 727 0 1220


Group C—Areas of Contact Between Linguistics and Other Disciplines

Lower-Division Courses

220. CDS. Developmental Psycholinguistics, (3). A 10 220 0 0815

301. Philosophy. Language and Linguistics, (3). Cross-listed as Phil. 301. A 24 301 0 1505

325. Philosophy. Formal Logic, (3). Cross-listed as Phil. 325. A 24 325 0 1505

Courses for Graduate/Undergraduate Credit


651. Anthropology. Language and Culture, (3). Cross-listed as Anthro. 651. A 10 651 0 2202

727. CDS. Teaching English as a Second Language, (2-3). Cross-listed as CDS 727 and Eng. 727. A 10 727 0 1220


Others

Lower-Division Course

292. 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. A 10 292 2 1505

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. A 10 590 2 1505

595. Linguistics. Directed Readings, (2-3). Credit assigned to Group A, B, or C depending on content. Repeatable for credit. A 10 595 3 1505

Logopedics (See Communicative Disorders and Sciences, College of Education)

Mathematics and Statistics

Mathematics

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, 550, 551

Group A: Math. 545, 547

Group B: Math. 513, 615, 621, 690, 720, 725


Major. For the Bachelor of Arts (BA) degree with a major in mathematics, students must complete all courses in Group R and one each from Groups A and B. In addition, the BA candidate must complete Math. 531 and two additional courses from those listed in Groups A, B, C and D.

For the Bachelor of Science (BS) degree in mathematics, students must complete all courses in Group R and one each from Groups A, B, C, and D. In addition, the BS candidate must complete two additional courses from those listed in Groups C and/or D. For the Bachelor of Science (BS) degree in mathematics with emphasis in statistics, students must complete all courses in Group R and one course in Group A. In addition, the BS candidate must complete Math. 553 and 15 additional hours of courses in Group C or D with a statistics prefix which must include either Stat. 571-572 or Stat. 771-
A study of mathematics and its applications. Prerequisite: Math. 344 with a grade of "C" or better. A 20 109 0 1701

123. College Trigonometry. (3). A study of trigonometric functions with applications. Prerequisite: Math. 109 or 111, or equivalent high school preparation. Credit in both Math. 123 and 112 is not allowed. A 20 123 0 1701

144. Business Calculus. (3). A brief, but careful, introduction to calculus for students of business and economics. Credit in both Math. 144 and 2420 is not allowed. Prerequisite: Math. 109, 111 or 112 with a grade of "C" or better or equivalent high school preparation. A 20 144 0 1701

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. A 20 150 2 1701

211. Elementary Linear Algebra. (3). Linear algebra and related topics. Prerequisite: one unit of high school algebra or Math. 011. A 20 211 0 1701

242. Calculus I. (5). Analytic geometry and the calculus in an integrated form. Credit in both Math. 242 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. A 20 242 0 1701

243. Calculus II. (5). A continuation of Math. 242. A study of integration and applications and an introduction to infinite series are included. Prerequisite: Math. 242 with a grade of "C" or better. A 20 243 0 1701

311. Introduction to Linear Algebra. (1). A study of systems of linear equations, matrices, determinants, vector spaces. Credit not allowed in both Math. 211 and 311. Prerequisite: Math. 344 or concurrent enrollment. A 20 311 0 1701

331Q. 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, functions, graphs and digraphs, trees, elementary probability and an introduction to graph theory. Prerequisite: Math. 111 or 211 or equivalent college-level mathematics course. A 20 331Q 0 1701

344. Calculus III. (3). A continuation of Math. 243. The course includes a study of multiple integration and partial derivatives. Prerequisite: Math. 243 with a grade of "C" or better. A 20 344 0 1701

480. Individual Projects. (1-5). Repeatable up to ten hours. Prerequisite: departmental consent. A 20 480 3 1701

Courses for Graduate/Undergraduate Credit

Credit is allowed in only one of the three courses Math. 109, 111 or 112. A 20 109 0 1701

Math. 109, 111, or 112. (Only three hours apply toward a Wichita State degree.) High school geometry or Math. 021 is a highly-recommended preparatory course. Prerequisite: one unit of high school algebra or Math. 011. A 20 109 0 1701

111. College Algebra. (3). 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: one and one-half units of high school algebra or Math. 011. Credit is allowed in only one of the three courses Math. 109, 111 or 112. A 20 111 0 1701

112. Precalculus Mathematics. (5). Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions and other standard topics prerequisite to a beginning study of calculus. This course is not available for credit to students who have received a grade of C or better in Math. 2420 or its equivalent. Prerequisites: one and one-half units of high school algebra or Math. 011, and one unit of high school geometry or Math. 021. Credit is allowed in only one of the three courses Math. 109, 111 or 112. A 20 112 0 1701

A study of linear algebra, including an examination of linear transformations and matrices over finite dimensional spaces. Prerequisite or corequisite: Math. 344. A 20 511 0 1701

513. Fundamental Concepts of Algebra. (3). Groups, rings and fields. Prerequisite: Math. 511 or departmental consent. A 20 513 0 1701

530. Applied Combinatorics. (3). Basic counting principles, occupancy problems, graph theory, permutations, combinations, trees, elementary probability and an introduction to graph theory. Prerequisite: Math. 344 with a grade of "C" or better. A 20 530 0 1703

531. Introduction to the History of Mathematics. (3). A study of mathematics and mathematicians from antiquity to the present, emphasizing how various areas of mathematics evolved. Problems are solved using
the methods of the historical period in which they arose. Requires mathematical skills. Prerequisite: Math. 511 and at least six additional hours of mathematics and/or statistics courses numbered 500 or above. A 20 531 0 1701

545. Integration Techniques and Applications. (3). A study of the basic integration techniques used in applied mathematics. Included are the standard vector calculus treatment of line and surface integrals, Green's Theorem, Stokes Theorem and the Divergence Theorem. In addition, the study of improper integrals with application to special functions is included. Prerequisite: Math. 344 with grade of "C" or better. A 20 545 0 1701

547. Advanced Calculus I. (3). A detailed study of limits, continuity and integration. Prerequisite: Math. 344 with a grade of "C" or better. A 20 547 0 1701

550. Ordinary Differential Equations. (3). An investigation of integrating factors, separation of variables, critical points, linear differential equations with constant coefficients, root of parameters and existence and uniqueness for initial value problems and systems. Prerequisite: Math. 344 with a grade of "C" or better. A 20 550 0 1703

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 use of the computer. Prerequisites: Math. 344 with a grade of "C" or better and a knowledge of FORTRAN, or departmental consent. A 20 551 1 1703

553. Mathematical Models. (3). This course covers case studies from the fields of engineering, technology and the natural and social sciences. The emphasis is to describe a problem and then develop the mathematics necessary to solve the problem. The case studies are selected to illustrate several of the topics from among linear algebra, differential and integral equations, stochastic processes, statistics and combinatorics. Each student is required to participate in a term project which is to be the solution of a particular problem approved by the instructor. Prerequisite: Math. 344 or departmental consent. A 20 553 0 1703

580. Selected Topics in Mathematics. (3). Topic to be chosen from among topics not otherwise represented in the curriculum. May be repeated up to a maximum of six hours credit with departmental consent. Prerequisite: departmental consent. A 20 580 0 1701

615. Elementary Number Theory. (3). Properties of the integers studied by elementary means. Prerequisite: Math. 344 or departmental consent. A 20 615 0 1701

621. Elementary Geometry. (3). A study of the structure of Euclidean geometry. Prerequisite: Math. 344 or departmental consent. A 20 621 0 1701

640. Advanced Calculus II. (3). An examination of the calculus of functions of several variables and line and surface integrals. Prerequisites: Math. 511 and 547 with a grade of "C" or better. A 20 640 0 1701

651. Engineering Mathematics I. (3). A survey of some of the mathematical techniques most often needed in engineering. The course includes vector analysis, linear algebra, Legendre functions and Bessel functions. No credit given toward a major in mathematics. Prerequisite: Math. 550 with a grade of "C" or better. A 20 651 0 1700

657. Optimization Theory. (3). An introduction to selected topics in linear and nonlinear optimization. The revised simplex method is developed along with a careful treatment of duality. The theory is then extended to solve parametric, integer and mixed integer linear programs. Other topics include additional methods in integer programs and classical methods in nonlinear optimization. Prerequisite: Math. 511. A 20 657 0 1703

690. Introduction to Mathematical Logic. (3). A study of symbolic logic including an axiomatic development of propositional calculus and first-order predicate calculus, an introduction to the role of formal languages in mathematics and computer science and applications of logic such as Boolean algebra, switching circuits and model theory. Prerequisite: Math. 513 or departmental consent. A 20 690 0 1701

713. Abstract Algebra I. (3). A treatment of the standard basic topics in abstract algebra. Prerequisite: Math. 513 or departmental consent. A 20 713 0 1701

714. Applied Mathematics. (3). Cross-listed as Phys. 714. Prerequisite: Math. 550 or instructor's consent. A 20 714 0 1703

720. Modern Geometry. (3). A study of fundamental concepts of geometry. Prerequisite: Math. 513 or departmental consent. A 20 720 0 1701

725. Topology I. (3). An investigation of point set and algebraic topology. Prerequisite: Math. 547 or departmental consent. A 20 725 0 1701

743. Real Analysis I. (3). A study of the foundations of analysis and the fundamental results of modern real analysis. Prerequisite: Math. 547 or departmental consent. A 20 743 0 1701

745. Complex Analysis I. (3). An investigation of the theory of analytic functions. Prerequisite: Math. 545, 547 or 651, or departmental consent. A 20 745 0 1701

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. A 20 750 0 1701


755. Ordinary Differential Equations. (3). Existence, uniqueness, stability and other qualitative theorems of ordinary differential equations. Prerequisite: Math. 651 or 545 or departmental consent. A 20 755 0 1703


759. Selected Topics in Number Theory. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 759 0 1701

775. Abstract Algebra II. (3). A continuation of Math. 713. Prerequisite: Math. 713 or equivalent. A 20 775 0 1701

783. Complex Analysis II. (3). A continuation of Math. 745. Prerequisite: Math. 745 or equivalent. A 20 783 0 1701

785. Numerical Analysis II. (3). Numerical solution of ordinary and partial differential equations, unconstrained minimization of functions of "n" variables, and solutions of systems of equations. Prerequisite: Math. 751 or equivalent. A 20 785 0 1703


801-802. Topics for Mathematics Teachers I and II. (3). Topics for secondary school mathematics teachers that relate to the secondary school mathematics curriculum. Topics are chosen according to the needs and interests of individual students. Repeatable for credit with departmental consent. Not applicable toward the MS in mathematics. A 20 801 0 1701; A 20 802 0 1701

813. Abstract Algebra II. (3). A continuation of Math. 713. Prerequisite: Math. 713 or equivalent. A 20 813 0 1701

818. Selected Topics in Number Theory. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 818 0 1701

819. Selected Topics in Algebra. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 819 0 1701

825. Topology II. (3). A continuation of Math. 725. Prerequisite: Math. 725 or equivalent. A 20 825 0 1701

826. Selected Topics in Topology. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 826 0 1701

829. Selected Topics in Geometry. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 829 0 1701

839. Selected Topics in Foundations of Mathematics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 839 0 1701

843. Real Analysis II. (2). A continuation of Math. 743. Prerequisite: Math. 743 or equivalent. A 20 843 0 1701

845. Complex Analysis II. (3). A continuation of Math. 745. Prerequisite: Math. 745 or equivalent. A 20 845 0 1701

849. Selected Topics in Analysis. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 849 0 1701

851. Numerical Analysis II. (3). Numerical solution of ordinary and partial differential equations; unconstrained minimization of functions of "n" variables, and solutions of systems of equations. Prerequisite: Math. 751 or equivalent. A 20 851 0 1703


857-858. Selected Topics in Engineering Mathematics I and II. (3). Advanced topics in mathematics of interest to engineering students, including such topics as tensor analysis, calculus of variations and partial differential equations. Not applicable toward the MS in mathematics. A 20 857 0 1703; A 20 858 0 1703

860. Proseminar. (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing. A 20 860 0 1701
This course ex­

have

orientation to the nature and scope of philosophy of the

ing with problems peculiar to minority people

King's life on the civil rights movement and

women that

for social, economical and political reform.

Lower-Division Courses

17QQ. Statistics Appreciation. (3). A non-
teaching course stressing and explaining how statistics and probability help to solve some 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. A 20 1700 0 1702

Upper-Division Courses

360Q. Elementary Probability. (3). Probability functions, random variables and expectation of finite sample spaces. Prerequisite: Math. 111, 112 or 331. A 20 360Q 0 1701

370. Elementary Statistics. (3). A survey of elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Not open to mathematics majors. Prerequisite: Math. 111 or equivalent, or Math. 211. A 20 370 1 1702

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). Topics of interest not otherwise available. Prerequisite: departmental consent. A 20 570 1 1702

571-572. Statistical Methods I and II. (3-3). Probability models, points and interval estimates, statistical tests of hypothesis, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance and topics in design and time series analysis. Prerequisite: Math. 144 or 243 or departmental consent. A 20 571 1 1702; A 20 572 1 1702

574. Elementary Survey Sampling. (3). A brief review of basic statistical concepts and simple random, stratified, cluster and systematic sampling, selection of sample size, ratio and regression estimates. Applications involve problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary course in statistics, such as Stat. 370, Soc. 501 or Psych. 401. A 20 574 1 1702

576. Applied Nonparametric Statistical Methods. (3). Assumptions and needs for nonparametric tests, rank tests and other nonparametric inferential techniques. Applications involve problems from engineering, medicine, education, social and natural sciences and other disciplines. Prerequisite: any elementary statistics course such as Stat. 370, Soc. 501 or Psych. 401. A 20 576 1 1702

661. 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. A 20 661 1 1702

671. Probabilistic Models and Statistical Methods. (3). A study of independent and dependent random variables; probability distributions such as Gamma, Weibull, Beta, Normal, Binomial, etc.; reliability and life testing, and topics on statistical inference with emphasis on applications to engineering. Prerequisites: Math. 344 with a grade of "C" or better. A 20 671 1 1702

762. Applied Stochastic Processes. (3). A study of random variables, expectation, limit theorems, Markov chains and stochastic processes. Prerequisite: Stat. 661 or 771 or departmental consent. A 20 762 0 1702

771-772. Theory of Statistics I and II. (3-3). An examination of stochastic dependence, distributions 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 a grade of "C" or better or departmental consent. A 20 771 0 1702; A 20 772 0 1702

Courses for Students Only

878. Special Topics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 878 0 1702

879. Individual Reading. (1-5). Prerequisite: departmental consent. A 20 879 3 1702

Minority Studies

The department's objective 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 department offers courses and programs to stimulate favorable interaction among people, thus reducing ethnic tension. Emphasis in the department is on cross-cultural communication, which stresses the uniqueness of the individual's cultural experiences and resulting behavior which impacts communications across ethnic and cultural lines.

Major. The major in minority studies consists of at least 24 hours, including Min. Stud. 100Q, 210Q; 220, 240Q or 260; three of the following: 331, 332, 333, 334, 337 or 540; and Min. Stud. 545 and 548.

Certain courses in related areas that meet the particular needs of the student and are approved by an adviser 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 15 hours. The courses are to be approved by the student's adviser in the department.

Lower-Division Courses

100Q. Introduction to Minority Studies. (3). Orientation to the nature and scope of minority studies. Emphasis is placed on the unique nature of the experiences of minority groups. Consideration of some alternative styles of behavior in dealing with problems peculiar to minority people in the United States is also undertaken. A 30 100Q 0 2599

210C. Fundamentals of Cross-Cultural Communications. (3). An examination of the effects of different cultures on language and methods of communicating. A study of communications and its relationship to behavior in this country also is made. A 30 210C 0 4999

220. Martin Luther King. (3). This course provides students with a study of the life and philosophy of the Rev. Dr. Martin Luther King, Jr.-Stresses the uniqueness of the individual's cultural experiences and resulting behavior which impacts communications across ethnic and cultural lines in the United States. A 30 220 0 4999

240Q. Minority Women in America. (3). Cross-listed as WS 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, sensibilities and emotions. A 30 240Q 0 2299

250. Prominent Minorities in the Making of America. (3). Design to explore, compare and contrast minority thought and processes for social, economical and political reform. Class explores into the social concepts of prominent American minorities through the coverage of popular novels, biographies, autobiographies, rhetoric, etc. Prerequisites: Min. Stud. 100Q. A 30 250 0 2299

Upper-Division Courses

331. The Black Family. (3). This course examines the factual and fictional images of black American families from slavery to the present. The primary focus will be on the adaptive abilities, experiences and accomplishments of black families. Prerequisites: Min. Stud. 100Q, 210Q or instructor's consent. A 30 331 0 4999

332. The Native American. (3). This course examines contemporary issues facing the native American with special focus on the Osage tribe. Prerequisites: Min. Stud. 100Q, 210Q or instructor's consent. A 30 332 0 4999
333. Issues in the Chicano Community. (3). This course examines a variety of social, psychological, and political concerns affecting Mexican Americans. Special attention is given to the impact of immigration and to the media's role in the portrayal of the Chicanos. Prerequisites: Min. Stud. 100Q, 210Q or instructor's consent. A 30 333 0 4999

334. European Ethnic Groups. (3). This course examines the adaptation and cultural practices of European ethnic groups in America. Prerequisites: Min. Stud. 100Q, 210Q or instructor's consent. A 30 334 0 4999

337. Black/White Communication in an Organizational Setting. (3). With special focus on educational institutions and the workplace, this course examines the areas in which communication breakdowns are most likely to occur between blacks and whites. Prerequisites: Min. Stud. 100Q, 210Q or 331 or instructor's consent. A 30 337 0 4999

338. Biracial Cross-Cultural Communications—Indian/Chicano. (3). An examination of concepts and behaviors useful in analyzing interpersonal organizational situations in the biracial cross-cultural setting between two selected ethnic groups. Readings and face-to-face encounters with situations involving progress of morale, productivity, motivation, leadership, authority, communication and the introduction of change are used to bring about an understanding of these areas of human interaction. Prerequisites: Min. Stud. 331, 332, 333 or 334. A 30 338 0 4999

481. Cooperative Education. (1-4). This course allows the student to examine the impact of minority status in the work environment. Interpersonal interactions, communication and acceptance in and adjustment to the multicultural work environment are examined. Offered Cooperative, departmental consent. A 30 481 0 4999

Courses for Graduate/Undergraduate Credit

512. Issues in Minority Aging. (3). 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 tried and tested solutions to the problems encountered by minority elderly. Cross-listed as Gerom. 512. Prerequisites: Min. Stud. 100Q, 100 Soc. 2110 or instructor's consent. P 15 512 0 4999

540. Advanced Cross-Cultural Communications. (3). An advanced study on special topics in cross-cultural communication. Offered Min. Stud. 360 or concurrent enrollment. A 30 540 0 4999

545. Cross-Cultural Communications Theory. (3). Varying in content, this course offers specific consideration of important areas of cross-cultural communications such as current issues, theory of structured exercises and laboratory planning. Prerequisites: Min. Stud. 540 or concurrent enrollment. A 30 545 0 4999

548. Research in the Minority Community. (3). An investigation and analysis of methods of creative research in cross-cultural communications with emphasis on innovative designs that can gather legitimate data on specific ethnic groups. The setting up and design of a research prospectus is fundamental. Also evaluative research is studied. Prerequisite: Min. Stud. 545 or concurrent enrollment. A 30 549 2 4999

580. Individual Projects. (3). This course allows the student to conduct independent research related to a specific minority group. Prerequisite: 60 hours of Wichita State credit or departmental consent. Repeatable for a total of six hours. A 30 580 3 2299

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. This course provides a conceptual understanding of special implications and necessary adaptations of communications to, between, and among diverse ethnic groups in our society. A 30 725 2 4999

750. Workshop. (1-4). Offered for credit in one of the following fields: (1) workshop is focused on the nature and scope of minority studies. Emphasis is given to the unique nature of the experiences of minority groups in this country. A 30 750 2 4999

Course for Graduate Students Only

860. Seminar in Cross-Cultural Communication. (3). A review of recent developments, research and literature in the field. Emphasis is on language and behavior in cross-cultural communication. Prerequisites: graduate standing and instructor's consent. A 30 860 0 4999

Modern and Classical Languages and Literatures

Chinese

Lower-Division Courses

111. Elementary Chinese I. (5). This course is an introduction to the Chinese language with an emphasis on the basic elements of learning the fundamentals of speaking, understanding, reading and writing modern Chinese. A 17 111 0 1107

112. Elementary Chinese II. (5). Continuation of the introduction to the Chinese language with an emphasis on learning the fundamentals of pronunciation, speaking, understanding, reading and writing the language. Continuation of Chinese 111 and an equivalent learning experience. A 17 112 0 1107

220. Intermediate Chinese. (5). Continues development of speaking, reading and writing skills. Prerequisite: Chinese 112 or departmental consent. A 17 220 0 1107

French

Major. A major in French consists of a minimum of 33 semester hours beyond Fr. 112 or its equivalent, and must include the following courses: Fr. 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: IS 232, 234 and 333. Certification requirements are: IS 428, 433, 466E and 442F.

Minor. A minor in French consists of a minimum of 12 semester hours beyond Fr. 112 and must include Fr. 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 adviser in the French department before enrolling in French courses.

Noncredit Course

060. French for Graduate Reading Examination. (3). Offered Cr/Cr only. Open to upper-division and graduate students only. This course is designed to prepare students to fulfill departmental requirements of a reading knowledge of French for the master of arts or master of science. No previous knowledge of French is required. The course does not count toward a degree. A 26 000 0 1102

Lower-Division Courses

111-112. Elementary French. (5-5). An in-
A minor in German consists of

1. Prerequisite: A grade of C or better in both Fr. 100 and Fr. 101.
2. Special departmental approval is required for students whose concerns are primarily in the humanities or who anticipate graduate study in literature. Students must take Ger. 324, 341 or 441Q, 524, 577 and at least six hours in Ger. 650.

The language emphasis is suggested for students whose objectives are primarily in the humanities or who anticipate graduate study in literature. Students must take Ger. 301, 324, 341 or 441Q, 524 and 577 or 579.

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 Ger. 524 and 577 or 579, 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 consists of at least 50 semester hours chosen from the three options below. For all categories, students must have 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 early in their college careers. Requirements for entering the student teaching program include:

1. Grade point average in German of 3.00 or above
2. Special departmental approval based on demonstrated competencies in the use of both oral and written German (not based on course grades)
3. Basic courses in education: IS 232 and 333

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 minor courses: Ger. 341, 441Q, 577 or 641.

Noncredit Course

010. German for Graduate Reading Examination. (3). A reading course designed to...
prepare students to fulfill departmental requirements of a reading knowledge of German as well as general information concerning German-speaking countries. Does not substitute for Ger. III. A 17 101 0 1103

102. Beginning German II. (3). A continuation of Ger. 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 Ger. 112. A 17 102 0 1103

111-112. Elementary German. (5-5). An introductory course emphasizing speaking, reading, and some grammatical essentials. Daily classroom and laboratory work is required. A 17 111 0 1103; A 17 112 0 1103

220Q. Continuing German. (5). Grammar review and cultural readings designed 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. A 17 220Q 0 1103

223. Intermediate German I. (3). Intensive reading, grammar, composition, and oral practice. Prerequisite: Ger. 112 with grade of "C" or better or departmental recommendation to transfer from Ger. 220. A 17 223 0 1103

225. German Conversation. (2). The development of oral fluency. Prerequisite: Ger. 220 or 223. May be taken concurrently with Ger. 223. A 17 225 0 1103

Upper-Division Courses

301. German Phonetics and Pronunciation. (1). A practical course to improve pronunciation of individual speech sounds as well as intonation and rhythm of sentences. Prerequisite: Ger. 112 or instructor's consent. A 17 301 0 1103

324. Intermediate Conversation and Composition. (2). Development of written skills is emphasized as conversational practice continues. Prerequisite: Ger. 225 or instructor's consent. A 17 324 0 1103

341. Civilization of the German-Speaking Countries. (3). Selected topics on significant aspects of life and thought in Germany, Austria, and Switzerland. The emphasis is on the modern period with special attention paid to the interrelation of cultural trends. A knowledge of German is not required. A 17 341 0 0312

344Q. Intermediate German II. (3). Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: Ger. 223 or equivalent. A 17 344Q 0 1103

441Q. Culture of the Two Germanies. (3). Study of the culture and life in the Federal Republic of Germany and the German Democratic Republic since 1945. A knowledge of German is not required. Does not count toward fulfillment or language requirement. A 17 441Q 0 1103

Courses for Graduate/Undergraduate Credit

524. Advanced Conversation and Composition. (3). Prerequisites: Ger. 324 or instructor's consent. A 17 524 0 1103

531. Practicum in German-English Translation. (3). Supervised individual reading and translation of passages from English to German and vice versa. A 17 531 0 1103

532. Advanced Conversation. (3). Mentored student conversations with emphasis on improving written German skills. Repeatable for credit. Prerequisite: Ger. 531. A 17 532 0 1103

777. Introduction to Linguistics. (3). Cross-listed as Ling. 577 and Anthro. 577. Principles of descriptive and historical linguistics: phonetics and phonology, morphology and syntax, the phonological and grammatical structures of Modern Standard German and its development from Proto-Germanic. This course is required for a German major. Prerequisite: Ger. 112 or equivalent of any foreign language. A 17 577 0 1105

579. Linguistics in the Teaching of German. (3). Cross-listed as Ling. 579. The principles of linguistics applied to the problems of teaching German with a contrastive analysis of the phonological and grammatical structures of English and German. Prerequisite: Ger. 577 or instructor's consent. A 17 579 0 1105

641. German Literature in Translation. (3). Consideration of the works of one major author, literary movement, trend or specific genre. Repeatable once for credit. Prerequisite: upper-division standing. A 17 641 0 0312

650. 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: the medieval period through the Age of Goethe; (c) survey II: 19th century to 1945; (d) contemporary literature: the literature of both Germanies since 1945; (e) special topics in literature, repeatable once for credit; (f) special topics in language, repeatable once for credit. Prerequisite: Ger. 244 or instructor's consent. A 17 650 0 1103

750. Workshop in German. (2-4). Repeatable once for credit. A 17 750 2 1103

Greek (Ancient Classical)

There is no major in Greek. A minor consists of 11 hours beyond the 111-112 level.

Lower-Division Courses

111-112. Elementary Greek. (5-5). Basic grammar with emphasis on early reading. A 26 111 0 1110; A 26 112 0 1110

223. Intermediate Greek. (3). Plato and Herodotus. Prerequisite: Greek 111-112. A 26 223 0 1110

224. Intermediate Greek. (3). Homer's Iliad. Prerequisite: Greek 223. A 26 224 0 1110

Upper-Division Course

390Q. Classical Culture. (3). Study of representative masterpieces of Greek and Latin literature, historical and philosophic literature in the wider context of classical culture, including art, mythology, religion and political and private life. The works of Aristotle and other writers in their historical context: the Augustan Age and the Renaissance. For credit. Prerequisite: Greek 224 or instructor's consent. A 26 390Q 0 1110

Courses for Graduate/Undergraduate Credit

515. Major Topics. (2-4). Special studies in Italian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1104

531. Introduction to Italian Literature. (3). Prerequisite: Ital. 112 or departmental consent. A 26 531 0 1104

540. Medieval and Renaissance Italian Literature in Translation. (3). Representative selections in English translation from Italian medieval and Renaissance literature. The works of Dante and other writers in their historical context: Boccaccio and the Waning of the Middle Ages; Petrarch and the formation of the new, humanistic civilization—reflections and divergences in the 14th, 15th and 16th centuries are all included. A knowledge of Italian is not a prerequisite and the course does not count toward an Italian minor. A 26 540 0 0312

Courses for Graduate/Undergraduate Credit

515. Major Topics. (2-4). Special studies in Italian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1104

531. Introduction to Italian Literature. (3). Prerequisite: Ital. 112 or departmental consent. A 26 531 0 1104

540. Medieval and Renaissance Italian Literature in Translation. (3). Representative selections in English translation from Italian medieval and Renaissance literature. The works of Dante and other writers in their historical context: Boccaccio and the Waning of the Middle Ages; Petrarch and the formation of the new, humanistic civilization—reflections and divergences in the 14th, 15th and 16th centuries are all included. A knowledge of Italian is not a prerequisite and the course does not count toward an Italian minor. A 26 540 0 0312

Courses for Graduate/Undergraduate Credit

515. Major Topics. (2-4). Special studies in Italian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1104

531. Introduction to Italian Literature. (3). Prerequisite: Ital. 112 or departmental consent. A 26 531 0 1104

540. Medieval and Renaissance Italian Literature in Translation. (3). Representative selections in English translation from Italian medieval and Renaissance literature. The works of Dante and other writers in their historical context: Boccaccio and the Waning of the Middle Ages; Petrarch and the formation of the new, humanistic civilization—reflections and divergences in the 14th, 15th and 16th centuries are all included. A knowledge of Italian is not a prerequisite and the course does not count toward an Italian minor. A 26 540 0 0312

Courses for Graduate/Undergraduate Credit

515. Major Topics. (2-4). Special studies in Italian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1104

531. Introduction to Italian Literature. (3). Prerequisite: Ital. 112 or departmental consent. A 26 531 0 1104

540. Medieval and Renaissance Italian Literature in Translation. (3). Representative selections in English translation from Italian medieval and Renaissance literature. The works of Dante and other writers in their historical context: Boccaccio and the Waning of the Middle Ages; Petrarch and the formation of the new, humanistic civilization—reflections and divergences in the 14th, 15th and 16th centuries are all included. A knowledge of Italian is not a prerequisite and the course does not count toward an Italian minor. A 26 540 0 0312
Japanese

Lower-Division Courses

111. Elementary Japanese I. (5). This course is an introduction to the Japanese language with an emphasis on the basic elements of learning the fundamentals of pronunciation, speaking, understanding, reading, and writing. A 17 111 0 1108

112. Elementary Japanese II. (5). This course is a continuation of introductory Japanese with an emphasis on learning the fundamentals of pronunciation, speaking, understanding, reading, and writing. Prerequisite: Japanese 111 or an equivalent learning experience. A 17 112 0 1108

220. Intermediate Japanese. (5). Continues development of speaking, reading and writing skills. Prerequisite: Japanese 112 or departmental consent. A 17 220 0 1108

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 consists of at least 50 semester hours, including at least 24 hours beyond Latin 111-112 as listed 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 early in their college careers. Requirements for entering the student teaching semester are:

1. Grade point average of 3.000 or higher in Latin
2. Special departmental approval based on demonstrated competencies in the use of Latin (not based on course grades)
3. Basic courses in education: IS 232, 234 and 333. Certification requirements are: IS 428, 433, 466E and 442F.

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

111-112. Elementary Latin. (5-5). Basic grammar with emphasis on early reading. A 26 111 0 1109; A 26 112 0 1109

150. Workshop in Latin. (2-4). Repeatable for credit. A 26 150 2 1109

210. Intermediate Latin Reading and Review. (5). Latin review and readings of prose and poetry illustrative of Roman life and culture. Prerequisites: Latin 112, two units of high school Latin or departmental consent. A 26 210 0 1109

223. Intermediate Latin. (3). General review of grammar with selected readings of prose and poetry. Prerequisite: Latin 112, two years of high school Latin or departmental consent. A 26 223 0 1109

224. Intermediate Latin. (3). Selected readings of prose and poetry. May be repeated for credit when the readings vary. Prerequisite: Latin 223 or departmental consent. A 26 224 0 1109

Courses for Graduate/Undergraduate Credit

Latin 210 or 224 or departmental consent is the prerequisite for all upper-division courses.

541. Roman Lyric Poetry. (3). The lyric poems of Catullus and Horace with emphasis on imagery, symbolism, structure, diction and meter. A 26 541 0 1109

542. Vergil's Aeneid. (3). Selected books of the Aeneid in the original and the rest in translation. Study of imagery, symbolism, structure, diction and meter. Consideration is given to the place of the Aeneid in the Augustan Rome and in the epic tradition. A 26 542 0 1109

543. Roman Drama. (3). A study of Roman comedy and tragedy, their Greek background and their influence on European literature. Included are selected plays of Plautus, Terence and Seneca, some in the original and some in translation. A 26 543 0 1109

544. Love in Ancient Rome. (3). The relationship of the sexes and the use of myth in the poetry of Ovid, Propertius and Tibullus. A 26 544 0 1109

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. Consideration is given to the development of the novel from its Greek beginnings up to the time of Apuleius and beyond. A 26 545 0 1109

546. Advanced Latin. (3). Directed reading of Latin. Reading may be combined with Latin prose composition at the option of the student. Repeatable for credit when content varies. A 26 546 0 1109

651. Roman Historians. (3). A study of the development of Roman historiography. Readings from Sallust, Caesar, Livy and Tacitus. A 26 651 0 1109

652. Cicero. (3). The orations, letters and essays of Cicero. The study 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. A 26 652 0 1109

653. Lucretius and Epicureanism. (3). Reading of Lucretius' De Rerum Natura and study of Epicureanism, the atomic theory and Democritean materialism. Consideration is given to the place of Lucretius in Latin poetry. A 26 653 0 1109

750. Workshop in Latin. (2-4). Repeatable for credit. A 26 750 2 1109

Portuguese

No major or minor is offered in Portuguese.

Noncredit Course

060. Reading Portuguese. (2). Offered CrN/Cr only. Open to Latin American studies majors and to upper-division or graduate students who need to fulfill departmental requirements of a reading knowledge of a foreign language for the major of arts or major of science. No previous knowledge of Portuguese required. Does not count toward a degree. A 26 060 0 1120

Lower-Division Courses

111-112. Elementary Portuguese. (5-5). Course emphasis includes understanding, speaking, reading and writing. Prerequisite: Portuguese 111 or equivalent, or instructor's consent. A 26 111 0 1109

210. Intermediate Portuguese. (5). Course emphasis includes understanding, speaking, reading and writing. Prerequisite: Portuguese 112 or equivalent, or instructor's consent. A 26 210 0 1109

Russian

There is no major or minor in Russian.

Lower-Division Courses

111. Elementary Russian. (5). A presentation of the sounds and structure of Russian with the purpose of developing the four basic skills of understanding, speaking, reading and writing. A 26 111 0 1109

112. Elementary Russian. (5). A continuation of Russian 111 in order to complete the presentation of elementary Russian grammar and to enhance the four basic skills. Prerequisite: Russian 111 or equivalent. A 26 112 0 1109

210. Intermediate Russian. (5). Course emphasis includes understanding, speaking, reading and writing. Prerequisite: Russian 112 or equivalent. A 26 210 0 1109

220. Intermediate Russian. (5). Course emphasis includes understanding, speaking, reading and writing. Prerequisite: Russian 112 or instructor's consent. A 26 220 0 1109

Upper-Division Courses

300. Russian Literature in Translation. (3). Consideration of the works of one or two major authors, a literary movement, trend or a specific genre. No knowledge of Russian is necessary. Repeatable once for credit. A 17 300 0 1109

315. Special Studies. (1-3). Special studies in Russian language, literature and civilization. Repeatable for credit. Prerequisite: departmental consent. A 17 315 0 1109

Spanish

Major. A major in Spanish consists of a minimum of 30 semester hours beyond
Spanish are normally not admitted to 100- and 200-level courses. To complete a major, 12 hours of upper-division work is required.

High School Spanish Students who have completed more than two units of high school Spanish should consult with an adviser in the Spanish department before enrolling in Spanish courses.

Lower-Division Courses

111-112. Elementary Spanish. (5-5). Lab fee. Emphasis on the four fundamental skills in language learning: understanding, speaking, reading, and writing. A 26 111 0 1105; A 26 112 0 1105

150. Workshop in Spanish. (2-4). Repeatable for credit. A 26 150 2 1105

210Q. Intermediate Spanish. (5). Spanish review with emphasis on conversation and cultural readings. Not open to students with previous credit in Span. 221 (not offered any more). Designed primarily for students wishing to fulfill the liberal arts language requirement. It is recommended that prospective majors and minors go directly into Span. 220, 223 or 225. Prerequisite: Span. 112, two units of high school Spanish or departmental consent. A 26 210Q 0 1105

215. Intermediate Spanish II. (5) Intensive review of Spanish with special emphasis on conversation. Course offered only in Puebla, Mexico. Prerequisite: Span. 112, two units of high school Spanish or departmental consent. A 26 215 0 1105

220. Intermediate Spanish Grammar and Composition. (3). Prerequisite: Span. 112 or two units of high school Spanish. A 26 220 0 1105

223. Selected Spanish Readings. (3). Intensive reading of Latin American and Spanish literary works. Also includes outside reading and reports. This course may be used to meet the LAS literature requirement. Prerequisite: Span. 112 or two high school units of Spanish. A 26 223 0 1105

225. Spanish Conversation I. (2). Prerequisite: Span. 112 or two units of high school Spanish. Should be taken with Span. 220. A 26 225 0 1105

281. Cooperative Education. (1-4). The goal of this course is to provide 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/NoCr only. A 26 281 2 1105

Upper-Division Courses

300. Intermediate Spanish Readings. (3). Intensive reading and analysis of Spanish literary works of all periods. This course may be used to meet the LAS literature requirement. Prerequisite: Span. 223 or departmental consent. A 26 300 0 1105

325. Spanish Conversation II. (2). Continuation of Spanish Conversation I with continued emphasis on fluency in Spanish and on vocabulary building. Prerequisite: Span. 225 or departmental consent. A 26 325 0 1105

481. Cooperative Education. (1-4). See Span. 281. A 26 481 2 1105

Courses for Graduate/Undergraduate Credit

505. Spanish Phonetics. (2). Cross-listed as Ling. 505. Prerequisite: any 200-level course or departmental consent. A 26 505 0 1105

515. Major Topics. (1-4). Special studies in (a) language, (b) literary criticism, (c) commercial Spanish, (d) the language laboratory, (e) music, (f) composition, (g) problems in teaching Spanish, (h) advanced conversation. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1105

525. Spanish Conversation III. (2). Prerequisite: Span. 325 or departmental consent. A 26 525 0 1105

526. Advanced Grammar and Composition. (3). Prerequisite: Span. 220 or departmental consent. A 26 526 0 1105

531. Survey of Spanish Literature. (3). Main currents of Spanish literature from 1700 to the present. Prerequisite: Span. 300 or departmental consent. A 26 531 0 1105

532. Survey of Spanish Literature. (3). Spanish literature from the beginning to 1700. Prerequisite: Span. 300 or departmental consent. A 26 532 0 1105

534. Contemporary Spanish Theater. (3). Prerequisite: Span. 300 or departmental consent. A 26 534 0 1105

536. Contemporary Spanish Novel. (3). Prerequisite: Span. 300 or departmental consent. A 26 536 0 1105

540Q. Contemporary Spanish Literature in English Translation. (3). Course content may vary from semester to semester, including Spanish and/or Latin American literature. No knowledge of a foreign language is necessary. This course may be counted towards a Spanish major or minor with departmental consent. Repeatable for credit. Prerequisite: departmental consent when counted toward a Spanish major or minor. A 26 540Q 0 1105

552. Business Spanish. (3). This course provides students the opportunity to learn and practice commercial correspondence, business vocabulary, translation and interpretation of business texts. Prerequisite: Span. 526. A 26 552 0 1105

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. A 26 557 0 1105

560. Spanish Play Production. (1-3). In-depth study of a play as a work of literature, followed by the actual production of the work for the general public. Repeatable for credit. Prerequisite: Span. 300 or departmental consent. A 26 560 0 1105

620. Survey of Latin American Literature. (3). Main currents of Latin American literature from 1500 to 1800. Prerequisite: Span. 300 or departmental consent. A 26 620 0 1105
The aim of this course is to develop an understanding of philosophy as a diverse and self-critical intellectual enterprise. A 24 1003 0 1509

250. Thinking Straight. (3). This course deals with the uses of logical concepts and techniques in evaluating and criticizing ordinary inferences and arguments. Some elementary systems of formal logic are studied. Considerable class time is spent on the analysis and evaluation of arguments found in such diverse fields as law, politics, education, advertising, and religion. A 24 125Q 0 1509

129. University Experience. (3). An examination of the structure, process, and problems of university education in the contemporary setting. This course attends especially to the personal, moral and spiritual problems and opportunities presented by the modern university. Prerequisites: Sophomore standing. Each philosophy department reflects the individual student's interests and future plans. Up to 12 hours of philosophy courses taken before the decision to major. Additional hours may be counted with the adviser's consent. A 24 144Q 0 1509

Upper-Division Courses

300G. Science and the Modern World. (3). The aim of this course is to develop 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 methods, limits, and consequences of science. No prerequisite but prior completion of general education requirements in science is desirable. A 24 300G 0 1509

301. Language and Philosophy. (3). Cross-listed as Ling. 301. This course examines the relationships between philosophy and language. It asks such questions 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? A 24 301 0 1509

320Q. Nineteenth Century Philosophy. (3). A study of selected 19th century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Herkgeard, Peirce, Nietzsche, Comte, Dilthey, Schleiermacher, idealism, materialism, positivism, empiricism and pragmatism. A 24 303Q 0 1509

305. Business Ethics. (3). An examination of moral issues that arise within the context of business practice. The philosophical presuppositions of business and business practice are analyzed through an investigation of actual cases and issues drawn from contemporary business. The course is designed for a general audience as well as for business or philosophy students. Attention is devoted to such topics as the ethical implications of investment/production distribution, the nature and extent of corporate social responsibility, governmental regulation, conflict of interest, environmental practice and environmental responsibility. A 74 305 0 1509

308. Philosophy of Economics. (3). The objective of this course is to investigate various philosophical issues inherent in economic theory and decision making. Phi-
311. Philosophy of Law. (3). An introduction to philosophical problems arising in the theory and practice of law. Topics considered include 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 of punishment. Attention is given both to classical and contemporary readings, and both the natural-law and positivist legal traditions are emphasized. A 24 311 0 1509

313Q. Political Philosophy. (3). An examination of various philosophical issues concerning political systems. Issues such as the nature of political authority, the rights of individuals, constitutionalism and civil disobedience are discussed. A 24 313Q 0 1509

315Q. Late Modern Philosophy. (3). A study of philosophical thought in the 18th century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Hutschon, Wolff and Kant, and movements such as empiricism, rationalism, the Scottish common sense school and idealism. A 24 315Q 0 1509

320. Philosophy of Science. (3). 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. A 24 320 0 1509

322Q. Early Modern Philosophy. (3). A study of philosophical thought in the period from the Renaissance through the seventeenth century with selections from philosophers such as Pico, Vico, Galileo, Cusanus, Telesio, Erramus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Malebranche and Locke. A 24 322Q 0 1509

325. Formal Logic. (3). Cross-listed as Ling. 325. A study of formal systems including sentential and predicate logic. The uses of these systems in the analysis of arguments is emphasized. A 24 325 0 1509

327. Philosophy of Health Care. (3). An examination of the philosophical and ethical issues generated by the development and expansion of the health care professions. Topics such as the concept of health, rights of patients, the medical team, professional rights and responsibilities, behavior control, euthanasia and institutional care are examined. The course is designed for the layman as well as for the medical professional. A 24 327 0 1509

331Q. Ancient Greek Philosophy. (3). An examination of the development of Greek philosophy in its major phases, including an exploration of the Milesian and Eleatic traditions, Pythagoreanism, Plato and the Platonists, the Sophists, Socrates, Plato and Aristotle. A 24 331Q 0 1509

338. Philosophy of Feminism. (3). Cross-listed as WS 338. An exploration of philosophical issues raised by the feminist movement with emphasis on conceptual and ethical questions. A 24 338 0 1509

340. Philosophy of Religion. (3). 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. A 24 3460 0 1509

354. Ethics and Computers. (3). A course in ethics with application to the ethical issues that arise from the use of computers. Attention will be devoted to such specific topics as the moral responsibility of computer professionals for the effect their work has on people; 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 justifiability of regulation of all the design, use and marketing of computing technology. Prerequisite: junior standing or departmental consent. A 24 354 0 1509

360. Ethical Theory. (3). A study of selected topics in ethics. Issues such as the meaning and justification of moral judgments, the nature of morality, the relations between normative and descriptive empirical criteria, the problem of revolution in moral schemes are selected for investigation. Prerequisite: one course in philosophy. A 24 360 0 1509

366. Philosophy of Literature. (3). An exploration of the philosophical themes present in literature. Special attention is devoted to literary forms and the associated problems of the essential nature of literature as a particular art form, the author's intentions, the criteria of aesthetic appreciation and literature as knowledge. Emphasis on the special type of literature—poetry, drama, the novel, the short story—is the instructor's choice. A 24 366 0 1509

375. Philosophy of the Arts. (3). 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. Some topics are the problem of tragedy, the character of the aesthetic attitude, the function and unity of a work of art, the role of art according to 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. A 24 375 0 1509

400. Honors Seminar (3). Cross-listed as Hon. 400. This is an honors course on a special topic to be announced. Repeatable for credit up to six hours. Prerequisite: honors student or departmental consent. A 24 400 0 1509

Courses for Graduate/Undergraduate Credit

505. Philosophy of Education. (3). An examination of educational concepts with an emphasis on the implication of such concepts with respect to the problems of moral, political and religious education in a secular, democratic society. A 24 505 0 1509

518. Recent British-American Philosophy. (3). Examination of philosophical ideas and movements in recent British and American Philosophy. Movements such as logical positivism, pragmatism, logical atomism in philosophy and analytic philosophy are discussed. Readings are selected from figures such as Russell, Wittgenstein, Pierce, Dewey and Quine. A 24 518 0 1509

519. Empiricism. (3). A study of the philosophical views that emphasize sensory experience rather than reasoning as a source of knowledge with particular attention paid to the philosophies of Hobbes, Locke, Berkeley, Hume and Mill. A 24 519 0 1509

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 and other minds and the nature of the future; universals; and necessary truths. Selections from both historical and recent writings are included. Prerequisite: one course in philosophy. A 24 540 0 1509

546. Rationalism. (3). A study of the philosophical views that emphasize reasoning rather than sensory experience as a source of knowledge with particular attention paid to the philosophies of Descartes, Spinoza and Leibniz. A 24 546 0 1509

549. Topics in Ancient Philosophy. (3). In each offering, this course explores one decisive issue in philosophy from the time of Thales through the Middle Ages. The specific topic 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, including 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. A 24 549 0 1509

550. Metaphysics. (3). An exploration of some basic topics in the theory of reality. Issues include such notions as space, time, substance, change, causality, appearance, essence and being. Prerequisite: one course in philosophy. A 24 550 0 1509

555. Philosophy of the Social Sciences. (3). A study of such topics as the relations of social science with natural science and philosophy, methodological problems peculiar to sociology, the nature and purposes of social science, concepts and constructs and the roles of mathematics and formal theories in social science. A 24 555 0 1509

557. Contemporary European Philosophy. (3). An exploration of a theme, issue, philosopher or movement in contemporary European philosophy. Philosophers considered include such figures as Husserl, Heidegger, Jaspers, Gadamer, Habermas, Marcuse, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lacan, Derrida, Foucault and Ricoeur. Philosophical movements examined include such tendencies as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics and Marxism. A 24 557 0 1509

574. Artificial Intelligence and Philosophy. (3). Cross-listed as CS 574. 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." The relevance of Godel's theorem and of other results in the domain of computability are discussed in this
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 as well as providing 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. 2130-2140 or 3130-3140-3150-3160, 551, 611, 621, and 631-632; Math. 550 and 545, 547 or 651; and five hours of chemistry.

For the Bachelor of Arts (BA) degree, two hours of Phys. 516 or 517 are required. Six additional hours of upper-division physics are also required.

For the Bachelor of Science (BS) degree, four hours of Phys. 516, two hours of Phys. 517, eight additional hours of upper-division 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, 614 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. 213-214 or 313-314-315-316 and at least six additional hours of upper-division physics.

Lower-Division Courses

101. Contemporary Physics. (1-2). Designed for physics majors and other science-oriented students; to be taken early in their courses of study. The course acquaints students with the subject matter of physics, the history and development of physics and some of the more important and interesting current problems in the field. Not open to students with credit in 2130, 2140, 3130, 3140. Offered C/NCR only. Prerequisite: one year of high school algebra. A 21 101 0 1902

111Q. Introductory Physics. (4). 3R; 3L. A general physics course for liberal arts students and those who have not had physics in high school. Topics include mechanics, heat, electricity and magnetism, wave phenomena and modern physics. Not open to students who can meet prerequisites for Phys. 3130. Prerequisite: one year of high school algebra. A 21 111Q 0 1902

113. Physical Principles of Mechanics. (2). This course provides basic principles of mechanics for students in physical education. Students engage in laboratory activities followed by group discussion of the concepts that have been studied. A 21 113 0 1902

131. Physics for the Health Sciences. (3). This course provides a background in basic physics for students in health-related professions. The choice of topics, the emphasis on problem solving and the details of applications are directed toward the special uses of physics in the health sciences. A 21 131 0 1902

195G. Introduction to Modern Astronomy. (3). A survey of astronomy intended for the student with little or no background in science or math. The nature and evolution of the universe and objects in it are considered from the perspective of the question: Why do things happen the way they do? Individual topics may be included: the nature of the stars and black holes, galaxies and quasars and the expansion of the universe. A 12 195G 0 1911

196. Laboratory in Modern Astronomy. (1). 3L. The application of the techniques and analysis of the data of modern astronomy. This course is recommended for students with some background in the physical sciences. When 196 is completed, 195G and 196 count as a laboratory science. Field trips are required. Prerequisites: two semesters of high school algebra, instruction in mechanics, and laboratory instructor's consent. A 21 196 1 1911

198. Discovery in Astronomy. (3). A selected topic in astronomy is discussed to develop an understanding of the discoveries and problems of modern astronomy. This course is intended primarily for general students with little or no background in a science or math. See course schedule for topic each semester. A 21 198 0 1911

213G. General College Physics I. (5). 4R; 3L. Mechanics, heat and wave motion. This course is intended for students with a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite: high school trigonometry or Math. 112. A 21 213G 1 1902

214G. General College Physics II. (5). 4R; 3L. Electricity, light and modern physics. This course is a continuation of Phys. 213G. Prerequisite: Phys. 213G or 313Q. A 21 214G 1 1902

Upper-Division Courses

313Q. University Physics I. (4). The first semester of a calculus-based physics sequence. Mechanics, heat and wave motion are studied. High school physics is recommended as preparation for this course. Natural science majors are required to take the lab, Phys. 313L, that accompanies this course. Credit is not given for both Phys. 213G and 313Q. Corequisite: Math. 243. A 21 313Q 0 1902

314Q. University Physics II. (4). The second semester of a calculus-based physics sequence. Electromagnetism and light are studied. Natural science majors are required to take the lab, Phys. 314L, that accompanies this course. Credit is not given for both Phys. 214G and 314Q. Prerequisites: Math. 243 with a grade of "B" or better and Phys. 213G with a grade of "B" or better and Phys. 313Q. A 21 314Q 0 1902


400. Individual Readings in Physics. (1-2). Repeatable but total credit may not exceed two hours for physics majors. Prerequisite: departmental consent. A 21 400 3 1912

407. Seminar. (1). Student reports on topics of general interest in physics. Repeatable for credit up to two hours but may not be counted for credit toward a minor in physics. Prerequisites: completion of, or concurrent enrollment in, an upper-division physics course and instructor's consent. A 21 407 9 1902

Courses for Graduate/Undergraduate Credit

501. Special Studies in Physics for Educators. (1). 3L. A series of courses covering both theoretical and experimental concepts which provide physical science background for the elementary educator. Prerequisite: inservice elementary teacher. A 21 501 1 1902

516. Advanced Physics Laboratory. (2). 4L. Experiments in classical and modern physics designed to stress scientific methods and experimental techniques. This course is open-ended projects requiring individual study. Repeatable up to a maximum of eight credit hours. Corequisite: Phys. 551. A 21 516 1 1902
632. ElectriCity and Magnetisms II. (3): An introduction to selected areas of modern physics with emphasis on the features of atomic, nuclear and solid state physics that require modifications of classical physics for their explanation. Prerequisite: Phys. 314Q or 314Q or departmental consent. Corequisite: Math. 344. A 21 555 0 1902

555. Physical Optics. (3).* Electromagnetic waves, diffraction and interference. Additional topics may include geometrical optics, coherence, the quantum theory of light and optical properties of solids. Prerequisites: Phys. 214Q or 314Q and Math. 344. A 21 555 0 1902

601. Individual Readings in Astrophysics. (1-2). Several topics in astronomy and astrophysics are studied in depth. Lectures, independent readings and student projects may be assigned. May be repeated up to six hours. Prerequisites: Phys. 195G and 551. A 21 601 3 1912

611. Modern Physics I. (3). Introduction to quantum mechanics, the Schroedinger equation, elementary perturbation theory and the hydrogen atom. Prerequisite: Phys. 551. A 21 611 0 1902


621. Elementary Mechanics I.* (3).* Motion of a particle in one and several dimensions, central forces, the conservation of energy and the Lagrangian form of mechanics. Prerequisites: Phys. 214Q or 314Q and Math. 344 with grades of "C" or better. A 21 621 0 1902

625. Electronics. (2).* 1R; 4L. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: instructor's consent. A 21 625 1 1909

631. Electricity and Magnetism I.* (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. A 21 631 0 1902

632. Electricity and Magnetism II.* (3).* A continuation of Phys. 631. Prerequisite: Phys. 631 or instructor's consent. A 21 632 0 1902

642. Chemical Physics. (3). Topics in areas of overlapping interests for students of chemistry and physics, such as thermodynamics, kinetics, quantum mechanics, solids and various types of spectroscopy. Standard experimental and theoretical techniques used in research in chemical physics are discussed by a team of chemists and physicists. Prerequisite: Phys. 711 or Chem. 641 or instructor's consent. A 21 642 0 1902

800. Individual Readings. (1-3). Repeatable for credit up to three hours. Prerequisites: 30 hours of physics and departmental consent. A 21 800 3 1902

801. Selected Topics in Physics. (2-3). Repeatable for credit up to six hours. Prerequisite: departmental consent. A 21 801 0 1902

807. Seminar. (1). Review of current periodicals; reports on student and faculty research. Repeatable for credit up to two hours. Prerequisite: 20 hours of physics. A 21 807 9 1902

809. Research. (1-3). Repeatable for credit up to six hours. A 21 809 4 1902

811. Quantum Mechanics I.* (3). The solution of quantum mechanics and perturbation theory with applications. Additional topics may include atoms, molecules, the solid state, relativity, second quantization, scattering and the WKB method. Prerequisites: Phys. 621 and 711, or departmental consent and Math. 550. A 21 811 0 1902


821. Classical Mechanics. (3). The Lagrangian, Hamiltonian and Hamilton-Jacobi methods of mechanics and an introduction to variational calculus. Applications will be selected from central forces, rigid body rotation, small oscillations and continuous media. Prerequisites: Phys. 621 and Math. 550. A 21 821 0 1902

831. Classical Electricity and Magnetism I.* (3). Maxwell's equations with application to static electricity and magnetism. Additional topics include vector fields, vector potentials, Greens functions, relativity, optics and magnetohydrodynamics. Prerequisites: Phys. 652 and Math. 550. A 21 831 0 1902

841. Nuclear Physics I.* (3). The nuclear two-body problem and nuclear forces, models of the nucleus and nuclear decay. Prerequisite: Phys. 711. A 21 841 0 1902

871. Statistical Mechanics. (3). An introduction to the basic concepts and methods of statistical mechanics with applications to simple physical systems. Prerequisites: Math. 550 and Phys. 621. A 21 871 0 1902

881. Solid State Physics I.* (3). Basic knowledge of the nature and properties of the solid state, including the structural, thermal, mechanical, electrical and magnetic properties. Also studied are the electron theory of metals and band theory of solids. Prerequisites: Phys. 551 or departmental consent and Math. 550. A 21 881 0 1902


Political Science
Major. A major consists of Pol. Sci. 121Q and 30 additional hours, including at least one course in four of the five groups below.

Minor. A minor consists of Pol. Sci. 121Q and 12 additional hours, at least six of which must be in upper-division courses.

Group 1, Political Theory and Philosophy—Pol. Sci. 300, 345, 444, 547 or 549
Group 2, American Politics—Pol. Sci. 315, 316Q, 317, 318, 319, 354, 358Q, 540, 551 or 552Q
Group 3, Comparative Politics—Pol. Sci. 226Q, 228, 320, 330, 523Q, 524 or 525
Group 4, International Politics—Pol. Sci. 335Q, 336, 338 or 534
Group 5, Public Policy and Administration—Pol. Sci. 321, 505, 506, 533, 535, 564, 580 or 587

Related Fields. Because of the changing nature of the social sciences and because of their increasing applicability to both the public and private sectors, political science majors should take appropriate courses in other social sciences, particularly Econ. 201-202, 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. Sci. 121Q, 345, 444, 547 or 549; one course from Group 3 (Comparative Politics) or Group 4 (International Politics); and the required hours from each area below.


Area C (six hours)—Econ. 201Q, Principles of Economics 1, and three hours in any of the following: Soc. 501, Sociological Statistics; Econ. 231, Introductory Business Statistics; Admin. 370, Quantitative Methods and Research; Math. (Statistics) 360Q, Elementary Probability; Psych. 315, Industrial Psychology; or computer science.

Lower-Division Courses

101G. Politics: Who Gets What. (3). A course focusing on some of the great political ideas and applying them to modern issues. Even if it is not a reason to re-examine the role of political issues, the emphasis will be on the role of women in the political process. This course is a part of the preparation for a major in political science.

102. Politics: Who Gets What—Laboratory. (1-2). This laboratory explores the processes of social conflict. Students collect and analyze raw data to better understand political decision making. A 22 102G 0 2207

103G. Games Nations Play: Problems in International Relations. (3). The immediate and most apparent aim of this course is to familiarize students with a number of international problems. The intention, however, is to achieve not only to analyze the international problems they encounter in the future. A 22 103G 0 2207

121Q. American Politics. (3). An analysis of the basic patterns and structure of the American political system with emphasis on policies and problems of American politics. A 22 121Q 0 2207

150. Political Science Workshop. (1-3). Prerequisite: instructor’s consent. A 22 150 0 2207


155. Practical Politics. (2-3). A course focusing on either election campaigns or legislative sessions depending on which is in progress during the specific semester the course is offered. During election seasons students are assigned to work for candidates and are also involved in a campaign simulation in class. During legislative sessions, both legislators and interest group leaders are involved. In addition, the class attends one of the legislative sessions in Topeka. A 22 155 0 2207

216. The Governments of Kansas. (3). An examination of the structure and function of state and local governments in Kansas. Emphasis upon policy formation and administration, finance, and intergovernmental relations. A 22 216 0 2207

220Q. East Asia. (3). Cross-listed as Hist. 220Q. A survey of the major political systems of the area, including China, Japan, and Korea, including history, culture, society, politics, religion, and economics. The course is taught by a team of instructors from several departments. A 22 220Q 0 2207

226Q. Comparative Politics. (3). An analysis of the basic patterns and structures of Western democratic and political systems, transitional systems, and totalitarian systems. A 22 226Q 0 2207

228. Autocracy, Dictatorship and Totalitarianism. (3). Nazi Germany, Fascist Italy, and Communist systems receive special attention. The role of majoritarianism in the development of political systems is examined. More traditional dictatorships and one-party states also receive attention. Topics emphasized are conditions giving rise to these regimes, leadership, ideology, and political personality. A 22 228 0 2207

2320. Basic Ideas in Political Theory. (3). The purpose of the course is to show the direct relationship between philosophical and political systems, the philosophical politics of six important Western philosophers are examined at an introductory level. Different models of democracy are studied 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. Finally, two or more political issues are examined in order to illustrate the various kinds of solutions that may be suggested by different political philosophies. A 22 232Q 0 2207

Upper-Division Courses

300. Political Analysis. (3). Introduction to traditional and scientific research approaches in political science. Attention is given to sources of data, data analysis and problems and ethics of research. A 22 300 0 2207

315. The Presidency. (3). The presidency focuses upon the evolution of the presidential office and recruitment of presidents and the nature of presidential power. A 22 315 0 2207

3160. The Congress. (3). Focused on the Congress with particular attention to interest articulation at both state and national levels. A 22 316Q 0 2207

317. Urban Politics. (3). An analysis of politics in urban areas, including such topics as 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. A 22 317 0 2207

318. Political Parties. (3). The role of political parties in the American political decision-making process at the national, state and local levels. A 22 318 0 2207

319. State Government. (3). The role of the states in the federal system and the patterns of politics and institutions in the several states. Particular attention is given to the State of Kansas. A 22 319 0 2207

320. Politics of Developing Areas. (3). A survey of the political systems in Latin America, Africa, the Middle East and South and Southeastern Asia, Special attention is paid to colonialism as a system, the effects of colonialism and patterns of emerging nations. A 22 320 0 2207

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 financial management, public personnel administration; political, judicial and other controls over the administration. A 22 321 0 2207

325. Women in the Political System. (3). Cross-listed as WS 325. A course focusing on the role of women in the political system. It also examines governmental policy with respect to the roles and status of women in society in both an American and comparative context. A 22 325 0 2207

330. Soviet Politics and Government. (3). An in-depth look at the Soviet political system. Using the United States as a point of reference, the course compares political processes in the systems of the two superpowers. Topics for study include political ideology, party, political scientist, and the individual, including the trade-off of individual and group goals, and the masses; evolution and development of the Communist party of the Soviet Union, leadership selection; treatment of minorities; judicial systems; and problems and policies. A 22 330 0 2207

335Q & 336. International Politics and Institutions. (3 & 3). 335Q: Focuses on interaction among 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. Emphasis on the United Nations. Some regional organizations are also covered. A 22 335Q & 336 0 2207 & A 22 336 0 2207
337. International Force and Intervention. (3). 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. Problems involved are those between Soviet and Western coalitions and in transferring arms to Third World countries also are discussed. A 22 337 0 2207

338. Soviet Foreign Policy. (3). The concept, content, and control of Soviet foreign relations; instruments and tools of Soviet diplomacy; policies of change and continuity from Russia to Soviet foreign relations and policy aims; and execution of foreign policy in selected areas. A 22 338 0 2207

345. Classical Medieval Political Theory. (3). The purpose of the course is to examine 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. The changes in emphasis that occurred in this tradition are traced through the Roman Stoics and the religious philosophers of the Middle Ages. Familiarity with these early political ideals is a major contribution to understanding subsequent political philosophers. A 22 345 0 2207


354. Judicial Process and Behavior. (3). Focuses upon the behavior and policy-making roles of courts and judges. A 22 354 0 2207

355. Practical Politics. (2-3). A course focusing on either election campaigns or legislative sessions depending on which is in progress during the specified semester the course is offered. During elections students are assigned to work for candidates and are also involved in a campaign simulation in class. During legislative sessions, both legislators and interest group leaders are involved. In addition, this is one of the legislative sessions in Topoke. A 22 355 0 2207

358Q. American Political Thought. (3). Consideration of selected topics in the development of political ideas in the United States. A 22 358Q 0 2207

390. Special Topics in Political Science. (1-3). An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit. A 22 390 0 2207

399. Directed Readings. (1-3). A course designed for exceptional students to meet their needs and deficiencies. Repeatable for credit. Prerequisites: senior standing and departmental consent. A 22 399 3 3207

444. Modern Political Theory. (3). This course continues the study of Western political philosophy beginning with the decisive break with the classical tradition that was made by Machiavelli early in the 16th century. Major works, which have been studied, are Hobbes, Locke and Rousseau, who are known as philosophers of the social contract and who exercised a great influence on the creation of the American political system. Marx, a political thinker who moves strongly in the direction of 20th century political philosophy, is also studied. Philosophers of this period have collectively had a profound impact on political life in this century. A 22 444 0 2207

481. Cooperative Education in Political Science. (1-3). The course provides the student with practical experience to complement the student's more formal political science course work. Specific projects must be approved by the department. Offered Cr/NCr only. A 22 481 0 2207

Courses for Graduate/Undergraduate Credit

505. The Politics of Health. (3). A course designed to show how governments in the United States make decisions in the health field; describe the political forces shaping governmental policy in health and analyze the arguments for and against an increased governmental role in health. A 22 505 0 2207

506. Politics of Aging. (3). Cross-listed as Q 322. Cross-listed as A 231. Student participation on the role of the elderly as competitors in the political arena. In assessing the elderly's strengths and weaknesses, the course analyzes the affects of aging on political behavior, strategies of the aging, both individual and collective and the responses of the political system. A 22 506 0 2207

523Q. Government and Politics of Latin America. (3). An examination of the political institutions and processes that currently exist in the Latin American republics. Emphasis is on the social, economic and psychological factors affecting these institutions and processes. A 22 523Q 0 2207

524. Politics of Modern China. (3). Emphasis is on study of China's political system since 1949 in terms of non-Western goals and ideas of social organization. Themes of political integration and political development are used to minimize distortion or cultural bias. Study encompasses the roots of the political system, the system as it now is and the goals of Chinese socialism. The assessment is made about the future development of communism in China. Topics include Chinese communism and the ideological heritage; political culture; policy making; changes in leadership succession; political participation; the Chinese Communist Party; political communications and socialization; legal developments; policy choices; and major events, such as the Hundred Musical Campaign, Great Leap Forward and the Proletarian Cultural Revolution. A 22 524 0 2207

525. Postindustrial Politics. (3). An examination and analysis of political systems and postindustrial politics in highly industrialized nations, such as the United States, Britain and Japan. Emphasis is placed upon party systems, stability-instability, party systems and comparative policy analysis. A 22 525 0 2207

523. Policy Development in Foreign Relations. (3). The process of U.S. foreign policy making in the American structure of government. Particular attention is given to institutional conflict. A 22 533 0 2207

534. Problems in Foreign Policy. (3). Examines domestic and international problems associated with U.S. foreign policy. A 22 534 0 2207

555. The Comparative Study of Foreign Policy. (3). An examination of foreign policy on a cross-national basis. Emphasis is placed upon conceptual approaches for explaining foreign policy behavior which are applicable cross-nationally. A 22 555 0 2207

560. American Political Behavior. (3). An intensive examination of the patterns of political behavior in the United States through primary and secondary analysis of extant data. Emphasis is given to the development and presentation of an original research paper. A 22 560 0 2207

574. Contemporary Political Theory. (3). The purpose of this course is to introduce students to the radically new ideas that emerged in the last century as a result of Darwinian biology and the new science of historicism and the growth of modern science and to explore their impact upon political thought. Although the multiplicity of philosophies makes generalization difficult, most of them draw strength from common sources. Philosophers such as Hans Kelsen, William Barrett, Friedrich Nietzsche and John Dewey are studied. Attention is given to the implications of these ideas as they relate to modern political issues and structures. A 22 574 0 2207

549. Approaches to the Study of Political Science. (5). A comparative study of representative conceptual frameworks to give the undergraduate student of politics an appreciation of the work of the professional scholar and its possibilities and limitations. An emphasis is placed on critical evaluation of such approaches. A 22 549 0 2207

551. Public Law. (3). An analysis of the role of appellate courts—especially of the U.S. Supreme Court— in the American political system. Emphasis is placed upon judicial review of state and national policies, separation of powers, federalism, the taxing power and the commerce clause. A 22 551 0 2207

552Q. Civil Liberties. (3). An analysis of the role of the appellate courts—especially of the U.S. Supreme Court—in the American political system. Emphasis is placed upon the guarantees of the Bill of Rights and the 14th Amendment. A 22 552Q 0 2207

559. The Planning Process. (3). This course is of use to students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the community level. It is also of value to students seeking an understanding of the complex process of urban-related life. The role of planning in solving human and environmental problems is examined. Emphasis is given to the relationship between specialists, citizens and elective officials as participants in the planning process. A 22 559 0 2207

561. Public Management of Human Resources. (3). The course surveys the major areas of management of human resources in the public sector. These include hiring, training, evaluation and pay promotion policies. Special emphasis is given to the laws governing public personnel management and to the impact of these laws on the public sector. The opportunity, productivity, unionization and collective bargaining problems found in the public sector. A 22 561 0 2207

564. Comparative Public Administration. (3). A study of the administrative system of selected developed and developing countries. Special emphasis is placed upon the various methods and approaches of comparative analysis and to the relationships between ad-
ministrative institutions and their environmental settings. A 22 564 0 2207

580. Administrative and the Policy Making Process. (3). The problems of government encountered in the administration of public policy. The approach is analytical rather than descriptive. Repeatable for credit. A 22 580 0 2207

587. Administrative Theory and Behavior. (3). A study of organization theory and the various approaches to the study of organization. A 22 587 0 2207

655. Urban Government Finance. (3). Cross-listed as Econ. 655. Analysis of urban government expenditure and revenue systems. Introduction to urban financial administration. A 22 655 0 2207

667. Introduction to Public Affairs. (3). Cross-listed as Econ. 667 and Soc. 667. An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 202 and a course in sociology or political science or its equivalent. A 22 667 0 2207

700. Advanced Directed Readings. (3). Repeatable for credit. Prerequisite: departmental consent. A 22 700 3 2207

701. Method and Scope of Political Science. (3). Emphasizes philosophy of science and methodology (as distinguished from method and technique) and exposes the student to recent works of methodological import in the various subfields within the discipline. Prerequisite: departmental consent. A 22 701 0 2207

702. Statistical Applications. (3). Emphasizes applications of data in political science. Prerequisite: departmental consent. A 22 702 0 2207

703. Proseminar in Political Science. (3). An examination of predominant concepts, theories and ideas of the discipline and its constituent subfields; required of degree-status graduate students upon entrance. Prerequisite: departmental consent. A 22 703 9 2207

710. Scope of Public Administration. (3). Cross-listed as Urban Affairs 710. Review of the scope of the field of public administration and its constituent subfields; required of key concepts and schools of thought underlying the field and identification of issues shaping the future development of the field. A 22 710 0 2214

750. Workshop. (2-4). Prerequisite: instructor's consent. A 22 750 2 2207

Courses for Graduate Students Only

813. Seminar in Comparative Government. (3). The comparative study of selected aspects of the politics and institutions of foreign governments. Prerequisite: departmental consent. A 22 813 9 2207

820. Seminar: The Administrative Process. (3). Consideration of the process and environment of administration with special attention given to the role of the executive in policy formulation, organization, planning, budgeting, staffing, coordination, communication, and administrative responsibility. Prerequisite: departmental consent. A 22 820 9 2207

821. The Budgetary Process. (3). Analysis of the development and utilization of the budgetary process in government administration with special attention given to the budget in relation to its role in policy formulation. Prerequisite: departmental consent. A 22 821 9 2207

835. Seminar in International Relations. (3). Analysis of special problems in and approaches to the study of international relations. Prerequisite: departmental consent. A 22 835 9 2207

841. Seminar in Urban Politics. (3). An intensive analysis of urban politics with emphasis on individual research projects. Prerequisite: departmental consent. A 22 841 9 2207

842. Administration in Local Government. (3). Examination of administrative processes and problems in local government, including the role of the professional chief executive. Prerequisite: departmental consent from the following: labor-management relations, problem evaluation, county administration, state government, and governmental decentralization. Prerequisite: Pol. Sci. 217, A 22 842 9 2214

845. Seminar in Political Theory. (3). Detailed study of the relevant works of major philosophical and political philosophers and their contribution to contemporary thought. Prerequisite: departmental consent. A 22 845 9 2207

851. Seminar in Public Law and Judicial Behavior. (3). Analysis of special problems in and approaches to the study of judicial systems. Emphasis is given to developing the student's awareness of research in the field. Prerequisite: departmental consent. A 22 851 9 2207

855. Seminar in Public Finance Systems. (3). An analytical study of selected topics in the politics and administration of revenue, expenditure and borrowing policies of governmental organizations. Prerequisite: departmental consent. A 22 855 9 2207

856. Seminar in American Politics and Institutions. (3). Analytical study of selected topics in American political behavior with emphasis on individual research projects. Repeatable for credit when content differs substantially. Prerequisite: departmental consent. A 22 856 9 2207

874. Internship. (3-6). S/U grade only. An intensive applied learning experience supervised by a university department or committee. To receive credit, a student must not only receive approval of a written report from his/her own department. Prerequisite: departmental consent. A 22 874 2 2207

875. Research Design. (3). S/U grade only. Requires the development of a research design for the thesis. The design must be submitted to a departmental committee for evaluation and approval. Prerequisite: departmental consent. A 22 875 4 2207

878. Thesis. (1-3). A 22 878 4 2207

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 broad subject areas (Group I); traditional human oriented areas (Group II); and applied areas (Group III).

The program is designed to prepare students for undergraduate 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 Whittier College. Psych. 111Q is required for all higher psychology courses. All BA majors are required to take Psych. 111Q, 111Q, 111Q, 111Q, 111Q, and 111Q in addition, six hours must be taken from each of the listed below.

Group One: Psych. 302, 322, 332, 342Q, 402, 502Q, 512, 532 or 622
Group Two: Psych. 304Q, 324Q, 334Q, 402, 502Q, 512, 532 or 622
Group Three: Psych. 316, 336, 416Q, 426Q, 501, 532 or 632

Minor: The minor consists of a minimum of 15 hours selected in consultation with the student's major advisor.

Lower-Division Courses

106. Stress and Stress Management. (3). 2R/2L. Introduction to the theories of stress and a survey of major stress management techniques. Class discussion emphasizes the conceptualization of stress and its social impact which is complemented by stress reduction techniques. The course does not satisfy the University's social science requirement for majors. It does count for a psychology major. A 23 106 1 2001

111Q. General Psychology. (3). An introduction to the general principles and areas of psychology. Topics include learning, perception, thinking, behavioral development, intelligence, personality, and abnormalities of behavior. This course is a prerequisite for advanced and specialized courses in psychology. A 23 111Q 0 2001


211. Advanced General Psychology. (3). An intensive study of selected topics from general psychology, including history of psychology, classical schools of psychology, contemporary theories and research in basic areas of psychology, and selected areas of recognized importance. Prerequisite: Psych. 111Q. A 23 211 0 2001
Upper-Division Courses

302. Psychology of Learning. (3). Basic principles of how organisms learn are explored to highlight key concepts such as reinforcement and punishment, generalization of behavior across settings and extinction of specific learned responses. Research, theoretical issues and current trends are discussed. Prerequisite: Psych. 111Q. A 23 302 0 2005

304Q. Social Psychology. (3). A study of how social behavior is influenced by the behavior of others. Topics covered include attitude formation and change, attribution, interpersonal attraction, impression formation and compliance, and the application of social psychological principles to an understanding of prosocial, aggressive, and sexual behavior. Prerequisite: Psych. 111Q. A 23 304Q 0 2005

316Q. Industrial Psychology. (3). An introduction to the many roles of scientific psychology in the selection, training, evaluation of employees, and human resources management. Emphasis is placed on the role of scientific psychology in mediating between the individual and the work environment. Prerequisites: Psych. 111Q. A 23 316Q 0 2006

324Q. Psychology of Personality. (3). Psychology of Personality, topics surveyed to illustrate general principles of personality, normal and abnormal psychology, and the use of personality tests for making decisions. Prerequisite: Psych. 111Q or Math. 111 or 112. A 23 401 0 2007

402. Psychology of Consciousness. (3). Consciousness is examined from two perspectives: (1) the functional standpoint deriving from Locke's consciousness to "peak experiences" and as a framework for knowledge. Research on split-brains and dissociated personalities is covered, and the healing process from the second perspective. Prerequisite: Psych. 111Q. A 23 402 Q 2001

404. Psychology of Aging. (3). Cross-listed as Geront. 404. An examination of the issues surrounding the aging process. Includes topics on personality and intellectual change, mental health of the elderly, and the psychological issues of extending human life. Major emphasis is placed on the strength of the elderly and prevention of psychological problems of the elderly. Prerequisite: Psych. 111Q. A 23 404 0 2009

411. Research Methods in Psychology. (4). 3R; 3L. Covers the philosophy of research methods, experimental design, appropriate data analysis techniques and historical trends and developments in experimental psychology. The laboratory exposes students to representative experimental lab techniques in the major subdivisions of psychology. All students are actively involved in research projects. Prerequisites: Psych. 110Q. A 23 411 0 2002

414. Child Psychology. (3). Covers psychological development from conception through infancy and childhood. Topics include the developmental sequence, perceptual and cognitive functioning, social-emotional attachment and socialization. Attention is also given to practical issues of discipline and child rearing. Prerequisite: Psych. 110Q. A 23 414 0 2009

415O. Psychology and Problems of Society. (3). A study of the special role of psychological research, theory and principles applied to contemporary social issues and problems, including such topics as environmental concerns, problems in the schools, substance abuse, nuclear proliferation, racism and sexism, child abuse, juvenile delinquency, aggression, behavioral control, aging, etc. Prerequisites: Psych. 110Q. A 23 415O 0 2009

426. Psychology of Work. (3). Selects from standard topics of industrial psychology to examine the greatest depth the seriousness of job satisfaction problems, effects of technological change, membership in unions, control of productive work tasks and myths about the working woman and other similar topics. Prerequisite: Psych. 111Q. A 23 426Q 0 2008

428. Field Work in Psychology. (3). Special projects and practicums under supervision in public and/or private agency settings. Projects of productive work tasks and research and/or research may be undertaken with prior approval of the department. Repeatable for a maximum of six credit hours, but only one credit may be earned per semester. Offered Cr/Noncr only. Prerequisites: Psych. 111Q and departmental consent. A 23 428 Q 2005

481. Cooperative Education. (1-3). This course is designed to provide the student with practical experience, under academic supervision, that complements the student's academic program. Consultation with advisor required. Prerequisite: One course from Group One. A 23 520Q 0 2001

Courses for Graduate/Undergraduate Credit

502Q. Compare Psychology. (3). Psychological and ethical analysis of behavior of contemporary societies. The evolution and development of behavior are stressed. Major topics include a critique of the indigenous sociocultural interpretation of behavior. Lectures are supplemented with field trips. Prerequisite: one course from Group One. A 23 502Q 0 2001

508. Psychological Tutorial. (3). Selected topics in psychology. Repeatable for a maximum of six hours of credit. Instructor's consent may be required. Check Schedule of Courses. Prerequisites: Psych. 110Q. A 23 508 Q 2001

512. Personality. (3). A survey of the primate (including humans) and their behavior. Topics include 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: Psych. 111Q. A 23 512 Q 2002

514. Psychology of Health and Illness. (3). A survey of the relationships between psychology/behavior and physical health and illness. Topics include stress and coping, health habits, symptom perception, stress, role conflict, health care provider-client relationships, hospitalization and prevention. A self-study of lifestyle and behavior in relation to health and illness may be included. Prerequisite: Psych. 110Q. A 23 514 Q 2001

516. Drugs and Human Behavior. (3). 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. Social-cultural, personal, and legal determinants and consequences of drug use and abuse will be detailed. Prerequisite: Psych. 111Q. A 23 516 Q 2002

522. Biological Psychology. (3). A review of the biological foundations of behavior. Topics include the evolutionary basis of behavior, behavior genetics, a critical analysis of brain-behavior relationships, the role of hormones in behavior, and neurochemical correlates of behavior. Prerequisite: Psych. 110Q. A 23 522 Q 2010

524. Advanced Psychology of Personality. (3). More intensive treatment of the topics of psychology of personality with special emphasis on contemporary theories, research and application of the psychological study of personality. Prerequisite: 324Q. A 23 524 Q 2001

526. Psychological Testing and Measurement. (3). A critical analysis of the psychological foundation of tests and the interpretation of test findings. Several tests represent the different types of intelligence, personality, normal and abnormal personality, interests, special abilities and aptitudes are surveyed to illustrate general principles of testing. Prerequisite: Psych. 401. A 23 526 Q 2006
532. Psychological Linguistics. (3). Cross-listed as Ling. 545. Survey of psychological, linguistic and informational analyses of language. Topics include the performance-competence distinction, child development of speech, animal communication, and the nature of language to thought. Prerequisite: Psych. 111Q A 23 534 0 2001

533. Psychology of Women. (3). Cross-listed as WS 534. Psychological assumptions, research and theories of the roles, behavior and potential of women in contemporary society. Prerequisite: Psych. 111Q A 23 534 0 2001

536. Behavior Modification. (3). A study of the basic assumptions, principles and issues of behavioral approach to helping persons with psychological problems. Demonstration and individualized practice in general helping skills as well as individual projects in applying these skills are included. Prerequisites: Psych. 111Q and Instructor's consent. A 23 536 2 2003

544. Abnormal Psychology. (3). An introductory survey of abnormalities of behavior. Definitions, causes, types and classifications of abnormal behavior are examined. Attention is given to various theories of abnormality, research evidence and various methods of diagnosis and treatment. Hypothetical regarding as well as concerns about style and presentation are not presented. Prerequisite: Psych. 324Q A 23 544 0 2001

546. Practicum in Applied Behavior Analysis and Social Learning. (3). 1R; 4L. Placement in local human service agencies for about eight hours a week for 14 weeks. Under supervision, students assist in the development and delivery of services at the agency site. Repeatable once. Prerequisites: Psych. 536 and instructor's consent. A 23 546 2 2003

556. Introduction to Clinical Psychology. (3). A survey of current ethical, conceptual and research issues involved in the assessment and treatment of psychopathology. Contemporary psychotherapies are reviewed with an emphasis on the relative efficacy of each and the mechanisms through which they initiate behavioral change. Prerequisite: Psych. 324Q A 23 556 0 2003

566. Computer Applications to the Behavioral Sciences. (3). 2R; 2L. This course is an introduction to computer applications to the behavioral sciences. Included are 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. A 23 566 1 2007

601. Systems and Theories in Psychology. (3). An intensive review of systems and theories of psychology with emphasis on behaviorism, Gestalt psychology, structuralism and others. An attempt is made to develop the logical relations of these theories to each other and as well as to consolidate modern views and points and practices into a comprehensive system. Prerequisite: 15 hours of psychology or instructor's consent. A 23 568 1 2007

608. Special Investigation. (1-3). Upon consultation with instructor, advanced students with adequate preparation may undertake original research or directed readings in psychological problems. Repeatable for a maximum of six credit hours. Consultation with and approval by an appropriate advisor are required prior to registration. Prerequisites: nine hours in psychology and instructor's consent. A 23 608 4 2001

622. History of Psychology. (3). Traces the development of philosophical and empirical concepts of psychology from the ancient Greeks through and beyond the 20th century. The origins and various views of the mind-body relationship are examined. The influences of naturalistic assumptions and research methods on 20th century psychology are emphasized. Prerequisites: nine hours of psychology or instructor's consent. A 23 622 0 2001

704. Advanced Social Psychology. (3). An intensive review of selected contemporary issues in social psychology. Prerequisite: Psych. 304Q A 23 704 9 2005

728. Seminar in Psychotherapy. (3). Provides an in-depth description and critical analysis of various theories and methods of psychotherapy, an examination of the efficacy of these therapeutic approaches and a survey of common issues in psychotherapy, such as process and outcome, and client and therapist variables in the therapeutic process. Prerequisites: Psych. 111Q and instructor's consent. A 23 728 9 2003

748. Research and Development in Applied Settings. (3). 2R; 2L. An introduction to research and development activities in industry. Lecturers cover sources of research ideas, funding sources, use of company resources, technical communications, assembling literature, research design and publishing practices. Lab work involves practice in preparing industry-type proposals and presentations and in the critical analysis of industry research proposals. Prerequisite: 15 hours of psychology or instructor's consent. A 23 748 1 2008

750. Psychology Workshop. (1-3). A course of specialized instruction, using various formats in selected topics and areas of psychology. For students with prior experience and research. A 23 750 3 2002

756. Aerospace Psychology. (3). Exploration of the many roles of scientific psychology in aviation and aerospace science. Surveys the research and literature in areas such as psychophysiological aspects of flight, environmental effects on human performance in aircrew, aircrew performance and training, pilot workload, cockpit control and display systems and aviation safety. Prerequisites: 15 hours of psychology or instructor's consent. A 23 756 0 2008

Courses for Graduate Students Only

802. Seminar in Clinical Psychology. (3). Intensive study of clinical theory, research and practice. Included are such issues as an intensive examination of psychopharmacological approaches, issues in assessment, research in clinical psychology, appropriate research designs in clinical science, client rights, legal and ethical concerns, role of the therapist, and community issues. Prerequisite: instructor's consent. A 23 802 9 2003

804. Seminar in Behavioral Development. (3). A critical analysis of the concept of development and of theories of behavioral development. Course begins with a review of the concept of integrative levels and proceeds to a discussion of modern evolutionary thought. The concept of development is examined from psychological, biological and anthropological perspectives. Finally, various theories of human development are critically evaluated. Prerequisite: instructor's consent. A 23 804 9 2001

811. Seminar in Cognitive-Behavioral Assessment. (4). 3R; 3L. Surveys issues of relevance to cognitive-behavioral assessment and intervention. Emphasis is placed on critical analysis and practice in clinical use of such psychological assessment methods as interviewing, observation, self-report and standardized intelligence and personality tests. Focus is upon comprehensive clinical assessment, including integration and reporting of assessment data for treatment planning. Prerequisite: instructor's consent. A 23 811 9 2003

815. Clinical Research and Practicum. (3). Designed to give the student further experience in clinical skills and clinical research. Students are supervised in their clinical work with individual clients seen through the departmental clinic. May be taken for a maximum of six credit hours. Prerequisite: instructor's consent. A 23 815 2 2003

820. Graduate Research Seminar. (3). Analysis and explanation of the assumptions and experimental methodologies of the types of research that lead to discovery of testing of scientific laws. Although not limited to psychology, specific attention is given to laws illustrating the causes of individual behavior. Prerequisite: instructor's consent. A 23 820 9 2001

825. Seminar in Behavior Therapy. (4). 3R; 3L. A review of the theoretical and empirical support for specific behavior therapeutic practices. Approaches may include systematic desensitization, flooding, contingency management techniques and aversive therapies. The interface between behavioral assessment and clinical practice also is discussed. Prerequisite: instructor's consent. A 23 825 9 2003

830. Seminar in Community Psychology. (3). Comprehensive overview of theory, research and practice in the emerging field of community psychology from the perspective of group and community processes. Topics include prevention, consultation, community mental health and a community versus individual perspective to human and social problems. Prerequisite: instructor's consent. A 23 830 9 2005

831. Research in Community Psychology. (3). An examination of the perspective of community psychology specifically concerning the applied methods of needs assessment and program evaluation. Special emphasis on how to use applied research methods to precipitate social changes, community agency and organizational change and social reform. Prerequisite: instructor's consent. A 23 831 2 2005

832. Practicum in Community Psychology. (3). Supervised practice in such areas as psychological consultation, program evaluation, program development, paraprofessional training and prevention. Prerequisite: nine hours in psychology and/or anthropological psychology. Prerequisites: nine hours in psychology and/or anthropological psychology. Repeatable for a maximum of six credit hours. Prerequisite: Psych. 830 and 831 and instructor's consent. A 23 832 2 2005

833. Psychological Service Agencies. (3). An in-depth examination of psychological service agencies with regard to structure, functions, financing, goals, planning, development, evaluation and accountability, consumer rights and agency ethics. Prerequisite: nine hours in psychology and psychology. Repeatable for a maximum of six credit hours. Prerequisite: Psych. 830 and 831 and instructor's consent. A 23 833 2 2005
Public Administration

Students planning to continue their education in pursuit of a Master of Public Administration degree may want to structure their undergraduate degree plans to include program prerequisites. The Master of Public Administration program has a specified list of prerequisites that is considered important to the information foundation of the professional administrator. Students can be accepted in a "full-standing" status prior to the completion of program prerequisites. The Master of Public Administration degree consists of 36 graduate hours and 16 hours of prerequisites in the areas of economic principles, public administration, statistics, and demonstrated computer competency.

The Master of Public Administration program uses an important blending of academic foundations and real world application. Since the program is housed in the Hugo Wall Center for Urban Studies, 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 and may elect to complete the program through an applied research project which addresses an issue of professional concern.

The courses listed below, except for PADM 755, constitute the core curriculum and completion option requirements for all Masters of Public Administration candidates. The remainder of the program can be structured to match the career aspirations of the student using course offerings from selected University departments. The following areas of specialization should serve as examples of possible track options:

- Public Management
- Public Personnel Management
- Urban Studies
- Aging Administration
- City Management
- Policy Analysis and Planning
- Public Financial Management
- Applied Research for Policy Decisions

Courses for Graduate/Undergraduate Credit

625. Computer Applications for Public Policy. (3). Course familiarizes students with major types of software applications for IBM compatible microcomputers and their use in public policy analysis. Prerequisite: enrollment in MPA program or sponsorship by local government. P 13 625 0 2214

700. Urban Affairs. (3). Study of the process of urbanization from a multidisciplinary point of view. Prerequisite: enrollment in urban affairs program or instructor's consent. P 13 700 0 2214

702. Urban Research Methods. (3). This course is designed to acquaint the student with applied public policy research methods. Emphasis is on locating, appraising, and utilizing secondary sources of data and types of data used in policy, planning, and administrative research. Students must complete several short research projects. Prerequisite: enrollment in urban affairs program or instructor's consent. P 13 720 0 2214

711. Scope of Public Administration. (3). Cross-listed as Pol Sci. 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. P 13 710 0 2214

720. Urban Systems. (3). Cross-listed as IE 720. This course describes the principles of systems analysis and the tools by which these principles can be applied. Examples include systems taken from urban problems. Emphasis is on the formulation of realistic models and solutions. Computer techniques developed in class are necessary. Prerequisite: instructor's consent. P 13 720 0 2214

730. Decision Making. (3). Course includes theories of decision-making ability under varying degrees of uncertainty. Content coverage includes such material as theories of decision making, environment for stimulating creativity, cognitive inhibitors to problem identification, alternative evaluation techniques, decision implementation and utilization of quantifiable tools in decision making. Prerequisite: instructor's consent. P 13 730 0 2214

740. Policy Evaluation. (3). This course is designed to assist public sector monitoring and control of program and service delivery quality. The social sciences offer a variety of relevant tools and techniques for management feedback applications which are appropriate for evaluating performance. Prerequisite: instructor's consent. P 13 740 0 2214

755. Special Topics in Urban Affairs. (3). Provides students with an opportunity to
engage in advanced study in urban topics that are of immediate concern and arise only occasionally. The 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. Corequivalent instructor's consent. P 13 755 0 2214.

Courses for Graduate Students Only

675-676. Thesis. (3-3). Prerequisite: advisor’s consent. P 13 675 0 2214; P 13 676 0 2214.

850. Urban Affairs Internship. (3). The internship is designed to integrate academic pursuits and practical experience. Students admitted to the internship are assigned to work in an approved government, community or private organization for a period of three to 12 months. P 13 890 2 2214.

898. Applied Research Paper. (3). The applied research paper under the direction of a faculty committee is designed to develop and measure competency in the areas of writing, research and policy conceptualization. Each paper addresses a policy relevant question and the delivery of a finished product with policy application. This course is to be taken in the last semester of course work. P 13 898 4 2214.

899. Urban Seminar. (3). As part of the internship experience, the intern is required to submit and be examined upon an internship paper. Prerequisites: completion of all Master of Public Administration core courses and six hours of additional graduate credit courses. P 13 899 0 2214.

Religion

The Department 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 is being 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.

Students contemplating a major or minor in religion should discuss their academic program with a member of the department. Each student declaring a major or minor in religion is assigned an advisor from the department faculty with whom to plan a course of study.

Major. The Department of Religion offers two options for a major. Option one is designed for the ordinary major. This option requires a minimum of 30 hours. A maximum of six hours may be taken at the 100 level. Option two is designed for students who choose religion as a second major. This option requires a minimum of 24 hours. A maximum of six hours may be taken at the 100 level.

Distribution. For both majors at least nine hours must be selected from "tradi tions" courses, three from comparative or theory courses and three from constructive courses. For an identification of these courses see the religion department advising coordinator.

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 box. "Biblical" has been central to a number of religious traditions for more than 2,000 years. This 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. The course is historical and analytic, non-confessional. It culminates with a survey of the roles played by the Bible in contemporary American culture. A 15 120Q 0 1510.

125. World of the Bible. (5). The course seeks to understand the Bible within its geographical, historical and religious context— the polytheistic world of the ancient Near East and the Mediterranean civilizations of Babylonia, Assyria, Egypt, Persia, Greece and Rome from the period of the patriarchs to the rise of Christianity. Special attention is paid to similarities and differences between Biblical theology and views current in neighboring religious traditions. A 15 125 0 1510.

127. Magic, Witchcraft and Religion. (3). Cross-listed as Anthro. 127. An examination of various concepts concerning the realm of the supernatural as held by primitive peoples. This course relates such religious and magical beliefs—and the resultant practices—to the larger patterns of cultural context. A 14 127 0 1510.

130Q. Introduction to Religion. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on methods used in the study of religion. A 15 130Q 0 1510.

131G. Traditional Religion and the Modern World. (3). A study of some of the traditional religious systems (Buddhist, Hindu, Confucian, Taoist, Judaic and Christian) and of several of the important contemporary criticisms of these traditions. This course explores the problem of whether traditional religion can be significant in the modern world. A 15 131G 0 1510.

150. Workshop in Religion. (2-4). A 15 150 0 1510.

210. Current Religious Issues. (3). A critical study of contemporary issues with some attention to non-Western religious traditions. The relationship of religion to such topics as race, war, secularism, population explosion and politics is considered. A 15 210 0 1510.

215. The Meaning of Death. (3). An exploration of the images, interpretations and practices that constitute the response to the problem of death in major religious traditions. A 15 215 0 1510.

221. Judaism. (3). The history and central teachings of traditional Judaism and its modern varieties (Reform, Orthodox, Conservative, Zionism, etc.). The course focuses on Jewish customs and practices as well as Jewish religious thought. A 15 221 0 1510.

222Q. Hinduism and Buddhism. (3). A survey of the history of India's ancient Vedic tradition and explores the diverse ways in which it has been interpreted. A 15 222Q 0 1510.

224Q. Christianity. (3). An overview of the historical development of Christianity from New Testament times to the present, stressing historical developments in religious life and theology. Catholic, Protestant and Orthodox Christianity are treated, with some attention to non-Western religious traditions. A 15 224Q 0 1510.

224R. Religion in America. (3). A survey of the history, development and current status of major American religious bodies with some attention to minor religious denominations such as the Black Church, Christian Science and the Latter Day Saints. A 15 224R 0 1510.

225. Jesus. (3). There have been varied responses to and multiple interpretations of the life and teaching of Jesus. This course examines the development and function of traditions about Jesus in Biblical, extrabiblical and more recent, popular sources. A 15 225 0 1510.

225G. Traditional Religion and the Modern World. (3). A study of some of the traditional religious systems (Buddhist, Hindu, Confucian, Taoist, Judaic and Christian) and of several of the important contemporary criticisms of these traditions. This course explores the problem of whether traditional religion can be significant in the modern world. A 15 225G 0 1510.

227. Magic, Witchcraft and Religion. (3). Cross-listed as Anthro. 127. An examination of various concepts concerning the realm of the supernatural as held by primitive peoples. This course relates such religious and magical beliefs—and the resultant practices—to the larger patterns of cultural context. A 14 127 0 1510.

230. Jewish/Christian Relations. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on methods used in the study of religion. A 15 230 0 1510.

250Q. Eastern Religions. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on methods used in the study of religion. A 15 250Q 0 1510.

275. Judaism and Christianity. (3). A critical study of contemporary issues with some attention to non-Western religious traditions. The relationship of religion to such topics as race, war, secularism, population explosion and politics is considered. A 15 275 0 1510.

285. Buddhism and Christianity. (3). A critical study of contemporary issues with some attention to non-Western religious traditions. The relationship of religion to such topics as race, war, secularism, population explosion and politics is considered. A 15 285 0 1510.

295. Islam. (3). The religion in its geographical, social, political and cultural context, both Arab and non-Arab. A 15 295 0 1510.

295Q. Eastern Religions. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on methods used in the study of religion. A 15 295Q 0 1510.

FAIRMOUNT COLLEGE/RELIGION 191
tion to the religions of India and China. Religious studies, when traced in a historical context, include Hinduism, Buddhism, Jainism, Taoism, and Confucianism. An attempt is made to understand the religious life and texts of these ancient faiths and the dynamic cultures from the various religious traditions. 

255. Zen and Taoism. (3) Zen is a form of Buddhism that emphasizes spontaneity and the oneness of the here and now, employing startling, nonintellectual methods to free the mind from the ruts of diverse traditions, plurality, and linear time. Taoism, on the other hand, represents a vision that is at once both Buddhist and deeply Chinese; its most distinctive features may in fact best be 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 man fitfully participates by, on one hand, a 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 the more traditional Buddhist approaches to enlightenment. This 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. A 15 260 0 1510

260Q. Psychic Phenomena. (3) Spiritual traditions have everywhere and at most times approved of a transpersonal or divine, and intermediate. The intermediate world of the psychic, the occult, the astral, is the subject of philosophical and psychological examination. Topics include: psychic; out-of-body, ESP, clairvoyance, telepathy, and ethereal bodies in Hinduism and the Tibetan Sardos. Lecture, discussion, and student reports. Visits by persons with expertise in psychic reading, out-of-body states, Kirlian photography and ESP. A 15 260Q 0 1510

280. Special Studies. (3) A concentrated examination of a significant figure, event, or issue in religion or the study thereof. Repeatable for credit. Prerequisite: department option. A 15 280 0 1510

281. Cooperative Education. (1-4). Offered on a Cr/N Gr basis. A 15 281 2 1510

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, eschatology, covenant, prayer, history, and wisdom. A 15 311 0 1510

321. New Testament Topics. (3) An in-depth study of a major facet of the religion of the New Testament, such as the synoptic traditions, Johannine theology, Pauline theology, apocalyptic, and canonization. A 15 321 0 1510

323. Protestantism. (3) This course traces the development of the Protestant Christian tradition and analyzes its distinctive themes. After a historical survey of this family of Christianity, the 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. A 15 323 0 1510

324. Catholicism. (3) This course traces the development of the Catholic Christian tradition and analyzes its distinctive themes. After a historical survey, the course stresses such

330. Modern Protestant Theologians. (3) Critical study of how Protestant theologians in the 19th and 20th centuries responded to modern thought. Includes selections from such theologians as Schaeffer, Toelzsch, Kierkegaard, Barth, Bultmann, H. Niebuhr, Reinhold Niebuhr and Tillich. A 15 330 0 1510

333G. Women and Religion. (3) Cross-listed as WS 333. An examination of past and present images and roles of women in religious traditions. The course looks at women in the Bible and religious history, as well as contemporary criticisms of patriarchal religion and resources for change. A 15 333G 0 1510

346. Philosophy of Religion. (3). Cross-listed as Phil 346. A 15 346 0 1510

362. Modern Judaism. (3) A survey of the variety of Jewish life that has arisen since the Enlightenment; beginning with the origins, beliefs and practices of modern Orthodoxy, Conservative, Reconstructionist, and Reform Judaism in what ways are these different? Which are particularly modern? In what ways are they continuations of an older tradition? A 15 362 0 1510

363. 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. The course concludes with an investigation into the relationship between Zionism and the modern state of Israel. A 15 363 0 1510

401Q. Comparative Religion. (3). An observation and analysis of the patterns found in the characteristic religious phenomena (e.g., myth, symbol, belief, and ritual), with a view to a systematic understanding of man’s religious life as it has expressed itself throughout history. A 15 401Q 0 1510

419. Modern Atheists. (3) An examination and critical evaluation of some of the seminal critiques of religion in both general and specifically Christian in particular that have been produced in the modern world. Includes selections from such figures as Spinoza, Voltaire, Feuerbach, Marx, Nietzsche, Freud, and Camus. A 15 419 0 1510


442. Greek and Roman Religion. (3) The transformations in the religions of the Mediterranean world, especially the conquests of Alexander the Great and the influence of Christianity under Constantine. The course covers the traditional themes of Greek and Roman religion, the impact of Greek culture on the Christian religion, and the development of the Christian religion as a separate entity. A 15 442 0 1510

446. Violence. (3). A critical examination of the relationship between religion and violence as expressed in war, revolution, criminality and interpersonal relationships. Special attention is given to the ways religions have justified, tried to limit or ameliorate violence. A 15 446 0 1510

461. Spiritual and Psychic Experience. (3). An interdisciplinary study of the reality of spiritual and psychic experiences that are reported in the history of religion: mysticism, conversion, shamanistic experiences, spiritual healing, paranormal visions, voices and knowledge. A 15 461 0 1510

466. Meditation and Spiritual Growth. (3). The course focuses on three interrelated topics: (1) biofeedback and meditation; (2) spiritual disciplines such as prayer, contemplation, fasting and service in religious traditions; and (3) selected personal growth disciplines that appear in the contemporary human potential movement. A 15 466 0 1510

476. The Reformations. (3). Cross-listed as Hist. 576. A 15 476 0 1510

480. Special Studies. (3) A concentrated study of a theologian, a writer of religion or a religious issue announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: Instructor’s consent. A 15 480 0 1510

481. Cooperative Education. (1-4). Offered on a Cr/N Gr basis. A 15 481 2 1510

490. Independent Work. (1-3). Designed for the student who is 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. A 15 490 3 1510

Courses for Graduate/Undergraduate Credit

750. Workshop in Religion. (2-4). A 15 750 0 1510

796. Independent Study. (1-3). Designed for the student who is capable of doing graduate work in a specialized area of the study of religion that is not formally offered by the department. Repeatable for credit. A 15 796 0 1510

Sociology/Social Work

A major in sociology provides students with an understanding of human behavior in personal relationships such as the family and friendship 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 personal 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.

Major A major in sociology consists of at least 30 hours, including:

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The male role

The structure, role of parenting in children, remaining childless, the transcyberphobic, the cyberphилиc; the computer as a family member; the computer as a power vendor in the work setting: computer deviance; and the computer and the disadvantage: A cross-cultural and historical perspective is utilized where appropriate. A 25 301 0 2208

110Q. Introduction to Sociology. (3). Introduction to basic concepts, propositions and theoretical approaches of sociology, including elementary methods of studying social phenomena. This course serves as the basic course for students who intend to take additional courses in sociology. A 25 100Q 0 2208

212. Introduction to Social Research. (3). A survey of the many research techniques found in sociology and related fields. This course stresses conceptual understanding of all phases of the research process. Prerequisite: Soc. 111Q A 25 212 0 2208

220Q. Contemporary Social Problems. (3). An analysis of contemporary American social problems with an emphasis on urban social problems. A 25 220Q 0 2208

226. Ethnic Groups in America. (3). Emphasis is given to the diversity of American ethnic groups to include minority and major white ethnic groups (e.g. German, Italian, Jews, etc.). Special attention is given to demographic processes such as births and migration and the interplay of ethnicity and health with its intriguing contrasts in the rates of disease, fertility and mortality. The diversity of ethnic situations is discussed. Students are encouraged to pursue in-depth study of their own ethnic groups through independent class projects. A 25 226 0 2208

Upper-Division Courses

300. Social Stages of Life. (3). This course examines the development and maturation of the social self through the various stages of adult life, i.e. childhood, adolescence, early adulthood, middle age and old age. Topics range from dating and marriage to the mid-life crisis. Attention is given to the various stages of adult life and how the interplay of social and historical events with personal experiences affects the self and relations with others. Prerequisite: Soc. 111Q A 25 300 0 2208

301. Computers and Society. (3). The course has two 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, the course focuses upon the work setting and the family. Some of the topics covered include new social roles (programmer, hacker, the cyberphobic, the cyberphilic), the computer as a family member, the computer as a power vendor in the work setting: computer deviance; and the computer and the disadvantage: A cross-cultural and historical perspective is utilized where appropriate. A 25 301 0 2208

315Q. Courtship and Marriage. (3). The emphasis is on courtship and marriage processes as they exist in the United States today. The course is designed to aid students in the acquisition of a sociological perspective of the courtship process through an examination of social class, sex roles, dating and human sexuality. Marital interaction, parenthood, marital dissolution and the future of marriage constitute the emphasis for the latter half of the course. A 25 315Q 0 2208

316. The American Mafia. (3). The role of the American Mafia is examined from a variety of sociological perspectives and within particular settings, for example, work, family and leisure. Other relevant topics are socialization, interaction and adult developmental stages and crises. Changing male roles produced by strains and conflicts in contemporary America are discussed. A 25 316 0 2208

318. Environmental Sociology. (3). Explores relationships between humans and their environment. Particularly emphasized are social variations in environmental usage, effects of overpopulation, resource utilization, pollution and possible solutions to environmental problems. A 25 318 0 2208

322. Deviant Behavior. (3). The structure, dynamics and etiology of those behavior systems that are integrated around systematic violations of the control norms. Competing theories are presented and evaluated within the context of the assumption that man is a social product. Prerequisite: Soc. 111Q. A 25 322 0 2208

325. Parenting. (3). The role of parenting in American society is examined from a number of different perspectives. The focus is on the major developmental changes facing couples as they move through the family life cycle. Among the topics covered are the decision to have children, remaining childless, the transition into parenthood, parent-child relationships, parents and school-age children. The transition from active parenthood. Other topics discussed include single parents, divorce, step-parenting and dual-career parents. Several different parenting techniques and styles are discussed as well. A 25 325 0 2208

330Q. Social Inequality. (3). An analysis of status, class and caste in various societies, especially in American society. The relationship of social inequality to various social institutions is also included. Prerequisite: Soc. 111Q. A 25 330Q 0 2208

331. Population. (3). The size, composition, distribution and recent trends in the population of the world and the United States and the relationship of population to world problems. Prerequisite: Soc. 111Q A 25 331 0 2208

333Q. Sociology of the Future. (3). The future is viewed through the sociological perspective of planned and possible alternatives. A body of literature is presented
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including theory and field studies of alternative social outcomes and what indicators are presently available as options for social planners and the communities, as well as the general citizenry. Prerequisite: Soc. 1110 or 2200. A 25 333Q 0 2208

334. Sociology of the Community. (3). An exploration of a basic unit of social organization, the community. Emphasis is placed on organizational and interpersonal relationships within the community and changes in those relationships, as well as the community’s place within society. Prerequisite: Soc. 1110. A 25 334 0 2208

335. Sociology of Occupations and Organizations. (3). The work group as a social group, social organization of the workplace and social factors affecting the work. A comparative approach to the study of occupations and work settings is used and worker troubles and tensions are highlighted. Prerequisite: Soc. 1110. A 25 335 0 2208

336. Sociology of Age. (3). Cross-listed as Gerion. 513. Analysis of the social dimension of old age, examining the role of aging in economic structure and role changes and their impact on society. Prerequisite: Soc. 1110. A 25 513 0 2208

511. Applied Quantitative Research. (3). An examination of the survey as a tool used to address sociological questions. Topics include research design, data collection techniques and interpretation of results. Students gain experience in designing and administering surveys. Prerequisite: Soc. 212. A 25 511 0 2208

513. Sociology of Aging. (3). Cross-listed as Gerion. 513. Analysis of the social dimension of old age, examining the role of aging in economic structure and role changes and their impact on society. Prerequisite: Soc. 1110. A 25 513 0 2208

515. Sociology of the Family. (3). 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. 1110. A 25 515 0 2208

516. Sociology of Sex Roles. (3). Cross-listed as WS 516. A course analyzing the institutional sources of men’s and women’s roles; the sources of change in these roles; the consequent ambiguities and conflicts. Prerequisite: Soc. 1110. A 25 516 0 2208

517. Intimate Relations. (3). This course is designed to examine the social dimensions of intimacy. The course includes an analysis of intimacy in different types of relationships, i.e., romantic, friendship, marriage, and parent-child; the role of theory and research in the area are reviewed with special focus on the place of intimacy in social interaction. Prerequisite: Soc. 1110. A 25 517 0 2208

523. Sociology of Law. (3). The study of law and legal institutions within their social context. Prerequisite: Soc. 1110. A 25 523 0 2208

526. Political Sociology. (3). Social basis and consequences of political behavior. Also included are the study of power and authority, problems in the development and maintenance of viable democratic political structures and bureaucratic organization and power. Prerequisite: Soc. 1110. A 25 526 0 2208

527. Violence and Social Change. (3). The analysis of the causal processes and functions of extreme and violent political behavior, i.e., revolutionary, insurrectionary and protest movements. The course includes an analysis of consequences for social change. Prerequisite: Soc. 1110. A 25 527 0 2208

532. Sociology of Family. (3). Cross-listed as Gerion. 532. An eclectic survey of the social aspects of disablement, ranging from social values, institutions and policies upon adults with disabilities, for both both students of sociology and the service professions. Prerequisite: Soc. 1110. A 25 532 0 2208

534. Urban Sociology. (3). Urban population, organization and institutions and programs of city planning. Prerequisite: Soc. 1110. A 25 534 0 2208

537. The Social Consequences of Disability. (3). Cross-listed as Gerion. 537. An eclectic survey of the social aspects of disablement, ranging from social values, institutions and policies upon adults with disabilities, for both both students of sociology and the service professions. Prerequisite: Soc. 1110. A 25 537 0 2208

538. Medical Sociology. (3). An analysis of social and cultural factors related to physical and mental illness. Also included are the dynamics of communication and role relationships among patients and medical personnel and social research and theory relevant to the health professions. Prerequisite: Soc. 1110. A 25 538 0 2208

539. Juvenile Delinquency. (3). The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: Soc. 1110. A 25 539 0 2208

540. Criminology. (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 1110. A 25 540 0 2208

541. Contemporary Corrections. (3). Historical and contemporary programs for the treatment of offenders, viewed as societal reactions to criminal behavior. Prerequisite: Soc. 539 or 540. A 25 541 0 2208

593. Internship. (1-6). A course used to supervise persons involved in internships or placements in the community where credit can be given. Prerequisite: departmental consent. A 25 593 0 2208

600. Selected Topics in Sociology. (3). Study in a specialized area of sociology with emphasis on student research projects. Areas covered include deviant behavior, political sociology, the family and others. Prerequisite: A 25 598 2 2208

643. History of Sociological Theory. (3). Analysis of emergence of sociological theory. Prerequisite: nine hours of sociology. A 25 643 0 2208

646. Principles and Concepts of Sociology. (3). Critical evaluation of major principles and concepts, their derivation and relationship to systematic theory. Prerequisite: nine hours of sociology. A 25 646 0 2208

651. Directed Research. (3). Designed to give 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. 510 or 511 and instructor’s consent. A 25 651 4 2208

670. Independent Reading. (1-3). Designed for the advanced student capable of doing independent work in an area of special interest. Prerequisites: 15 hours of sociology and instructor’s consent. A 25 670 3 2208

687. Introduction to Urban Affairs. (3). Cross-listed as Pol. Sci. 687 and Econ. 687. An introduction to the study of the megalopolis as a social, political and economic system. Prerequisites: Econ. 201 and Soc. 1110 or a course in political science. A 25 687 0 2208

750. Sociology Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a sociologically relevant subject. A 25 750 2 2208

* Prerequisite may be waived with departmental consent.

Courses for Graduate/Undergraduate Credit

501. Sociological Statistics. (3). Generally offered only in the fall semester. Application of descriptive and inferential statistics to sociological problems. Topics include measures of central tendency, dispersion and association, simple linear regression, hypothesis testing and analysis of variance. Prerequisite: Math. 1110 or Math. 3310. A 25 501 0 2208

502. Qualitative Research Methods. (3). An examination of various qualitative research tools and techniques used by sociologists. As part of the learning experience students are involved in direct field observation in natural social environments. Prerequisite: Soc. 1110. A 25 510 0 2208

503. Field Research Methods. (3). An examination of various qualitative research tools and techniques used by sociologists. As part of the learning experience students are involved in direct field observation in natural social environments. Prerequisite: Soc. 1110. A 25 510 0 2208

505. Survey Research Methods. (3). A course designed to provide specialized instruction, using a variable format, in a sociologically relevant subject. A 25 550 2 2208

Courses for Graduate Students Only

800. Research Methods in Sociology. (3). The application of research methods to sociological data. Topics include research design, sampling, data collection techniques, controlling extraneous variables and report writing. Students are expected to design their own research projects. Prerequisites: Soc. 510 or 511 and departmental consent. A 25 800 9 2208

805. Seminar in Qualitative Methodology. (3). An in-depth examination and practical
application of various field research methods in social work. Participants may choose areas of interest and selective topics in consultation with a major professor. A 25 841 9 2208

841. Advanced Seminar on Theories of Corrections. (3). Evaluation of the range of contemporary theories of individual and group techniques of correctional treatment with special emphasis upon the nature related to process research and current research. Prerequisite: Soc. 541 or departmental consent. A 25 841 9 2208

Seminar in Sociological Theory. course emphasizing continuities between European and American social theory. Topics include both historical and analytical spanning the 18th, 19th and 20th centuries. Readings will be taken from the works of representative contemporary theorists. Prerequisite: Soc. 645 or 646 or departmental consent. A 25 845 9 2208

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 not to exceed six hours. Prerequisites: 15 hours of sociology and departmental consent. A 25 847 9 2208

851. Directed Research. (1-3). Designed 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. 800 and instructor's consent. A 25 851 4 2208

860. Proseminar-Teaching Sociology. (1). This course focuses on the teaching techniques, course organization and evaluation. Prerequisite: graduate student status. A 25 860 6 2208

870. Independent Reading. (2-3). Advanced systematic reading in a topical area under the tutelage of a member of the graduate faculty. Repeatable for credit not to exceed six hours. Prerequisite: departmental consent. A 25 870 3 2208


Social Work
A major and minor are provided in the sociology/social work department for training in various areas of social work and human services. Courses are designed primarily to prepare students for beginning professional social work practice at the baccalaureate level, but they also are valuable in preparing students for graduate training in social work. The social work sequence is useful for students planning to enter other helping professions as well as responsible community participation in human concerns. WSU's program is accredited by the Council on Social Work Education. Social work practice requires licensure by the state of Kansas.

Major: A major in social work requires at least 42 hours (33 hours in social work courses and nine hours in related departments) as follows: SW 2000, 201, 500, 502, 550, 560, 601, 602, 604 and 605. This required curriculum includes nine hours in field instruction (practicum) courses. SW 602 and 605. Requirements in related departments include Soc. 212 and 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 adviser.

Minor: A minor in social work requires at least 19 hours in social work courses as follows: SW 2000, 201, 500, 602, 604 and 605. This minor curriculum includes four hours in the field instruction (practicum) course SW 602.

Lower-Division Courses
100Q. Explorations in the Helping Professions. (3). An introduction to the helping professions as they relate to the whole person. This multidisciplinary course emphasizes the common helping processes of each profession, how they developed and how they differentially relate to human problems. A 25 1000 Q 2 2104

150. Aspects of Social Work. (Workshop). (2-5). Aspects of social work practice relating primarily to paraprofessional work with practitioners and managers and the fundamentals of helping. May be offered together with SW 750. A 25 150 2 2104

2000. Understanding Social Welfare. (3). Introduction to a broad spectrum of community services with emphasis on public and private systems which address individual, family and group needs. The relations of area services to larger social welfare institutions and to cultural heritage are systematically examined, including public needs, policy trends, current issues and the normative aspects of determining who should be helped and how. A 25 2000 Q 2 2208

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 multiple intervention strategies used in practice: aspects of the problem-solving process; and attention to the current trends in direct social services. Prerequisites: Soc. 111Q and Psych. 111Q. A 25 201 0 2104

3400. Human Sexuality. (3). Cross-listed as WS 340. Provides a forum for information and discussion on topics relating to sexual behavior psycho-social and cultural components of human sexuality. Selected topics include female and male sexual attributes and roles, sexual problems, alternate lifestyles, birth control, values and sexuality and cultural components of sexuality. A 25 3400 Q 0 0506

Courses for Graduate/Undergraduate Credit

500. Social Welfare Policy and Services I. (3). Descriptive and analytical approach to the social welfare system, emphasizing its historical, structural and value bases. Alternative program strategies of meeting individual and group needs are explored. Prerequisites: SW 2000, 201, 500, 502, 601, 602, 604 and 605. Social science courses approved by the social work faculty and selected in consultation with a social work adviser.

502. Strategies and Techniques in Interven­tive Skills. (4). Course introduces students to the study and practice of interpersonal professional interaction skills within the framework of a social work helping process. The course focuses on developing skills in professional observation, communication, interviewing, recording and reporting. The course is didactic as well as interactive and includes an integrated laboratory component which focuses on experimental learning. Required for social work majors and open to nonmajors. Prerequisite: SW 201 for social work majors, departmental consent for nonmajors. A 25 502 0 2104

550. Social Welfare Policy and Services II. (3). Analytical approach to social welfare problems, policies, programs and issues, including an analysis of the influence of values on the formation of social welfare policy. In-depth examination of selected issues in public and voluntary areas and alternative methods of meeting needs are included. Prerequisite: SW 500. A 25 550 0 2104
551. Independent Studies. (1-3). Individual projects designed for social work students who are capable of doing independent work in areas of special interest. Repeatable for credit not to exceed six hours. Prerequisites: instructor's consent. A 25 551 3 2104

560. Personal Human Interaction within Society. (3). This course provides students with a beginning theoretical framework within which the integration of personal knowledge can be made regarding physical, mental, and social stresses. It also provides opportunities for personal and professional self-evaluation. Prerequisites: A 26 610 0 2104

750. Social Work Workshops. (1-5). Specialized instruction using a variable format in a social welfare relevant subject. This course may be offered together with SW 150. Prerequisite: instructor's consent. A 25 750 2 2104

Spanish (See Modern and Classical Languages and Literatures)

Speech Communication
The Bachelor of Arts (BA) degree in speech communication educates the student in the study, criticism, research, teaching and application of the artistic, humanistic and scientific principles of communication.

Effective communication has been viewed as the social matrix or common denominator of educated persons, essential for personal satisfaction and professional success. Knowledge of, and competence in, communication and its various components—interpersonal (one-to-one), public (one-to-many in a face-to-face setting) and mass (one-to-many in a mediated fashion) are vital in contemporary society.

Speech communication majors pursue many careers, a few of which are law, ministry, politics, broadcasting, broadcast-journalism, media or other communication-related management, personnel training and development, and teaching.

A major in the Department of Speech Communication requires a minimum of 35-39 hours with a specialization in one of the following areas:

1. Rhetoric and Communication (36 hours)—Speech 111, 112, 144Q, 211, 213Q, 221Q, 222Q, 650, 661, plus six hours elected with the area adviser's consent from rhetoric and communication courses.

2. Combined Theater and Rhetoric and Communication (39 hours)—Speech 111, 112, 211, 213Q, 221Q, 222Q, 650 and 661; Thea. 243Q, 244 and 259; plus six hours of electives with the area adviser's consent from theater courses.

Students planning to teach should also check the state certification requirements to make sure that they will fulfill the necessary requirements. Students must meet the requirements for the professional education sequence and, prior to admission to the student teaching semester, must have a 2.50 overall grade point average in their major field and recommendation from the major department. Students in Fairmount College of Liberal Arts and Sciences must meet the graduation requirements for both Fairmount College and the College of Education.

Broadcast-Journalism Combined Major (36 hours)—Speech 114Q, 214, 221Q, 222, 304, 322, 332, 522 and 606 and Journ. 200 and 500, plus six hours of electives. The six elective hours must be taken in upper-division speech or journalism courses. Students must also have a concentration (or minor) of not fewer than 15 hours in one additional field of study with the consent of their adviser.

Minor. A minimum of 15 hours must be selected with the approval of the speech communication department. At least six of the 15 hours must be upper-division courses. Students interested in a radio-television-film minor are required to have a minimum of 18 hours and must take Speech 114Q, 214, 304 and 332, plus six hours of electives with the area adviser's consent.

General

Lower-Division Courses

111. Basic Public Speaking. (3). A study of basic concepts of speech communication and listening as applied to public speaking. The course is designed for students wishing to enhance leadership potential by improvement in traditional public speaking situations.
Course is not counted toward a speech communication major. (The University’s requirement in oral communication may be fulfilled by completion of either Speech 111 or 112. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the speech communication department.) A 27 111 0 1506

112. Basic Interpersonal Communication. (3). To develop an awareness of the elements of interpersonal communication and to aid the student in establishing more meaningful and satisfying interpersonal relationships through participation in group dynamics. The course is not counted toward a speech communication major. (The University’s requirements in oral communication may be fulfilled by completion of either Speech 111 or 112. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the speech communication department.) A 27 112 0 1506

281. Cooperative Education. (1-4). The goal of this course is to provide the student with 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. May be repeated once for credit. Prerequisite: departmental consent. Cr/Ncr: A 27 281 2 1506

Upper-Division Course

481. Cooperative Education. (1-4). The goal of this course is to provide the student with 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. May be repeated once for credit. Prerequisite: departmental consent. Offered for Cr/Ncr only. A 27 481 2 1506

Courses for Graduate/Undergraduate Credit

650. Instructional Communication. (3). The study and practice of communication concepts, processes, technologies and strategies related to formal instruction and learning outcomes. By means of structured experiences, students develop competencies in (1) determining appropriate instructional goals, (2) designing instruction, strategies to achieve learning outcomes, (3) utilizing visual, vocal and verbal communication skills to implement instructional strategies and (4) assessing, the efficiency of communication skills used for instruction. Course flexibility in planning and emphasis provides for the utilization of instructional communication across disciplines and fields as well as in most professional and training settings. A 27 650 0 1509

660. Seminar in Speech. (2-3). Special seminars designed to treat current areas of interest or problems in: (a) rhetoric and communication, (b) theater, (c) radio-television-film or (d) speech education. Repeatable for credit in different topics only. A 27 660 9 1509

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. A 27 661 0 1509

665. Communicative Disorders. (3). Cross-listed as CDS 705. A survey of speech, language and hearing as well as on-air work, student prerequisites: Journ. 200 and Speech 224. A 27 665 0 1509

750. Workshops in Speech. (24). A 27 750 2 1509

Radio—Television—Film

Lower-Division Courses

114Q. Introduction to Radio and Television. (3). The structure and operation of broadcasting in the United States. Includes review of radio and television advertising, programming, regulation and history. Provides perspective on the broadcasting industry in the community. A 27 114Q 0 0603

214. Radio Production. (3). Production and direction of radio programs. Hands-on use of all standard radio sound equipment to learn techniques of sound blending and reproduction. A 27 214 1 0603

215. Radio Practicum. (3). Application of theory to practice by performing assigned activities at KMUV for six hours per week. Prerequisite: Speech 214 or instructor’s consent. A 27 215 2 0603

220Q. Introduction to Film Studies. (3). Emphasis is placed on 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. A 27 220Q 0 0603

Upper-Division Courses

304. Television Production. (3). Basic principles, procedures and techniques of TV production including operation of equipment and direction of TV programs. Prerequisite: instructor’s consent or Speech 214. A 27 304 2 0603

315. Advanced Radio Practicum. (2). Application of theory to practice by performing assigned activities at KMUV for six hours per week. Prerequisite: Speech 215 or instructor’s consent. A 27 315 5 0603

320. Cinematography. (3). A production course in motion picture making. Theory and technique are both emphasized with practical experience in conception and the use of camera and editing equipment for film projects. A 27 320 0 0603

322. Broadcast News. (3). 3P; 3L. Cross-listed as Journ. 322. Theory and technique of preparing news for the broadcast media. Students prepare newscasts and news reports for public radio station KMUV. Prerequisites: Journ. 200 and Speech 224. A 27 322 0 0603

332. Radio-Television Writing. (3). Writing formats, commercials, continuity and drama for radio and television. A 27 332 0 0603

Courses for Graduate/Undergraduate Credit

500. Documentary and Propaganda Films. (3). An investigation into the evolution, theories and techniques of documentary and propaganda film making. Emphasis placed upon the role of film in formulating and affecting public opinion and attitudes in modern society. A 27 500 0 0603

509. Directed Projects in Instructional Television. (2). Practical assignments in instructional television and cablecasting. Activities include six hours per week in campus television exercises. Prerequisites: Speech 504 and instructor’s consent. A 27 509 0 0603

522. Advanced Broadcast News. (3). Cross-listed as Journ. 522. A course in the techniques of preparing news for radio and television presentation with emphasis on a civic activity approach to radio and television newsrooms. Prerequisite: Speech 322 or Journ. 322. A 27 522 1 0603

530. Media Performance: Radio. (3). This course provides experiences in the various areas of radio programming, from newscasts to radio drama. Emphasis is placed on the role of radio as a medium of influence and mass communication. Prerequisite: Speech 214 or instructor’s consent. A 27 530 0 0603

531. Media Performance: Television. (3). This course provides experiences in the various areas of television performance, from newscasts to interviews, sports to commercials. It is designed, through simulated experiences, to extend and develop student performance skills, capabilities and knowledge in this public communication medium. Prerequisites: Speech 111 or 112 and Speech 221, 222 or 243. A 27 531 0 1509

604. Advanced Television Production and Direction. (3). Application of television equipment and techniques for expression of ideas and concepts. Execution of visual and audio impression in relation to effective communication. Prerequisite: Speech 504 or instructor’s consent. A 27 604 2 0603

605. Radio and TV Station Management. (3). The organization and management of radio and television stations, including administrative, programming, technical and sales problems and physical facilities. Prerequisite: departmental consent. A 27 605 0 0603

606. Broadcasting and the Law. (3). Explores legal forces operating in the broadcast industry emanating from laws, rules and regulations of various federal agencies, industry self-regulation and citizen action. Emphasis is on the underlying philosophy and trends in influencing events in broadcast regulatory history. A 27 606 0 0603
Rhetoric and Communication

Noncredit Course

011. Reducing Fear of Speaking. (2). A course designed 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. The goal of the course 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. A 27 011 0 1506

Lower-Division Courses

150A. Debate Workshop. (2). Instruct in theory and techniques of debate and preparation for debating the national high school debate topic. Not repeatable for credit. Prerequisite: departmental consent. A 27 150A 5 1506

190G. Crises in Communication. (3). An exploration of several alternative frameworks by which man copes with and controls the communication environment. The student has both observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other and entire cultures. Multimedia instructional procedures are utilized. A 27 190G 0 0601

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. A 27 202 5 1506

211. Persuasive Speaking. (3). Training in influencing human behavior in socially acceptable ways via the spoken word. A 27 211 0 1506

2130. Argumentation and Advocacy. (3). A study of the implications of argumentation in public debate, forensic and educational areas. Includes valid and fallacious reasoning as well as tests of evidence. A 27 2130 0 1506

221Q. Oral Interpretation. (3). Cross-listed as Thea. 221Q. The development of the mental, vocal and analytical techniques essential to the oral interpretation of literature. A 27 221Q 0 1007

222. Improving Voice and Diction. (3). Cross-listed as Thea. 222. A course for students wishing to improve their speaking voices and gain greater control over their pronunciation of spoken English. The course is performance-oriented; however, the analysis of vocal and prosodic patterns of British and American English is included. A 27 222 0 1506

226. Parliamentary Law and Procedure. (1). The parliamentary rules governing the order and conduct of meetings and the methods of voting and writing minutes and resolutions. A 27 226 0 1506

2280. Small-Group Communication. (3). A study of the nature and functions of groups and development of skills for identifying and evaluating communication behavior as reflected in human interaction in small-group situations. A 27 228Q 0 1506

Upper-Division Courses

312Q. Nonverbal Communication. (3). 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. Emphasis is given to the application of nonverbal communication to the total human communication process. Prerequisite: Speech 111 or 112. A 27 312Q 0 1506

325. Business and Professional Speaking. (3). A study of the basic concepts of public speaking and discussions as they apply to the business and professional person. Emphasis is given to public presentations, group leadership and interpersonal communication as appropriate to business and professional oral communications. A 27 325 0 1506

335. Development of Rhetorical Theory. (3). Review of the metorical foundations of contemporary communication theory from the perspective of selected individuals and works encompassing Graeco-Roman, Medieval English and American rhetorical thought. A 27 335 0 1506

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. A 27 402 5 1506

Courses for Graduate/Undergraduate Credit

612. Contemporary Theories of Oral Communication. (3). Conceptual models useful in the scientific study of speech and communication from selected areas of psychology, sociology, anthropology and other related fields. A 27 612 0 1506

613. Advanced Theories of Argumentation. (3). Intensive examination of the principles and problems of reasoned discourse. A 27 613 0 1506

615. Language and Symbolic Processes. (3). Application of the theoretical framework of general semantics, linguistics and psychology to the analysis of oral language behavior. Analysis of language usage that leads to conflict, confusion and misdirection and development of methods of accuracy and precision in language usage. A 27 615 0 1506

632. American Public Address. (3). Cross-listed as Amer. Stud. 632. 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 times to the present is assessed. A 27 632 0 1506

635. Leadership Techniques for Women. (3). Cross-listed as WS 635. A course designed to provide the woman student experience in decision making and to improve skills in leadership through role playing and exercises in group dynamics. A 27 635 0 1506

636. Advanced Public Speaking. (3). Theory and practice in the various forms of platform speaking for the academically mature student. Course includes such special forms as the after-dinner speech and speeches of goodwill, tribute, keynote and courtesy. A 27 636 0 1506

637. Processes and Effects of Mass Persuasion. (3). An exploration into the effects of mass communication at the individual, social and cultural levels. A 27 637 0 1506

672. Practicum in Audience Measurement. (3). Application of research techniques to practical problems in audience measurement. Also included are the identification of specific problems, the construction of measuring instruments (e.g., questionnaires), sampling techniques, collection of data, tabulation, analysis and reports of findings. Prerequisite: Speech 325 or departmental consent. A 27 672 2 1506

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: Speech 111 or instructor's consent. A 27 712 0 1506

770. The Audience. (3). Application of research techniques to the measurement of audience behavior with particular emphasis on mass media audiences. Topics include focus group interviews, survey research and radio and television ratings. A 27 770 0 1506

Courses for Graduate Students Only

820. Investigation and Conference. (2­) (3). Cross-listed as Tha. 820. Directed research and experimentation for graduate students in some phase of (a) public address, (b) theater history and production, (c) radio-television or (d) teaching of speech. Repeatable for credit up to a total of six hours. A 27 820 0 1506

writers from 466 B.C. to the decline of Roman oratory. Principal emphasis is on Isocrates, Plato, Aristotle, Cicero and Longinus. A 27 830 0 1506

831. Theories of Rhetoric: Renaissance to Early Modern, (3). Cross-listed as Eng 826. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analysis is made of the rhetorical systems associated with such figures as Augustine, Fulcanelli, Bulwer, Sheridan, Steele, Ruskin, John Quincy Adams, Blair, Campbell and Whately. A 27 831 0 1506

832. Methods of Rhetorical Criticism, (2). A development study of the critical techniques of Plato, Aristotle and Cicero to the modern approaches in the criticism of A. Richards and Kenneth Burke. A 27 835 0 1506

860. Seminars in Speech, (2-3). Special seminars designed to treat problems in (a) public address, (b) drama, (c) radio-television or (d) speech education. Repeatable for credit. A 27 660 0 1509

865. Organizational Communication, (3). Cross-listed as Mgmt 865. An analysis of communication models, with emphasis on their applications to communication problems in organizations. Social-psychological processes underlying persuasion in interpersonal relations and through the mass media are explored. Communication systems and techniques within formal organizations are analyzed critically. A 27 865 0 1506

867. Trends in Speech Education, (3). To provide advanced speech students with a background for a philosophy of speech education. Readings and seminar discussion concern the philosophical rationales that underlie speech and drama as academic disciplines. Included also are the history of speech education, analysis of theories and methods, comparative study of speech curricula today and projections to the future. A 27 867 0 1509

Women's Studies
The major in women's studies includes courses in various fields, especially in the humanities and social sciences, which present a coherent picture of woman in the past, her activities in the present and the future. Students preparing for vocations which emphasize women's concerns are especially encouraged to pursue women's studies as a second major.

The major consists of at least 24 hours, including WS 387Q, 389Q, 530Q and 635. In addition, appropriate courses may be selected from such fields as philosophy, sociology, history, literature, anthropology, religion, minority studies, psychology, speech and administration of justice. Courses counted toward a major or minor in another field may not be included. The minor consists of 15 hours, including WS 387Q and 389Q. In addition to the courses listed below, the following courses are also applicable toward a major or minor in women's studies: Biographies and Autobiographies of Great and Notable Women (Hon. 301E), and Issues in Gender: Role Counseling (ICSP 752K).

Lower-Division Courses

163. Women in Business, (3). Cross-listed as Mgmt. 163. B 12 163 0 0506

180A. Assertion Training for Women, (1). This course is designed to teach women assertive skills. A 10 180A 0 4903

180B. The Working Woman, (2). This course focuses on the needs and interests of currently employed women and those returning to work. A 10 180B 0 4903

180C. Women's Sexuality, (1). This course presents information on women's sexuality from biological, psychological and sociocultural perspectives. A 10 180C 0 4903

180D. Domestic Violence, (1). This course deals with the roots of domestic violence embedded in family roles, legal systems and religious beliefs. A 10 180D 0 4903

180E. Rape Information and Prevention, (1). This course explores the cultural myths and stereotypes about rape. A 10 180E 0 4903

180F. Sex and Spirituality, (1). This course explores the influence of religious images and doctrines on the sexuality of women and men. A 10 180F 0 4903

180G. Advanced Assertion Training for Women, (1). This course for students who have already taken Assertion Training for Women. A 10 180G 0 4903

180J. Women and Dependences, (3). This course examines the various ways in which women are victims of their own dependencies in areas such as chemical dependency, social and prescriptive drugs, relationship dependencies, food disorders and fitness obsession. A 10 180J 0 4903

190. The American Woman, (3). Students will examine the ways in which mainstream society "defines" the American woman. The class will examine a wide range of cultural "phenomena" as it studies gender identification. Topics will range from children's toys to music video, from standards of physical beauty promulgated in advertising to daytime soap operas, and more. A 10 190 0 4903

200. Women Throughout Western Civilization, (3). Cross-listed as Hist. 200. A 10 200 0 2205


Upper-Division Courses

316. The American Male, (3). Cross-listed as Soc. 316. A 10 316 0 2208

325. Women in the Political System, (3). Cross-listed as Pol. Sci. 325. A 22 325 0 2207

333. Women and Religion, (3). Cross-listed as Rel. 333. A 10 333 0 1510

338. Philosophy of Feminism, (3). Cross-listed as Phil. 338. A 10 338 0 4902


380. Special Topics, (1-3). This course focuses on intermediate topics of interest to women's studies. A 10 380 0 4903

382. Women in the Administration of Justice, (3). Cross-listed as Pol. Sci. 382. A 10 382 0 2105

387Q. Women in Society: Cultural Images, (3). This course explores the roles, relationships and cultural influence of women in society as revealed in popular culture, such as film, literature, myth, religion, psychology, education and politics. Women in other cultures and other times also are considered, as are feminist visions of the future. A 10 387Q 0 4903

388Q. Women in Society: Social Issues, (3). This course explores the roles of women in society, as revealed in popular culture, such as film, literature, myth, religion, psychology, education and politics. Women in other cultures and other times also are considered, as are feminist visions of the future. A 10 388Q 0 4903

481. Cooperative Education, (1-4). The goal of this course is to provide the student with a field placement that integrates theory with practical experience. Graded on a credit or no credit basis. A 10 481 0 4999

499B. Women in American Film, (3). Cross-listed as Amer. Stud. 499B. The changing role of the 20th century American woman can be understood by how they have been depicted in American films which both create cultural values and reflect them. Topics include the Victorian princess; flapper and vamp of the twenties; chorus girls and fortune-hunters of the thirties; patriotic housewives, professionals and "Rosie the Riveter" of the forties, the sex object of the fifties; and the revolutionary women of the sixties, as well as contemporary images. A 10 499B 0 4903

Courses for Graduate/Undergraduate Credit

516. Sociology of Sex Roles, (3). Cross-listed as Soc. 516. A 10 516 0 2208

630. The American Woman in History, (3). Cross-listed as Hist. 630. A 10 630 0 2205

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 3R, 4L means three hours of lecture and four hours of lab.
533. Women and the Law. (3). This course is an introduction to 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. Consideration also is given to women in the field of law, such as lawyers and legislators. A 10 533 0 4903

534. Psychology of Women. (3). Cross-listed as Psych. 534 A 23 534 0 2001

535. Images of Women in Literature. (3). Cross-listed as Eng. 535. Women characters as stereotypes, archetypes and fully developed human beings in the works of various authors. A 10 535 0 1502

536Q. Writing by Women. (3). Cross-listed as Eng. 536. The work of major women writers, both British and American, in poetry and prose. A 10 536Q 0 1502

542. Women in Other Cultures. (3). Cross-listed as Anthro. 542. A 10 542 0 2202

570. Directed Readings. (1-3). This course is designed for students who wish to pursue special reading or research projects not covered in course work. A 10 570 3 4903

580. Special Topics. (1-3). This course focuses on advanced topics of interest to women's studies. A 10 580 0 4903

580B. History of Women's Culture. (3). This course surveys the contributions of American women to visual arts and crafts, poetry and music from the late 18th century until the emergence of the 20th century women's art movement. A 10 580B 0 4903

580C. Contemporary Women's Art. (3). This course looks at works by women in the visual arts, music and poetry since the 1960s. A 10 580C 0 4903

580D. Theories of Feminism. (3). This course examines various approaches taken by theorists both of the women's movement and of the cultural status of women. A 10 580D 0 4903

589. Seminar in Women's Issues. (3). Designed to give students experiential learning in interdisciplinary skill development related to women's issues in law, psychology, sociology, economics and literature and to offer independent study and field work in the students' area of specialization related to women. A 10 589 0 4903

635. Leadership Techniques for Women. (3). Cross-listed as Speech 635. A course designed to provide the woman student experience in decision making and to improve her leadership through role playing and exercise in group dynamics. A 10 635 0 4903

750. Current Concerns of Women. (2-3). Workshop. P 14 750 0 4903

870. Directed Readings. (2-3). Designed for graduate students who want to pursue research in areas not normally covered in course work. Repeatable for credit with department consent. Prerequisite: instructor's consent. A 10 870 0 4903

880. Seminar in Women's Studies. (3). Intensive study of selected women's studies topics. Seminar discussion, reports and research project. Repeatable for credit with departmental consent. Prerequisite: instructor's consent. A 10 880 9 4903
University Faculty—Fall, 1986

Date or dates following title refer to time of initial and successive appointments. Faculty listed have academic rank.

Aagaard, Alan A., Assistant Professor of Industrial Technology and Special Assistant, BA, California State The University, Long Beach, 1969; MA, 1970; EdD, University of Northern Colorado, 1975.

Ackerman, Paul D., Assistant Professor of Psychology (1965) BA, The University of Kansas, 1964; MA, 1966, PhD, 1968.

Adams, Charles F., Assistant Professor of Educational Administration and Supervision (1966) BS, State University of New York College at Buffalo, 1961; EdM, State University of New York at Buffalo, 1967; EdD, 1969.


Adams, Ginette, Associate Professor of French (1974) and Chairperson of Department of Modern and Classical Languages and Literatures (1965, 1972). Diplome de Fin d'Etudes Normales; Ecole Normale d'institutrices, 1963; MA, North Carolina Central University, 1965; PhD, Washington University, 1975.

Aduka, Russell F., Assistant Professor of Educational Technology and Associate Dean for Media Resources Center (1974) BA, University of Kentucky, 1968; MS, Clarion State College, 1974.

Ahlgren, Clark D., University Professor (1968) BA, The Wichita State University, 1959; MA, Syracuse University, 1942; PhD, 1957; MFA, 1963; LHD, St. Lawrence University, 1981.

Ahmed, Bassam O., Assistant Professor of Nursing (1984) BSN, Cairo University, 1975; MSN, 1979.

Alcañiz-Joaquin, Carlos, Assistant Professor of Finance (1983) BBA, National University of Mexico, 1971; MBA, 1975.

Alexander, John R., Instructor and Director of Housing (1980) BS, East Texas State University, 1973; MS, 1974.

Alliegro, Robert L., Associate Professor of Sociology (1967) BS, Pittsburg State University, 1969; MA, 1969; PhD, University of Missouri, 1969.

Allen, Anneke S., Associate Professor of Chemistry (1964) Candidate Ryksuniversiteit Groningen, 1962; PhD, Tulane University, 1965.

Allen, Cheryl L., Assistant Instructor of Economics (1986) BSEd, Graceland College, 1974; EdD, Northwest Missouri State University, 1975.


Alley, Robert D., Professor of Secondary Education and Associate Dean of Education (1967) BS, Iowa State University, 1957; ME, University of Montana, 1980; EdD, Arizona State University, 1987.

Anderson, Les W., Assistant Professor of Journalism (1977) BA, Fort Hays State University, 1970; MA, University of Missouri, 1971.

Anderson, Peggy J., Associate Director of Intensive English Language Center (1961) BSE, Emporia State University, 1967; MAS, University of Kansas, 1977.

Anderson, Robert E., Professor of Educational Administration (1967) BA, University of Iowa, 1952; MA, 1953; EdD, University of Nebraska, 1958.

Armstrong, Warren B., Professor of History (1963) AM, University of Michigan, 1958; PhD, 1964.


Babnich, Judith, Assistant Professor of Theatre (1946) BA, Edgedale College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Bair, Sue F., Assistant Professor of Physical Education (1968) BA, The Wichita State University, 1973; MS, 1974.

Bajaj, Prem N., Associate Professor of Mathematics and Statistics (1968) BA, Punjab University, 1951; MA, 1954; MS, Case Western Reserve University, 1967; PhD, 1968.

Bakken, Linda, Assistant Professor of Educational Psychology (1968) MA, Northern Michigan University, 1969; MS, Utah State University, 1970; EdD, Boston University, 1983.

Baldridge, Wilson R., Assistant Professor of French (1964) BA, Denison University, 1973; PhD, State University of New York, 1982.

Ballenger, Marcus T., Associate Professor of Elementary Education (1970) BS, Ed, North Texas State University, 1969; MED, Texas Tech University, 1969; EdD, 1970.

Barrett, Elwin, Assistant Professor of Social Work and Director of Undergraduate Program in Social Work (1974) BA, University of California at Berkeley, 1957; MSW, 1958; DSW, University of Southern California, 1974.

Barbor, Peter S., Assistant Professor of Physics (1965) BA, Bethel College, 1943; MA, 1945.


Bastida, Elena M., Assistant Professor of Sociology (1981) BA, Kansas State University, 1979; MA, 1979; PhD, The University of Kansas, 1979.

Bateman, Marita R., Associate Professor of Decision Sciences (1981) BSE, University of South Carolina, 1946; MS, University of North Carolina, 1960; PhD, Oklahoma State University, 1967.


Beachy, Wilmer D., Assistant Professor and Acting Chairperson of Department of Respiratory Therapy (1983) BA, Hesston College, 1966; AS, Indiana University, 1972; BS, 1974; ME, University of Illinois, 1981.

Beckman, Steven, Assistant Professor of Economics (1982) BA, University of California, Davis, 1978; MA, 1978; PhD, 1982.


Beune, Nancy, Assistant Professor of
Korea, 1965; MA, Wayne State University, 1969; PhD, University of Illinois, 1973.

Chopra, Dharam Vir, Professor and Chairman of Mathematics and Statistics (1967). BA, Punjab University, India, 1950; MA, 1953; MA, University of Michigan, 1961; AM, 1963; PhD, University of Nebraska-Lincoln, 1965.

Chou, Sidney D., Assistant Professor of Mechanical Engineering (1986). BS, National Taiwan University, 1976; MS, Oklahoma State University, 1981; PhD, University of California-San Diego, 1986.

Christ, Ronald, Associate Professor of Painting (Studio Arts) (1976). BFA, Kansas City Art Institute, 1972; MFA, Indiana University, 1985.


Chung, Kae H., Professor and Chairman of Department of Management (1970). BA, Seoul National University, Seoul, Korea, 1959; MA, Louisiana State University, 1965; PhD, Indiana University, 1970.


Clark, James E., Assistant Professor of Economics and Director, Center for Economic Education (1976). BA, Michigan State University, 1963; MS, Northwestern University, 1973; PhD, 1976.

Clark, Mary Ann, Assistant Professor of Dental Hygiene (1973). BS, University of Missouri at Kansas City, 1965; MS, 1975.


Conrad, Mary Elaine, Assistant Professor of Medical Technology (1980). BS, Kansas Newman College, 1967; MS, Kansas State University, 1974.

Copeland, Ann, Assistant Professor of Medical Technology (1982). BS, University of Oklahoma, 1978; MS, Oklahoma Medical Center, 1987; PhD, University of California-Davis, 1971.

Corbett, Donald L., Professor of Music Education (1976). BME, The Wichita State University, 1960; MS, The Ohio State University, 1971; PhD, University of Nebraska, 1974.

Cornfield, Charles S., Assistant Professor and Coordinator of Respiratory Therapy (1978, 1983). BS, Indiana University of Pennsylvania, 1974; MS, Kansas State University, 1983.


Cress, Allan M., Professor of German (1953). AB, University of Illinois, 1942; MA, 1948; PhD, 1952.


Crowns, Arthur J., Jr., Professor of Administrative Medicine (1971). BS, University of Wisconsin at Stevens Point, 1947; JD, University of Wisconsin, 1950; MSSW, 1956; PhD, University of Wisconsin, 1959.

Cruikshank, Dorothy E., Associate Professor of Voice (1973). BA, Barrington College, 1966; MM, Western Kentucky University, 1969; DMA, University of Colorado, 1977.

Cuthbertson, Jean, Associate Professor of Physical Therapy (1973). BS, Ohio Wesleyan University, 1946; MA, Stanford University, 1952.

Cutler, R. Bruce, Adele M. Davis Distinguished Professor of Women's Studies (1970). BA, University of Iowa, 1951; MS, Kansas State University, 1957; LHD, Southwestern College, 1975.

Czajkiewicz, Zigmund, Assistant Professor of Industrial Engineering (1961). BS, Technological University of Wroclaw, 1977; MS, 1973; PhD, 1976.

Dagli, Cihan, Visiting Assistant Professor of Information Technology (1983). BS, Middle East Technical University, 1971; MS, 1972; PhD, University of Birmingham, UK, 1979.


Davis, Gayle R., Assistant Professor of Women's Studies (1982). BA, Muskingham College, 1968; MS, Michigan State University, 1975; PhD, 1981.


Decker, Jay C., Professor of Music and Director of Orchestras (1971). BME, The Wichita State University, 1956; MS in Mus Ed, University of Illinois, 1962; DMA, University of Missouri-Kansas City.


DeSilveri, Dharma, Associate Professor of Management (1976). BSBA, University of Evansville, 1957; MS, Southern Illinois University, 1959; PhD, Indiana University, 1966.

DeSmet, John, Associate Professor of Educational Counseling (1985). BBA, University of Oklahoma, 1960; MBA, 1961; PhD, University of Texas, Austin, 1965; CPA—Oklahoma and Nevada.


Diller, Marc Todd, Assistant Professor of Physician's Assistant and Clinical Sciences Coordinator (1975). BA, University of Missouri, 1972; MA, The Wichita State University, 1976.

Distor, Donald A., Associate Professor of Biological Sciences (1963). BA, University of Louisville, 1952; MA, PhD, The University of Kansas, 1963.

Dowen, Stephen E., Assistant Professor of Administration of Justice (1977). BA, Oklahoma University, 1972; MS, University of New Mexico. 1974; PhD, Louisiana State University, 1978.

Dorey, Robert Cameron, Assistant Professor of Chemistry (1965). BS, Virginia Polytechnic Institute, 1964; MS, 1967; PhD, University of Georgia, 1968.

Douglas, Donald M., Associate Professor of History (1965). BA, Kansas State University, 1967; MA, 1965; PhD, The University of Kansas, 1968.

Douglas, J. Rex, Associate Professor of Educational Administration and Supervision (1959). BBA, University of Texas, 1947; MS, University of Northern Colorado, 1961; EdD, Texas Tech University, 1967.


Dreifort, John E., Associate Professor and Chairperson of Department of History (1976). MS, Bowling Green State University, 1969; MA, 1966; PhD, Kent State University, 1970.

Duell, Orpha K., Associate Professor of Educational Psychology (1968). BS, Kansas State University, 1963; MS, University of Illinois, 1965; PhD, 1967.

Dunning, Wayne W., Assistant Professor of Administration of Justice (1961). BS, Iowa State University, 1952; MS, 1959; PhD, 1964.


Edwards, Harold T., Associate Professor of Educational Administration and Supervision (1967). BS, Kansas State University, 1963; MS, University of Illinois, 1965; PhD, 1967.


Egburt, Robert J., Associate Professor of Electrical Engineering (1960). BSEE, Univer-
Academy of Management, 1982; MS, University of Illinois, 1963; MS, 1964; PhD, University of Iowa, 1969.


Elliott, Barbara, Assistant Professor of Nursing (1982). BS, The Wichita State University, 1974; MN, 1979.


Epstein, Susan B., Visiting Assistant Professor of Speech Communication (1986). BA, University of Northern Colorado, 1982; MA, 1983; PhD, University of Denver, 1986.

Ernest, W., Assistant Professor of English (1964). BA, University of Minnesota, 1955; MA, 1957; PhD, 1961.


Fagin, James, Assistant Professor of Administration of Justice (1974). BA, University of Nevada, 1971; MS, Southern Illinois University, 1982.


Fang, Zhi-Xi, Assistant Professor of Computer Science (1984). BS, Fudan University, 1970; MS, University of Nebraska, 1982; PhD, 1984.

Fard, Nasser S., Assistant Professor of Industrial Engineering (1982). BBA, University of Teheran, 1973; MS, Western Michigan University, 1976; PhD, University of Arizona, 1986.

Farnsworth, David N., Professor of Political Science and Acting Associate Vice President for Academic Affairs (1956). BA, The Wichita State University, 1953; MA, University of Illinois, 1959; PhD, Western Illinois University, 1972; PhD, Louisiana State University, 1976.


Fernandez, Jeffrey L., Assistant Professor of Electrical Engineering (1986). BEng, NED University of Engineering and Technology, Karachi, Pakistan, 1982; MS, Texas Tech University, 1983; PhD, 1986.


Fisher, Glenn W., Regents' Professor of Urban Affairs and Professor of Economics (1970). BA, University of Iowa, 1948; MA, University of North Carolina, 1950; PhD, University of Wisconsin, 1954.

Flint, H. Edward, Professor of Urban Affairs and Associate Director of Urban Studies (1979). BS, Emporia State University, 1964; MA, George Washington University, 1985; PhD, The University of Kansas, 1970.


Foran, Nancy Joyce, Assistant Professor of Accounting (1979). BS, University of California at Los Angeles, 1965; MS, The Wichita State University, 1967; PhD, Oklahoma State University, 1985; CPA Certificate-Kansas.

Foster, Donald L., Assistant Professor and Chairperson of Department of Physics (1986). BA, Reed College, 1967; PhD., University of California, 1987.


Foster, Mary Sue, Associate Professor and Chairperson of Department of Art Education (1966). BA, Reed College, 1957; PhD, University of Iowa, 1965.


Fox, L. Raymond, Professor and Chairperson of the Department of Biophysical Sciences (1979). BA, University of California, Santa Barbara, 1963; PhD, 1967.

Freeman, Theodore S., Associate Professor of Educational Psychology (1970). BA, Nebraska Wesleyan University, 1965; MS, Fort Hays State University, 1966; EdD, Oklahoma State University, 1970.


Freeman, John G., Assistant Professor of Speech Communications (1986). BA, The Wichita State University, 1968; MA, Mankato State College, 1968; PhD, University of Wisconsin-Madison, 1964.


Full, William E., Assistant Professor of Geology (1982). BS, University of Notre Dame, 1969; MS, University of Illinois-Chicago Circle, 1980; PhD, University of South Carolina, 1982.


Garver, Stockton H., Assistant Professor and Chairperson of Department of Art History (1973). BA, Harvard University, 1964; MA, Indiana University, 1966; PhD, 1971.


Gaston, John Coy, Associate Professor and Chairperson of Department of Minority Studies (1973). BA, The Wichita State University, 1973; MEd, 1973; PhD, University of Colorado, 1979.


Gerhard, Armin, Assistant Director of the Intensive English Language Center (1968). BA, University of Kansas, 1959.


Gibson, George, Professor of Opera Theater and Voice (1966). BM, University of Illinois, 1956; MM, University of Texas, 1958; DMA, University of Southern California, 1971.


Glachart, Stephen C., Assistant Professor, Chairperson of the Department of Health Science and Director of the Master of Health Science Program, 1974. BA, The Wichita State University, 1969; MA, 1972; EdD, The University of Kansas, 1977.

Gasser, Mark A., Assistant Professor of Business Studies (1981). BA, The Wichita State University, 1970; MUA, 1974; PhD, University of Texas at Arlington, 1981.

Goldman, Louis, Associate Professor of Secondary Education (1982). AB, University of Michigan, 1950; MS, University of Texas, 1959; DMA, University of Southern California, 1971.

Goodell, Phillips W., Assistant Professor

Gosman, Albert L., Professor of Mechanical Engineering (1967). BSME, University of Michigan, 1950; MSME, University of Colorado, 1955; PhD, University of Iowa, 1963.


Graham, J. Keith, Professor and Chairperson of the Department of Communications Disorders and Sciences (1966). BS, Wayne State University, 1948; MA, 1951; PhD, Northwestern University, 1965.

Graham, James, Associate Professor of History (1963). AB, University of California at Los Angeles, 1954; PhD, 1966.

Greenberg, Gary, Associate Professor of Psychology (1965). BS, Brandeis University, 1962; MA, The Wichita State University, 1964; PhD, Kansas State University, 1970.

Gregg, Alvin L., Assistant Professor of English (1966). BA, Texas Tech University, 1958; MA, 1957; PhD, University of Texas, 1969.

Grewall, Mahesh S., Professor of Mechanical Engineering (1969). BSc, University of Allahabad, India, 1953; MS, University of California at Berkeley, 1957; MS, 1959; PhD, 1962.


Gries, John C., Associate Professor of Geology (1971). BS, University of Wisconsin, 1962; MS, 1966; PhD, University of Texas, 1970.

Griffith, Kathryn, Professor of Political Science (1954). BA, The Wichita State University, 1949; MA, 1954; PhD, University of Chicago, 1957.

Grotz, William G., Associate Professor of Chemistry (1980). BS, American University of Beirut, 1969; PhD, University of Kentuck, 1972.


Guthrie, Anthony P., Assistant Professor of English (1971). Diplome d’Humanites, St. Stanislas, Popingee, Belgium, 1950; BPh, MA, Universite de Louvain, Belgium, 1957; MA, University of Detrol, 1966; PhD, 1971.


Hanson, Lee D., Assistant Professor of Management (1986). BA, California State University, Fresno; MA, University of California, 1956; PhD, Southern Methodist University, 1961.


Harmon, Dorothy A., Instructor and Associate Director, Marcus Center for Continuing Education (1974). BA, The Wichita State University, 1946.

Karn, William W., Assistant Professor of Health Administration and Education and Director of University College (1980). BS, John C. Smith University, 1968; MA, Satin Hall University, 1974; PhD, Kansas State University, 1978.


Harris, Jamee A., Assistant Professor of Geology and Geography (1984). BS, Cornell University, 1973; MS, Colorado State University, 1979; PhD, 1984. Licensed Professional Engineer—Colorado.

Harman, John J., Professor of Sociology (1974). BS, Southwest Missouri State University, 1960; MS, University of Missouri, 1966; PhD, 1966.


Hartsook, Robert F., Assistant Professor of Business Law and Vice President for Development and Alumni Relations (1985). BS, Emporia State University, 1970; MS, 1972; PhD, Washburn University, 1979.

Hawood, Gregory W., Assistant Professor of Musicology/Composition (1996). BA, Brigham Young University, 1975.


Haydon, Randall B., Professor of Economics (1968). BBA, University of Massachusetts, 1954; MBA, 1958; PhD, University of Illinois, 1962.


Headley, C. Benson, Assistant Professor of Computer Studies and Director of Computer Center (1972). BS, University of Michigan-Ann Arbor, 1980; MS, 1986.

Hedley, Esther L., Instructor of Marketing and Associate Director of MBA Program (1980). BBA, The Wichita State University, 1979; MBA, 1980.

Heileman, Jim, Assistant Professor of Computer Science (1980). Ph.D., University of Delaware, 1981.

Henderson, Jane S., Assistant Professor of Nursing (1980). BSN, University of Missouri at Columbia, 1967; MS, 1974; PhD, 1986.


Henkin, Carole Singleton, Assistant Professor of Psychology (1985). BA, University of Alabama, 1955; MA, 1957; PhD, University of Wisconsin-Madison, 1973; OMSU, University of Iowa, 1983.

Hersch, Philip, Assistant Professor of Educational Psychology (1980). BA, Queen's College, 1974; MA, Ohio State University, 1976; PhD, 1982.

Hershey, Myrliss A., Assistant Professor of Educational Psychology (1983). BA, University of Rochester, 1951; MS, Emporia State University, 1965; PhD, Kansas State University, 1976.

Hill, Craig A., Visiting Assistant Professor of Psychology (1982). BA, Hampton College, 1974; MA, University of Kansas, 1976; PhD, University of Texas at Austin, 1984.


Ho, James C., Professor of Physics and Geology (1974). BS, National Taiwan University, 1959; MS, University of California at Berkeley, 1963; PhD, 1966.

Hoaq, Gerald B., Assistant Professor of English (1967). AB, Loyola University, New Orleans, 1951; MA, Tulane University, 1955; PhD, 1965.


Hogan, Linda, Assistant Professor of Medical Technology (1972). BS, Emporia State University, 1965; MT (ASCP), 1965; BS (ASCP), 1972; MED, The Wichita State University, 1977.

Holmes, Ellen C., Assistant Professor and Academic Coordinator, University Gerontology Center (1973). BA, The University State University, 1968; MA, 1971; PhD, The University of Kansas, 1981.

Holmes, Lowell D., Professor of Department of Anthropology (1959). BS, Northwestern University, 1950; Ph.D, 1957.


Hommerich, Donald L., Associate Professor and Graduate Coordinator of in-
Knapp, Robert K., Associate Professor of Psychology (1981). BA, Kent State University, 1954; MA, 1956; PhD, Michigan State University, 1960.

Kneel, Thomas R., Assistant Professor of Communicative Disorders and Sciences (1969). BS, Bowling Green State University, 1953; MS, Syracuse University, 1956; PhD, University of Iowa, 1972.

Knight, Carla R., Assistant Professor of Music (1969). BS, University of Kansas, 1961; MA, The Wichita State University, 1968; PhD, University of Oklahoma, 1977.

Kocher, John E., Assistant Professor of Computer Science (1979). BS, Jackson State University, 1973; MS, Clemson University, 1975; PhD, University of Minnesota, 1980.

Konek, Carol W., Assistant Professor of Women's Studies and Associate Dean of Fairmount College of Liberal Arts and Sciences (1969). BS, The University of Kansas, 1961; MA, The Wichita State University, 1968; PhD, University of Oklahoma, 1977.

Kopp, John H., Assistant Professor of Spanish (1966). BA, The Wichita State University, 1964; MA, University of Iowa, 1966; PhD, 1974.

Kraft, Frederic B., Associate Professor and Chairman of Department of Marketing and Business Administration (1986). BS, Wayne College, 1964; MBA, Washington University, 1966; DBA, Indiana University, 1972.


Krop, Leonid, Assistant Professor of Mathematics and Statistics (1963). BS, University of Moscow, 1957; MS, 1967; PhD, University of Tartu, 1974; PhD, University of Chicago, 1983.

Kruzer, Susan F., Assistant Professor of Nursing (1970). BA, University of Oklahoma; MS, Oklahoma State University, 1962; PhD, 1964.

Lange, Gerald D., Jr., Acting Assistant Dean of Graduate School and Associate Professor of Physics (1964). BA, The Wichita State University, 1964; MS, Oklahoma State University, 1962; PhD, 1964.

Lewis, Martha, Assistant Professor of Nursing (1960). BA, The Wichita State University, 1953; Diploma, Western School of Nursing, 1957; MN, The Wichita State University, 1980.


Livingston, Alan, Assistant Professor and Media Designer (1978). BA, University of Utah, 1974; PhD, Brigham Young University, 1978.

Loper, Gerald D., Jr., Acting Assistant Dean of Graduate School and Associate Professor of Physics (1964). BA, The Wichita State University, 1964; MS, Oklahoma State University, 1962; PhD, 1964.


Malcolm, Don Edmund, Professor and Interim Chairperson of Department of Industrial Engineering (1973). BS, Oklahoma State University, 1966; MS, 1968; PhD, 1975.

Malzahn, Don Edmund, Professor and Interim Chairperson of Department of Industrial Engineering (1973). BS, Oklahoma State University, 1966; MS, 1968; PhD, 1975.


Martin, Charles L., Assistant Professor of Marketing (1967). BS, University of Arizona; MBA, 1969; PhD, 1970.


Martin, Charles L., Assistant Professor of Business Administration (1969). BA, West Texas State University, 1961; MBA, 1962; PhD, Texas A&M University.


Maseman, Denise Cecile, Assistant Professor of Dental Hygiene (1981). BS, University of Nebraska, 1974; MS, University of Missouri-Kansas City, 1974.


Mason, Nancy, Assistant Professor of Management (1980). BA, The Wichita State University, 1980; MBA, 1984; Ph.D, University of Minnesota, 1986.

Masud, Abu S. M., Associate Professor of Industrial Engineering (1980). BS, Bangladesh University of Engineering and Technology, 1969; Diploma, Institute of Business Administration, Dhaka, 1970.

Matthes, William E., Professor of Music Education and Chairperson of Department of Performing Arts (1980). BS, Brigham Young University, 1957; MS, 1961; PhD, University of Michigan, 1969.


Mead, John H., Assistant Dean of Faculties for Personal Affairs (1977). BS, Southwest Missouri State University, 1974; MA, The Wichita State University, 1977.


Mays, Mary Jo, Assistant Professor and Chairperson of Department of Physical Therapy (1983). BS, University of Nebraska, 1964; MS, Virginia Commonwealth University, 1971; PhD, University of Nebraska, 1973.


McCormick, B. Jack, Professor and Chairperson of Department of Chemistry (1979). BS, West Texas State University, 1956; PhD, Oklahoma State University, 1962.

McCoY, Howard, Professor of Inorganic Chemistry (1970). BS, Emporia State University, 1956; MS, 1957;

McCartan, John B., Assistant Professor of Chemistry (1969). BS, Creighton University, 1958; MS, 1960; PhD, University of Iowa, 1964.

McCollum, Shirley, Assistant Professor of Graphic Design (1975). BFA, University of Texas, 1968; MFA, North Texas State University, 1974.

McDermick, B. Jack, Professor and Chairperson of Department of Chemistry (1979). BS, West Texas State University, 1956; PhD, Oklahoma State University, 1962.

McCroy, William, Professor of Inorganic Chemistry (1970). BS, Emporia State University, 1956; MS, 1957;

McCracken, Robert Lee, Professor of Communicative Disorders and Sciences (1979). BA, University of Ed, Ohio State University, 1948; MA, 1952; PhD, 1956.


McIntosh, Kamea, Assistant Professor of Nursing (1985). BS, University of Missouri, 1973; MS, University of Wisconsin, 1976.

McKellar, Nancy A., Assistant Professor of Counseling and School Psychology (1984).
Seoul National University, Korea, 1974; MS, University of Wisconsin-Madison, 1982; PhD, 1986.


Paulson, Merle J., Assistant Professor, Librarian, Dean of Academic Affairs, Library (1969). BA, Emporia State University, 1953; BS in Ed. 1954; MA, University of Denver, 1962.

Payne, Joe Dean, Associate Professor of Elementary Education (1967). BA, Texas Tech University, 1950; Med, 1953; EdD, 1963.


Pennin, Maurice J., Assistant Professor of Health Administration and Education (1969). BA, The University of Nebraska, 1957; MA, 1969; MPH, 1972; PhD, 1974.


Peterson, Richard, Associate Professor of Economics (1965). BA, Arizona State University, 1960; MA, Ohio State University, 1962; PhD, 1965.

Peterson, Ralph, Associate Professor of Biology (1989). BS, University of Idaho, 1963; PhD, Washington State University, 1975.

Pettit, Roberta L., Assistant Professor of Biological Sciences (1976). BA, The Wichita State University, 1969; MS, 1974.

Platt, George M., Associate Professor of Urban Studies and Social Sciences (1965). AB, University of California at Los Angeles, 1954; PhD, 1960.


Riordan, Janice M., Assistant Professor of Speech Communication and Director of the Basic Oral Communication Program (1984). BA, Texas Christian University, 1961; MS, Western Michigan University, 1977; PhD, University of Washington, 1985.


Pinkerton, Russel G., Assistant Instructor and Assistant to the Dean of the College of Engineering (1968). BA, Kansas State University, 1962.


Pittar, George M., Associate Professor of Urban Studies and Associate Vice President for Planning and Institutional Research (1967). BS, South Dakota State University, 1953; MA, Syracuse University, 1955; PhD, 1963.

Poe, John W., Associate Professor of English and Director of the Emory Lindsey Honors Program (1970). BS, Emporia State University, 1950; MA, 1958; PhD, University of Oregon, 1972.

Pollack, Rhoda-Gale, Professor of Theater and Dean of the College of Fine Arts (1965). BFA, Cornelius College, 1956; MA, San Francisco State University, 1966; PhD, Stanford University, 1967.

Prater, Charles A., Assistant Professor of Management (1964). BA, Texas Christian University, 1955; MS, 1957; PhD, Oklahoma State University, 1973.


Qamar, Sandra L., Assistant Professor of Nursing (1986). BSN, The Wichita State University, 1973; MN, 1983.


Richardson, William H., Associate Professor of Mathematics and Statistics (1967). BA, Drake University, 1965; MS, 1967.

Rice, Martin A., Professor of History and Political Science (1965). AB, University of California at Los Angeles, 1954; PhD, 1960.

Rhatigan, James J., Professor of Education, Vice President for Student Affairs and Dean of Students (1965). BA, College of Notre Dame, 1957; MA, Syracuse University, 1959; PhD, University of Iowa, 1965.


Richardson, William H., Associate Professor of Mathematics and Statistics (1960). AB, California State University, Los Angeles, 1960; MS, Iowa State University, 1961.

Richardson, William Harrison, Associate Professor of Urban Studies (1971). BA, University of California, Santa Barbara, 1969; MA, University of California, Berkeley, 1970; PhD, 1976.

Rittich, Gisela, Associate Professor of German (1965). MA, Free University of Berlin, 1952; PhD, University of Michigan, 1965.


Rodriguez-Arenas, Flor M., Assistant Professor of Spanish (1986). License, Universidad Pedagógica Nacional, Bogotá, Colombia, 1975; MA, Instituto Caro y Cuervo, Bogotá, Colombia, 1978; MA, The University of Michigan, Ann Arbor, 1980; PhD, The University of Texas at Austin, 1985.


Rogers, Ben F., Associate Professor of Philosophy (1966). BA, University of Tennessee, 1956; MAT, Vanderbilt University, 1967; MA, University of Illinois, 1969; PhD, 1970.

Rogers, Ethel Elisabeth, Assistant Professor of Mathematics and Statistics (1957). BS, Kansas State University, 1946; MA, Northwestern University, 1950; MS, Emporia State University, 1973.


Romig, Charles A., Associate Professor of Counseling and Guidance (1958). BS, University of Illinois, 1957; MA, Trinity Evangelical Divinity School, 1979; PhD, Purdue University, 1982.

Ross, Robert H., Associate Professor of Marketing and Director of MBA Program (1977). AB, Cornell University, 1964; MBA, 1966; PhD, University of Oklahoma, 1979.


Rozelle, Robert W., Assistant Professor of University College and Coordinator of Advising Services (1977). BA, University of New York, Cortland, 1966; ME, Ohio University, 1967.


Safizadeh, Hossein, Associate Professor of Decision Sciences (1979). BA, Iran Institute of Banking, 1974; MBA, Oklahoma State University, 1976; PhD, 1979.

St. John, Richard W., Associate Professor of Ceramics and Associate Dean of the College of Fine Arts (1969). BFA, Kansas City Art Institute, 1967; MFA, Alfred University, 1969.

Seethampan, Viswanathan, Associate Professor of Computer Science (1975). B Tech, Indian Institute of Technology, Kanpur, India, 1971; PhD, Ohio State University, 1975.

Seethampan, Viswanathan, Assistant Professor of Computer Science (1975). B Tech, Indian Institute of Technology, Kanpur, India, 1971; PhD, Ohio State University, 1975.

Sawin, Mahmoud El-Sayed, Associate Professor of Electrical Engineering (1979).
BSEE, University of Alexandria, 1973; MS, 1976; PhD, University of Illinois, 1979; Licensed Professional Engineer—Kansas.


Schad, Jasper G., Professor of Library Science, University Librarian and Dean of Administration, 1954; MA, Stanford University, 1957; MLS, University of California at Los Angeles, 1961.

Schiesler, Karl, Professor of Anthropology (1962). PhD, University of Bonn, 1956.

Schreiner, Rebecca, Assistant Professor and Chairperson of Anthropology (1984). BA, Brandeis University, 1977; MA, 1979; PhD, Ohio State University, 1984.

Schönstaller, Philip H., Associate Professor of English (1967). BA, State University of New York at Oneonta, 1965; MFA, University of Iowa, 1967.


Schrag, Robert L., Professor of Electrical Engineering (1957). BSEE, Kansas State University, 1952; MME, 1966.

Schneller, Rebecca, Assistant Professor and Coordinator of Communicative Disorders and Director of The Wichita State University, Speech-Language-Hearing Clinic (1972). BA, The Wichita State University, 1964; MA, 1972; PhD, 1978.

Sclcut, Joyce A., Assistant Professor of Foreign Languages and Chairperson of Department of Foreign Languages (1983). BA, University of Illinois, 1984.


Sculder, Rosalind R., Assistant Professor of Language and Chairperson of Department of Foreign Languages (1983). BA, University of Illinois, 1984.


Scruby, William M., Assistant Professor of Chemistry (1982). BA, Vanderbilt University, 1971; PhD, North Carolina State University, 1978.

Shore, Elsie Rochelle, Assistant Professor of Psychology (1981). BA, Brooklyn College, 1967; MA, University of Nebraska—Lincoln, 1970; PhD, 1981.


Singhal, Ram P., Associate Professor of Chemistry (1974). BSc, University of Lucknow, India, 1958; MSc, 1960; DEA, Université de Paris VI, France, 1964; PhD, 1967.


Skokan, Elvera W., Assistant Instructor of Biology, Wichita State University, 1982.

Skokan, Elvera W., Assistant Instructor of Biology, Wichita State University, 1982.


Smith, Larry D., Assistant Instructor and Assistant Director of Sponsored Programs Management, Research and Sponsored Programs (1978). BBA, The Wichita State University, 1970.

Smith, Nicholas E., Assistant Professor of French, Wichita State University, 1970; AB, Eastman School of Music, 1972; DMA, 1980.

Smith, Robert M., Associate Professor of Speech-Language-Hearing, Chairman of the Department of Speech-Language-Hearing, Wichita State University (1969). MS, Miami University, 1963; MSME, 1965; PhD, Kansas State University, 1966.

Smith, Larry D., Assistant Instructor and Assistant Director of Sponsored Programs Management, Research and Sponsored Programs (1978). BBA, The Wichita State University, 1970.

Smith, Nicholas E., Assistant Professor of French, Wichita State University, 1970; AB, Eastman School of Music, 1972; DMA, 1980.

Smith, Robert M., Associate Professor of Speech-Language-Hearing, Chairman of the Department of Speech-Language-Hearing, Wichita State University (1969). MS, Miami University, 1963; MSME, 1965; PhD, Kansas State University, 1966.

Smith, Larry D., Assistant Instructor and Assistant Director of Sponsored Programs Management, Research and Sponsored Programs (1978). BBA, The Wichita State University, 1970.

Snyder, Jacqueline J., Associate Professor of American Studies, Dean of Continuing Education and Director of Summer Session (1975). BA, College of St. Catherine, 1963; MA, Indiana University, 1968; DA, University of Oregon, 1987.

Snyder, James J., Associate Professor of Psychology (1977). BSc, University of Idaho, 1968; MA, Southern Illinois University, 1974; PhD, 1978.

Snyder, Melvin H., Jr., Professor of Aeronautical Engineering (1947). BSME, Carnegie-Mellon University, 1947; MS, The Wichita State University, 1950; PhD, Oklahoma State University, 1957; Licensed Professional Engineer—Kansas.


Sobin, Anthony G., Associate Professor of English (1967). BA, Tulane University, 1966; MFA, University of Iowa, 1969; PhD, University of Utah, 1975.

Sokol, Gregory, Associate Professor of American Studies and Assistant to the Executive Vice President of Academic Affairs (1978). BA, State University College of New York at Fredonia, 1971; MA, Indiana University, 1973; PhD, 1978.


Sowards, J. Kelley, Distinguished Trustees Professor of Humanities (1956). BA, The Wichita State University, 1947; MA, University of Michigan, 1948; PhD, 1952.

Spencer, LaVerne, Assistant Professor and Academic Counselor in University College (1971). BA, The Wichita State University, 1971; MED, 1974.

Staley, Christopher P., Assistant Professor of Ceramics (Studio Arts) (1985). BFA, Wittenberg University, 1977; MFA, Alfred University, 1980.

Stanga, John E., Associate Professor of Political Science (1981). BA, Southeastern Louisiana University, 1961; MA, Louisiana State University, 1963; PhD, University of Wisconsin, 1971.

Stephan, Rebecca Waller, Instructor and Assistant Director of the School of Accountancy (1986). BS, Fort Hays State University, 1977; MSA, 1979.

Steffies, Francis A., Associate Professor of English (1970). BA, Texas A&M University, 1956; MA, University of Texas, 1967; PhD, 1970.


Stiner, Mary, Associate Professor of Art, Assistant Professor and Chairperson of Department of Dental Hygiene (1972, 1977). BS, University of Missouri at Kansas City, 1967; MS, Kansas State University, 1978; PhD, Kansas State University, 1985.


FACULTY 211

Varghese, Ansa Elizabeth, Assistant Professor of

Walters, Dorothy J., Associate Professor of

Ward, Susan D., Assistant Professor of


Throckmorton, Helen J., Professor and Chairperson of Department of English (1964).

AB, Friends University, 1945; MEd, University of Colorado, 1956; EdD, 1972.

Thye, Larry, Assistant Professor of

Tilden, Michael, Associate Professor of

Tillford, Marion, Associate Professor of

Tinti, Maurice M., Professor of Health
Sciences (1983). BA, Rice University, 1937; MD, University of Texas School of Medicine, 1941; MS, Kansas State University, 1979; PhD, 1983.

Todd, Richard A., Associate Professor of

Tomasko, James E., Assistant Professor of

Tombs, Averett S., Professor of Biology, Vice President for Research and Dean of Graduate Studies (1980). BA, University of Arkansas, 1954; MS, Virginia Polytechnic Institute, 1956; PhD, Rutgers University, 1961.

Topham, Debra, Assistant Professor of

Topping, Gary E., Instructor and Clinical

Tork, Susan C., Assistant Professor of

Torres, John M., Assistant Professor of
Dental Hygiene and Supervising Dentist (1986). DDS, University of Missouri-Kansas City, School of Dentistry, 1964.

Toubia, Gracia T., Instructor of Mathe-

Town, Robert L., Associate Professor of

Townsend, Pochara, Assistant Professor

Thibault, Fred H., Assistant Professor of

Thomann, Gary C., Associate Professor of

Thomas, James H., Associate Professor and Interim Chairperson of Department of American Studies (1976). BA, The Wichita State University, 1971; MEd, 1975; PhD, Oklahoma State University, 1976.

Thomas, Phillip D., Professor of History
and Dean of Fairmont College of Liberal Arts and Sciences (1965, 1984). BA, Baylor University, 1946; MA, University of New Mexico, 1964; PhD, 1965.

Thomson, John William, Associate
Professor of Music, Director of Jazz Ensembles and Director of Recording, Department of Music (1969). BM, The Wichita State University, 1976; MM, 1980; DMA, University of Missouri at Kansas City, 1968.

Unruh, Henry J., Professor of Physics (1946). BA, The University of Kansas, 1940; MS, Kansas State University, 1942; PhD, Case Western Reserve University, 1950.

Vahdat, Part, Associate Professor of

Varghese, Ansa Elizabeth, Assistant Professor and Science Librarian (1985). BS, Women's Christian College, Madras, India, 1949; MA, University of Illinois, 1951; PhD, University of California-Los Angeles, 1958.

Varsha, Albert J., Director of the Intensive

Vartabedian, Robert A., Assistant Professor

Vaughn, Ambrose, Instructor of Management

Vickery, W. Dean, Assistant Professor of
Management and Assistant Dean for Student

Vincent, Michael, Associate Professor of
French (1960). BA, St. John's University, 1956; MA, Université de Paris, France, 1957; PhD, 1960.

Wahlbeck, Phillip G., Professor of Chemi-

Walters, Dorothy J., Associate Professor of
English and Director of Center for Women's Studies and Programs (1967). BA, University of Oklahoma, 1948; BA in LS, 1951; PhD, 1960.

Washburn, Jane L., Assistant Professor of

Washington, Patricia, Assistant Professor of

Weaver, Arden, Assistant Professor of

Webb, Edgar L., Assistant Professor of

Webb, Michael W., Assistant Instructor of

Weiss, Samuel C., Professor of Economics
(1966). BS, University of Missouri, 1957; MS, PhD, The University of Kansas, 1968.

Weiland, Susan D., Assistant Professor of

Wellborn, Linda H., Instructor in Dance

Wellbrock, Mildred, Instructor in Library
Science and Coordinator of the EMT Program (1978). BS, Marian College, 1941; MS, Creighton University, 1965.

Welsh, Candace, Assistant Professor of

Welsbacher, Betty T., Associate Professor of

Welsbacher, Richard C., Professor of
Theater and Director of Department of
Theater (1968). BA, Denison University, 1948;
MA, University of Denver, 1960; PhD, Ohio State University.

Wolfe, Donna J. Hawley, Associate Professor of Nursing and Director of Graduate Nursing Education (1981). BA, University of North Carolina at Chapel Hill, 1968; MA, University of Missouri at Kansas City, 1971; MS, The University of Kansas, 1980; EdD, 1980.


Yanney, Douglas M., Assistant Professor and Director of the Foreign Language Instructional Laboratories (1975). BS, The Wichita State University, 1972; BA, 1983.


Yeatts, Catherine G., Assistant Professor of Secondary Education (1979). BS, Michigan State University, 1963; MS, Purdue University, 1973; PhD, 1978.


Young, Lee, Assistant Director of Admissions and Registrar (1985). BS, Jackson University, 1975; MS, 1975.

Youngman, Arthur L., Assistant Professor of Psychology (1983). BA, Montana State University, 1959; MS, Case Western Reserve University, 1961; PhD, University of Texas, 1965.

Zafar, Haris Uz, Assistant Professor of Health Administration and Education (1986). BS, Engineering University, Lahore, Pakistan, 1975; MBA, The Wichita State University, 1982.

Zadler, Melvin M., Associate Professor of Chemistry (1966). BA, Friends University, 1950; MS, The Wichita State University, 1963; PhD, Arizona State University, 1967.


Zoller, Peter T., Associate Professor of English and Director of English Composition (1973). BA, University of San Francisco, 1965; MA, Claremont Graduate School, 1966; PhD, 1970.


Retired Faculty

Aldrich, Benjamin M.
Artiega, Lucio
Bernard, David
Bontrager, Ralph L.
Burgen, Philip
Carson, Doris M.
Ceasar, James J.
Christman, Paul G.
Christian, Robert V., Jr.
Collins, George
Comstock, George A.
Corbin, Harry F.
Crockett, Helen
Cross, Laura M.
Doig, J. Robert, Jr.
Draile, Lewis A.
Duerksen, George N.
Ellison, Thomas
Ford, William R.
Fording, Dorothy Gardner
Fugate, Josephine B.
Gale, Elizabeth
Gates, Therese
Gerling, Amy G.
Gleason, Kenneth G.
Gossett, Lucille
Haines, Forrest D.
Hammond, Geraldine
Hecht, Sabrina
Heilmann, Charles E.
Herman, David F.
Hinton, Evelyn A.
Holmer, Robert M.
Homburger, Richard H.
Houston, Martha P.
Jackson, Bill
Jamison, Ines
Jovanovic, Milan K.
Kiskadden, Robert M.
Knight, Dorothy M.
Knight, Kenneth C.
Lindquist, Emory
Linscheid, Harold W.
Lucas, Walter A.
Malone, Marion M.
Miller, Glenn
Miller, Margarette
Millet, John H.
Mohr, Phillip J.
Moon, Robert G.
Mullick, Margaret D.
Nelson, Eunice D.
Newman, Arthur N.
Noel, G. Carrol
O'Hara, Downing P.
Paddock, Beatrice
Parke, Albert R.
Paris, Wayne L.
Pease, Beatrix Sanford
Peterson, Kenneth C.
Powell, Jackson O.
Pranko, N. H.
Rasser, Arthur C.
Rydjord, John
Adjunct Faculty—Fall, 1986

Absolver, Patsy—Dental Hygiene
Adams, Christina J.—Pediatric Dentistry
Aguliera, David—Medical Technology
Ahrens, Jackie Lunsford—Medical Technology
Alexander, Holly—Medical Technology
Allen, Renee J.—Physical Therapy
Allison, Carol A.—Physical Therapy
Attenhouen, Marilyn—Physical Therapy
Amberg, Sally D.—Medical Technology
Anders, James E.—Marketing and Small Business
Anderson, Sara—Dental Hygiene
Anthes, Phyllis—Management
Armstrong, Janet—Medical Technology
Arnott, Debra J.—Finance, Real Estate and Decision Sciences
Attel, Janeen—Respiratory Therapy
Averbuch, Joan S.—Physical Therapy
Aumick, Patti—Physical Therapy
Avery, John C.—Graphic Design
Avey, Kathryn—Physical Therapy
Baldwin, John S.—Physical Therapy
Barb, Dale—Physical Therapy
Barden, Bobbi K.—Respiratory Therapy
Barnes, William J.—Physical Therapy
Barnett, Edward M.—Finance, Real Estate and Decision Sciences
Barr, Jane L.—Respiratory Therapy
Bartel, Cindy—Physical Therapy
Barto, Bette—Nursing
Barton, Nancy—Nursing
Baxi, Niranjan R.—Physicians Assistant
Bays, Sylvia—Medical Technology
Beachey, Ruth B.—Physical Therapy
Beadle, Kathy—Medical Technology
Beard, Alice—Medical Technology
Beatrice, Mary Kay—Dental Hygiene
Bell, Tally—Nursing
Benson, Beverly—Nursing
Blackwell, Mary J.—Physical Therapy
Blanchett, Kelli—Physical Therapy
Blanner, Patricia Ann—Physical Therapy
Blessing, Brenda G.—Finance, Real Estate and Decision Sciences
Blosser, Shelly—Respiratory Therapy
Blitz, Thomas—Respiratory Therapy
Blolinger, Marjorie B.—Medical Technology
Bowes, Mary—Physical Therapy
Brenner, Carol—Medical Technology
Broddie, Sharon—Respiratory Therapy
Brown, Cynthia Rose—Physical Therapy
Brown, Ron—Medical Technology
Brown, Shirley A.—Medical Technology
Brungardt, Rosie—Medical Technology
Bryant, Jeffrey J.—Accountancy
Byron, Eric—Physical Therapy
Burke, Gary—Health Administration and Education
Burger, Dave—Medical Technology
Burton, Pamela A.—Respiratory Therapy
Butler, Nancy—Physical Therapy
Byrne, Associates—Medical Technology
Calvert, Kathy—Medical Technology
Carnacchio, Mary K.—Nursing
Carroll, Susan—Physical Therapy
Cary, Todd—Physical Therapy
Carlson, Sandy—Physical Therapy
Carroll, Mark—Medical Technology
Chambers, Daniel G.—Finance, Real Estate and Decision Sciences
Chard, Frederick—Physicians Assistant
Chesnutt, Ann L.—Medical Technology
Chiles, Pamela L.—Medical Technology
Cho, Sechin—Medical Technology
Collis, Paula Donald—Physical Therapy
Clark, D. Marie—Physical Therapy
Collins, Ronald—Medical Technology
Concho, Vera—Medical Technology
Cook, Everett L.—Aeronautical Engineering
Cook, Lloyd—Respiratory Therapy
Cowen, Ann—with Physical Therapy
Cowen, Carolyn S.—Physical Therapy
Crouse, Connie—Respiratory Therapy
Cusick, Edward K.—Physicians Assistant
Dalal, T. David—Marketing and Small Business
Davis, A. B.—Health Administration and Education
Davis, William—Physical Therapy
Decoster, Harold—Medical Technology
Deidt, Reith Heinen—Medical Technology
Denger, Sue—Nursing
Dewbre, Joan—Nursing
Diamond, Patricia—Nursing
Dick, James—Physical Therapy
Dickey, Fred M.—Electrical Engineering
Dill, Robert—Medical Technology
Dinmore, Ann E.—Physical Therapy
Dreger, John—Physical Therapy
Doherty, Michael D.—Dental Hygiene
Doolittle, Viucci L.—Physical Therapy
Downing, Kathy—Medical Technology
Draper, David J.—Communicative Disorders and Sciences
Dunning, Jacquie M.—Respiratory Therapy
Eagleton, Beth—Nursing
Ellis, Howard E.—Music Education
Embelin, Thomas H.—Respiratory Therapy
Emrich, June—Nursing
Engel, David—Medical Technology
Eyster, Robert L.—Physicians Assistant
Fahnhoft, Diane E.—Medical Education
Fetterholl, Jon—Physical Therapy
Fox, Debby J.—Respiratory Therapy
Fry, Velma J.—Medical Technology
Funk, Lennie—Physical Therapy
Funke, Judy—Physical Therapy
Furst, Janet—Physical Therapy
Gabbert, M. Jane—Physical Therapy
Ganesan, Uma—Medical Technology
Ganner, M. Catherine—Nursing
Graff, William J.—Medical Technology
Grenier, M. N—Physical Therapy
Grenier, Stepheny L.—Physical Therapy
Gribbin, Ted—Respiratory Therapy
Grim, Richard—Physical Therapy
Guillen, Michelle J.—Physical Therapy
Gillison, Teresa—Nursing
Goebrich, Meri—Physical Therapy
Gonzalez, Barbara M.—Dental Hygiene
Gray, Margaret A.—Marketing and Small Business
Greene, R. Bruce—Physicians Assistant
Gribbin, Maureen V.—Physical Therapy
Gronan, Earl L.—Medical Technology
Guthrie, Linda—Nursing
Haase, Lisa M.—Economics
Hammon, Willy (Bill) E.—Physical Therapy
Hampton, David—Respiratory Therapy
Hampton, Nanci—Music Performance
Harrington—Physical Therapy
Harris, Mostowitz, Patricia—Physical Therapy
Harley, Marilyn—Nursing
Hayworth, Dana L.—Physical Therapy
Hedin, Tammy—Medical Technology
Heeb, Joseph A.—Health Administration and Education
Hennings, Vickie—Physical Therapy
Hinkley, Sheila D.—Dental Hygiene
Hinnen, Deborah—Nursing
Hiskett, Evelyn—Respiratory Therapy
Hladik, James Robert—Dental Hygiene
Hoffman, Jean A.—Physical Therapy
Hogue, Judy L.—Physical Therapy
Hogan, Kevin P.—Accountancy
Holland, Cecilia M.—Nursing
Holli, Kenneth—Respiratory Therapy
Holmes, Martha—Medical Technology
Horne, Karen F.—Medical Technology
Horner, Jill—Physical Therapy
Harris—Physical Therapy
Horning, Noyes—Respiratory Therapy
Hoyer, D. Ann—Nursing
Hudan, Tom—Physical Therapy
Hurst, Christopher M.—Finance, Real Estate and Decision Sciences
Huslig, Mark P.—Physical Therapy
Hussey, William S.—Health Administration and Education
Jabara, Leesa K.—Marketing and Small Business
Jackson, Bill—Graphic Design
Jackson, Shirlene—Medical Technology
Johnson, Doug—Medical Technology
Johnson, Kenneth F.—Political Science
Johnson, Leland—Electrical Engineering
Johnson, Marilyn—Respiratory Therapy
Johnson, Roseann—Physical Therapy
Johnston, Rochelle A.—Physical Therapy
Jonas, Patrick T.—Physical Therapy
Johnson, Kenneth F.—Political Science
Johnson, Roseann—Physical Therapy
Johnston, Rochelle A.—Physical Therapy
Jonas, Jack—Industrial Engineering
Jonas, Man—Nursing
Jonas, Patricia F.—Physical Therapy
Kaup, Kimberly A.—Physical Therapy
Kaiser, Charles P.—Geology
Keller, Carol—Physical Therapy
Kehoe, Jac—Medical Technology
Kennally, J. Michael—Finance, Real Estate and Decision Sciences
Kennedy, Janice M.—Accountancy
Keny, Patricia—Finance, Real Estate and Decision Sciences
Kim, Joon Y.—Physical Education
Kim, Jun Jung—Mechanical Engineering
Kincade, Julie—Medical Technology
Klapeheke, Kathleen C.—Physical Therapy
Kleffner, Frank F.—Communicative Disorders and Sciences
Kofoed, Franchesca—Medical Technology
Koehn, Dixie L.—Physical Therapy
Kostner, Donna M.—Physical Therapy
Kraus, Judith Rowan—Nursing
Krupat, Richard J.—Mechanical Engineering
Kurtz, Karen A.—Respiratory Therapy
Lalonde, Hugh K.—Medical Technology
Lavelle, Michael G.—Marketing and Small Business
Leslie, John H.—Industrial Engineering
Linn, Cindy Hamilton—Physical Therapy
Lore, Michael—Dental Hygiene
Brace, Kathy A.—Communicative Disorders
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Undergraduate Catalog 1987-88

This Catalog is a guide for information and is not a contract. It becomes effective March 1, 1987.

The official University Address is:
The Wichita State University
Wichita, Kansas 67208-1595

The general University telephone number is:
(316) 689-3456.

For admission information, call toll-free:
(800) 362-2594.
# Academic Calendar for 1987-88

## Summer Session 1987
- **May 25, Monday** ........................................................... Memorial Day, holiday
- **May 26-June 12** ............................................................ Presession and workshops
- **June 4-5, Thursday-Friday** ........................................... Summer Session registration
- **June 8, Monday** ............................................................ Classes begin
- **July 2, Thursday** ............................................................ Final day of first four-week term; registration for second four-week term
- **July 3-4, Friday-Saturday** ............................................ Independence Day, holiday
- **July 6, Monday** ............................................................ Second four-week term classes begin
- **July 31, Friday** ............................................................ Summer Session closes

## Fall Semester 1987
- **August 17-22, Monday-Saturday** ..................................... Fall semester registration
- **August 24, Monday** ........................................................ Classes begin
- **September 5-7, Saturday-Monday** .................................... Labor Day, holiday
- **October 16, Friday** ....................................................... Midterm point
- **October 30, Friday** ....................................................... Final date for withdrawal with nonpenalty grades
- **November 11-20** ............................................................ Preregistration period for spring semester. Exact dates to be published in the Schedule of Courses

## Spring Semester 1988
- **January 11-16, Monday-Saturday** ..................................... Spring semester registration
- **January 18, Monday** ....................................................... Classes begin
- **March 11, Friday** ............................................................ Midterm point
- **March 13-19, Sunday-Saturday** ....................................... Spring recess
- **March 21, Monday** ........................................................ Classes resume
- **April 1, Friday** ............................................................ Final date for withdrawal with nonpenalty grades
- **April 13-22** ................................................................. Preregistration period for fall semester. Exact dates to be published in the Schedule of Courses

## Summer Session 1988 (Tentative)
- **May 23-June 10** ............................................................ Presession and workshops
- **May 30, Monday** ............................................................ Memorial Day, holiday
- **June 2-3, Thursday and Friday** ...................................... Summer Session registration
- **June 6, Monday** ............................................................ Classes begin
- **July 1, Friday** ............................................................... Final day of first four-week term; registration for second four-week term
- **July 4, Monday** ............................................................. Independence Day, holiday
- **July 5, Tuesday** ............................................................ Second four-week term classes begin
- **July 29, Friday** ............................................................ Summer Session closes