WICHITA STATE UNIVERSITY
CATALOG 1985-86
University preschool facilities are available to children of students, faculty, and staff.
Student and faculty artists are among those who exhibit work at the Clayton H. staples Gallery in the McKnight Art Center.

The Bureau of Educational Placement provides career planning and placement assistance for WSU students and alumni.
Under supervision of instructors, dental hygiene students practice their newly-learned skills.

The College of Fine Arts includes the divisions of art, dance, and music.
This catalog is for information only and does not constitute a contract. This catalog becomes effective March 1, 1985.

Contents

General Information ....................................................... 4
Administrative Officers ................................................. 4
Profile of Wichita State University ............................... 4
Admission to Wichita State ............................................ 6
Academic Information .................................................... 8
Special Academic Areas .................................................. 16
Cooperative Education Program ..................................... 16
Division of Continuing Education ................................. 17
Graduate School .......................................................... 17
Summer Session ........................................................... 17
Financial Information .................................................... 17
Student Affairs ........................................................... 20
Special Programs .......................................................... 21
Special Facilities .......................................................... 23
Student Activities and Organizations ............................ 25
Key to Course Descriptions ......................................... 27

University College

College of Business Administration
College Policies and Programs ........................................... 30
Accounting ................................................................. 37
Aviation Management ..................................................... 38
Business Education ....................................................... 39
Business Law ............................................................... 39
Decision Sciences ........................................................ 40
Economics ................................................................. 40
Finance ................................................................. 43
Legal Assistant ........................................................... 43
Management ............................................................... 44
Marketing ................................................................. 45
Personnel ................................................................. 46
Real Estate ............................................................... 46
Small Business/Entrepreneurship ................................... 47

College of Education
College Policies and Programs ........................................... 47
Communicative Disorders and Sciences (Logopedics) ............... 52
Industrial Education ....................................................... 56
Instructional Services .................................................... 57
Military Science ........................................................... 63
Music Education .......................................................... 64
Personnel Services ........................................................ 64
Physical Education, Health, and Recreation ........................ 67

College of Engineering
College Policies and Programs ........................................... 70
Engineering—General Education .................................... 72
Aeronautical Engineering .............................................. 73
Electrical Engineering .................................................. 75
Industrial Engineering .................................................. 77
Mechanical Engineering ................................................ 79
Engineering Technology ................................................. 81

College of Fine Arts
College Policies and Programs ........................................... 85
Division of Art ............................................................. 86
Art Education ............................................................ 87
Art History ............................................................... 88
Graphic Design—Commercial Art ................................... 89
Studio Arts ............................................................... 90
Division of Dance ........................................................ 94
Division of Music ......................................................... 95
Music Education ........................................................ 100
Music Performance ...................................................... 102
Musicology—Composition .............................................. 104

College of Health Professions
General Policies and Programs ......................................... 106

Published by Office of University Relations
Wichita State University
Wichita, Kansas 67208
Sara Weinert, Editor
Lisa Van Dusen, Designer

The official University address is:
Wichita State University
Wichita, Kansas 67208
The general University telephone number is: (316) 689-3456.
For admission information call, toll free, (800) 362-2594.
Baccalaureate Programs .......................... 107
Cytotechnology .................................. 107
Dental Hygiene .................................... 108
Health Care Administration ....................... 109
Medical Record Administration .................. 110
Medical Technology ................................ 111
Nursing ............................................ 113
Physical Therapy .................................. 117
Physician Assistant ................................ 119
Respiratory Therapy ............................... 121
Associate of Science Programs .................... 123
Dental Hygiene .................................... 123
Respiratory Therapy ............................... 123
Special Certificate Programs ...................... 124
Basic Emergency Medical Care Training ........ 124
School Nurse ...................................... 124
Physician Assistant ................................ 125
Service Departments ................................ 125
Health Administration and Education ............ 125
Health Science ...................................... 125

Fairmount College of Liberal Arts and Sciences
College Policies and Programs .................... 127
Administration of Justice ........................ 132
American Studies .................................. 135
Anthropology ....................................... 136
Biological Sciences ............................... 139
Chemistry .......................................... 142
Communications ................................... 146
Computer Science .................................. 147
Economics .......................................... 150
English Language and Literature ................ 150
Geology ............................................ 154
Gerontology ........................................ 157
History ............................................. 158
Interdisciplinary Liberal Arts and Sciences Program 160
Journalism ......................................... 160
Linguistics ......................................... 162
Mathematics and Statistics ....................... 162
Minority Studies .................................. 165
Modern and Classical Languages and Literatures 166
Philosophy ......................................... 171
Physics ............................................. 173
Political Science ................................... 174
Psychology ......................................... 177
Public Administration ........................... 179
Religion ............................................ 179
Sociology/Social Work ............................ 181
Speech Communication ............................ 184
Women's Studies .................................. 188

University Faculty ................................. 189
Index .............................................. 204
General Information

1984-85

Administrative Officers

Wichita State University

Warren B. Armstrong, President of the University
John B. Breazeale, Vice President for Academic Affairs and Dean of Faculties
Martin H. Bush, Vice President for Academic Resource Development
George M. Platt, Associate Vice President and Director for Planning and Institutional Research
Jacqueline J. Snyder, Associate Vice President for Academic Affairs
Lloyd M. Benningfield, Dean of Graduate Studies and Research
Douglas Sharp, Dean of the College of Business Administration
Leonard M. Chaffee, Dean of the College of Education
William J. Wilhelm, Dean of the College of Engineering
Gordon B. Terwilliger, Dean of the College of Fine Arts
Sidney D. Rodenberg, Dean of the College of Health Professions
Philip D. Thomas, Dean of Fairmount College of Liberal Arts and Sciences
Jasper G. Schad, Dean of Libraries and Media Resource Center
Barbara A. Mawhiney, Assistant Dean of Faculties for Personnel
William E. Wynne, Registrar
Frederick Sudermann, Director of Research and Sponsored Programs and Governmental Relations
James J. Rhatigan, Vice President for Student Affairs and Dean of Students
David L. Meabon, Dean of Student Life and Services
C. Russell Wentworth, Dean of University College and Continuing Education and Director of Summer Session
Deltha O. Colvin, Assistant Dean of Students for Special Programs
Roger D. Lowe, Vice President for Business Affairs
Armin L. Brandhorst, Director of Physical Plant
James R. Decker, Controller
Mary L. Herrin, Director of Budgets
Milton L. Myers, Chief of University Police
William H. Smith, Director of Campus Activities Center
Robert D. Warren, Director of Personnel and Administrative Services
H. R. Reidenbaugh, Executive Vice President of Board of Trustees and Executive Secretary of Endowment Association
James D. Moore, Executive Director of the Alumni Association
Lewis Perkins, Director of Athletics
Max A. Schable, Director of University Relations
Stanley E. Henderson, Director of Admissions

Board of Regents, State of Kansas

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Archie R. Dykes, Topeka
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Sandra L. McMullen, Hutchinson
John G. Montgomery, Junction City
James W. Pickert, Emporia
George Wingert, Ottawa
Stanley Z. Koplik, Executive Director, Topeka

Profile of Wichita State University

Wichita State University, a medium-sized, state-supported university, is located in the city of Wichita. Boasting a population of nearly 280,000 persons, Wichita is the largest city in Kansas and a center for cultural and economic activity.

With a growing enrollment of more than 17,000, Wichita State takes pride in its specialized attention to each student. Non-traditional programs and classes help meet the needs of all, including those who don't fit the mold of "typical" students—more than 84% of those enrolling at WSU are employed part- or full-time; students range in age from 15 to 81 years; 1,100 are receiving veterans' benefits.

Nearly 200 areas of academic concentration allow "Shockers" (as WSU students are known) to fit scholastic growth and progress to their individual talents and interests. Programs are offered in the Colleges of Business Administration, Education, Engineering, Fine Arts, and Health Professions, as well as in Fairmount College of Liberal Arts and Sciences, University College (for entering freshmen and adult students) and the Graduate School. Students can work toward one- and two- year certificates, and associate, bachelor, master, specialist and doctoral degrees.

As part of its commitment to fulfill the needs of each student, WSU features a Summer Session with a flexible time format. A three-week presession and two four-week sessions are held concurrently with the regular eight-week session.

Wichita State programs emphasize four basic concerns:
1. The University provides general education through the General Education Program and University College.
2. The University offers advanced and special education through the various major studies in liberal arts and sciences and in the degree programs of the professional schools and colleges.
3. The University provides continuing educational opportunities for adults through special seminars, workshops, classes and related University programs and activities.
4. The University promotes graduate studies and stimulates research through a variety of graduate programs authorized by the Kansas Board of Regents, as well as through going programs of University research, and research sponsored by outside organizations.

Implicit in all the University's objectives are student welfare and continuing public service.

History

Wichita State University began as Fairmount College in 1895 with 16 students and three instructors. Founded by the Congregational Church, the college was governed by the church until 1926; when the citizens of Wichita voted to make Fairmount College the Municipal University of Wichita. The University was then placed under the direction of what eventually would be known as the Board of Trustees.

After 38 years as a municipal institution, the University again changed its status on July 1, 1964, and officially entered the state system of higher education. In its present status, Wichita State is one of six state institutions of higher education governed by the Kansas Board of Regents.

Accreditation and Associations

Wichita State is accredited by the North Central Association of Colleges and Schools. Specific programs are also accredited by professional organizations listed with information from each college.

Women graduating from Wichita State with bachelor's degrees or higher are eligible for membership in the American Association of University Women.
Policies

Human Relations
It is the policy of 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. Rhatigan, vice president for student affairs and dean of students, Grace Wilkie Hall.

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

1. To consult their advisers on all matters pertaining to their academic careers, including changes in their programs
2. To observe all regulations of their 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
9. To g et 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.

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 peacefully assemble 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 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

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 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 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 recording institution and will not be returned to the applicant. College transcripts brought by students cannot be accepted.

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

Admission of a student to Wichita State University is independent of sex, race, physical handicap, ethnic background, or creed.

Degree-Bound Students

Freshmen

Students who will graduate from accredited Kansas high schools and will not attend another college before coming to Wichita State will be admitted to the University as freshmen after submitting an application and a high school transcript. Scores from the test battery of the American College Testing Program (ACT) must also be submitted before enrollment. Application may be completed in one of two ways:

1. Students may apply by taking the American College Test (ACT) and having the results sent to Wichita State (college code 1472). Upon receipt of the ACT scores, the WSU admissions staff completes a copy of the application and sends it 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 the Wichita State Admissions Center. ACT scores must also be submitted before enrollment. Graduates of non-accredited 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 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 2.00 or better on a 4.00 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 the 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 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 the Wichita State 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 the Wichita State 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 the Wichita State 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**

International students 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 not acceptable, 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.
4. After one semester of intensive English, students would have the opportunity to take another proficiency test. Those who pass would be allowed to begin enrollment in their academic program. Those who do not will continue enrollment in intensive English.
5. They must have a statement of financial responsibility in an amount of $9,300 or more to cover expenses for 12 months, including summer session tuition. All international students are considered nonresidents for tuition and fee purposes.
6. They must submit a University health form which has been completed by a physician.

Graduate Students

A number of 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 an accredited institution based on credits comparable to those allowed toward a degree by Wichita State, a minimum grade point average of 2.75 (on a 4.00 scale) in their last 60 hours of academic work and similar performance in their major field of study, and no more than 9 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 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 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 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.

Special Admissions

Students who have accumulated a
grade point average of less than 2.00 may petition the dean of their college and the University Committee on Admissions and Exceptions to be admitted to a degree program with no college credit and no grade point average.

To qualify, petitioners must be at least 25 years old, must have been out of a degree program of college studies for at least four years, and must demonstrate ability to progress in college work. If the petition is approved, all prior college courses and grades are recorded on the transcript, a double line is drawn and the notation "admitted without credits or grades by committee action" is made.

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

**Nondegree-Bound Students**

Wichita State 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 the Wichita State 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 admission procedure. Students will be admitted to the nondegree program as special open admission students:

1. If they have been graduated from 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 may 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.

**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. Guest students are not eligible to participate in preregistration or advance registration.

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. School principal's recommendation and a carefully prepared justification for enrollment would be necessary before consideration could be 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 residence of students entering Wichita State University is determined by acts of the state legislature, and the most recent statement reads as follows:

Persons enrolling in universities and colleges under the state board of regents who, if adults, have not been, or if minors, whose parents have not been, residents of the State of Kansas for one year (12 months) prior to enrollment for any term or session in a college or university are nonresidents for fee purposes. Notwithstanding the foregoing provisions of this section, the state board of regents may adopt rules and regula-

...tions authorizing the following to pay an amount equal to resident fees: (1) Employees of the university or college and their dependents, (2) persons in the military stationed in Kansas and their dependents, (3) other classes of persons having special domestic relations circumstances, and (4) persons who have lost their resident status within six months of their enrollment.

The state board of regents shall adopt rules and regulations prescribing criteria or guidelines for determination of residence of students, so long as such criteria or guidelines are not in conflict with the provisions of this act. The state board of regents shall adopt rules and regulations prescribing guidelines for the membership composition and procedure of a residence committee for each college and university under its control.

Residency of new students enrolling for the first time at Wichita State is determined by the Admissions Center according to the above statute. 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.

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 is sent. Any change in residence must be reported within three days to 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
- Juniors: 60 to 89 semester hours earned
- Seniors: 90 semester hours or more earned

As a general rule, a student taking 12 hours during the fall or spring semester is considered a full-time student. For graduate students, 9 hours is considered full-time. (Graduate students who are half-time teaching assistants are considered full-time if they take 6 or more hours.)

During the summer session, 6 hours is full-time for both undergraduate and graduate students, with graduate teaching assistants full-time with 3 hours.

In order to graduate with a bachelor's degree in 8 semesters, however, a student must take an average of 16 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 designed primarily for freshmen and sophomores. Graduate students may be admitted if they satisfy the course prerequisites. Students from other classes may be considered for the first semester of work during the transition semester, as discussed in the Transition Semester section of the Catalog.

Credit/No Credit Courses
Courses numbered below 100 do not carry credit toward a Wichita State University 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 NC, 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 2.0 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 and a P. An F is 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. Deans of the college will serve as arbitrator 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, F, W, Au, Cr, NCr, S, U, I, R, and CrE.

A: Distinguished achievement. Credit given; four credit points per semester hour.
B: Superior achievement. Credit given; three credit points per semester hour.
C: Average achievement. Credit given; two credit points per semester hour.
D: Below average achievement. Credit given; one credit point per semester hour.
P: Passing work (with a B, C, or D). Credit given; no credit points assigned.
F: Failing work. No credit given; no credit points. Does not affect grade point average.

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.

Grading symbols (Cr, NCr, S, U, I, R, and CrE) are used on anyone course, since a student may be granted an extension of time to complete course work. Credit is included in the student's grade point average until it is completed and a regular letter grade is assigned. An incomplete course must be satisfactorily completed by the end of the next semester in which the student enrolls, summer excluded, or the I reverts automatically to an F. Students may not enroll in the course in which they received the I unless they do not enroll at WSU for one calendar year.

The following conditions govern incompletes:
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.

Repeat. A prefix to other grading symbols indicating that the course is a repeat of one taken earlier, such as RA, RB, RC, RD, RF, RW, or RI. The R prefix has no evaluative function but is used for information only. The following provisions concern repeats:
1. No course may be attempted more than three times. For this policy a repeat of an audit does not count as an enrollment, but a W counts as an enrollment. Exceptions may be made in writing by the chairperson of a student's major department.
2. Any previously completed course may be repeated. In the computation of the grade point average the grades students receive in repeated courses will replace previous grades up to a maximum total of five such repeats beginning on June 1, 1976. Only two of these five repeats can be used on any one course, since a single course may not be repeated more than twice. The grade W does not replace the previous grade, and it does not count as one of these five repeats. Beginning with the sixth repeat, all grades are included in the computation of the grade point average except for the grades that have been previously replaced. The semester in which students complete the fifth repeat may include additional repeats. In this case, the repeats (within the total of five) are selected so that the grade point average is maximized.

Transfer students are also eligible to repeat courses and replace the previous grades five times, beginning with the first repeat course taken at any college or university after June 1, 1976.

3. A course being repeated may not be taken under the A/Pass/Fail option but must be taken for a letter grade. (See Catalog section on A/Pass/Fail option.)
4. Students may audit the same course any number of times.

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

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

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

Grade Point Average (GPA). The grade point average (also called grade point index) is computed by dividing the total number of credit points by the total
number of semester hours completed for which 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 officially enrolled 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 one 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 grading or reporting may be initiated by an instructor at any time during one calendar year following the assignment of the original grade. A grade change may also be initiated by the chairperson of the department that offered the course if, and only if, the instructor is not in residence. The approval of the dean of the college of the department concerned is needed to have the change in grade entered on the student’s transcript. The dean must then notify the chairperson of the department concerned that the grade has been changed.

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

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

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

Students who receive below a 2.00 GPA when they receive their graded reports (A, B, C, D, or F), may file a request with their college dean that all work in the transition semester be translated into Credit/No Credit (Cr/NCr) on their official records, with Cr applying to letter grades A, B, and C, and NCr applying to letter grades D and F.

A written request to have letter grades translated into Cr/NCr must be filed by the student with the dean of the college in which the student is enrolled between the posting of the semester grades and the student’s next enrollment including Summer Session. The request for transition semester will be handled by the dean’s office and will be implemented if the student fulfills the following criteria for the next period for which the student is enrolled:

Students who request transition semester must complete a minimum of 6 graded hours during their next enrollment period and achieve a minimum of 2.00 GPA.

Students who file for the transition semester will be placed on probation and will be limited to a maximum of 12 semester hours (or a proportional enrollment during a Summer Session) or less during their next enrollment. Students’ requests for transition semester will be processed if they have fulfilled the requirements (appropriate hours completed with a GPA of at least 2.00). Students who fail to meet the requirements of the subsequent semester (lack of appropriate number of hours or less than a 2.00 GPA) will not be allowed to take the transition semester, and will become 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. 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 5 to a low of 1, 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 Testing and Evaluation 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 Testing and Evaluation Center. Students who pass CLEP examinations with 65th percentile scores or better will be given three hours of credit in the respective general education area for which the test is presented. Information about the dates and times at which CLEP examinations are given is available from the Testing and Evaluation Center.

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

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

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

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

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

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

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

Graduate Credit for Seniors (Senior Rule)

Seniors at Wichita State University or neighboring baccalaureate degree-granting institutions who have an overall grade point average of 3.00 or above in their major field and in upper-division courses 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, department 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 life. 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 vice president for academic affairs.

Entering freshman students must have

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 3.25 and a grade point average of at least 3.00 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.
College of Natural Sciences.

Colloquium in Natural Sciences and Mathematics (1-4). P 11 303 5 1509

Colloquium in Mathematics (1-4). P 1 11 303 5 1509

Colloquium in Social and Behavioral Sciences (1-4). P 11 302 5 0601

Colloquium in Humanities and the Social Sciences (1-4). P 11 301 5 0601

Upper-Division Courses

Colloquium in Humanities and the Fine Arts (1-4). P 11 301 5 4905

Colloquium in Social and Behavioral Sciences (1-4). P 11 302 5 0601

Colloquium in Natural Sciences and Mathematics (1-4). P 11 303 5 1509

Colloquium in Humanities and the Fine Arts (1-4). P 11 301 5 4905

Colloquium in Social and Behavioral Sciences (1-4). P 11 302 5 0601

Colloquium in Natural Sciences and Mathematics (1-4). P 11 303 5 1509

Colloquium in Professional Studies (1-4). P 11 304 5 2201

Honors Seminar (1-4). P 11 400 5 4906

Independent Study (1-4). Repeatable to a maximum of 6 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 3.25 are eligible to conduct a research or creative project under the supervision of a faculty member. Students considering such projects are encouraged to begin planning their work well 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 be filed with the Honors Program by the senior year. Students considering such projects are encouraged to begin planning their work well 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.

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 6001

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

302. Colloquium in Social and Behavioral Sciences (1-4). P 11 302 5 0601

303. Colloquium in Natural Sciences and Mathematics (1-4). P 11 303 5 1509

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 6 hours of credit. P 11 410 4 4906

Academic Recognition

Honors criteria are established for Wichita State students by the University and apply equally to students of all colleges.

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 3.250 or higher for a semester.

Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduation 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 graduation magna cum laude is both an overall grade point average of 3.550 and a grade point average of 3.550 on Wichita State course work. The minimum standard for graduation 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 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 their 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, the office 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 returned because the address given by the student at the time of enrollment is incorrect, administrative withdrawal will take place 15 days after the initial notice. A grade of W or F will be officially recorded on the student's permanent record for a course or courses from which the student is administratively withdrawn. The grade of F will be recorded only if the administrative withdrawal is for academic reasons.

Academic Progress Reports

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

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

Absence Letters. Faculty members who make regular attendance checks may inform the dean of a student's college if 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 for graduation (or above 2.000 for University College) but below this level for one semester may receive a letter from the dean of their college warning of the consequences of continued substandard performance. Such warnings do not appear on a student's transcript.

Academic Probation and Dismissal Standards

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

Since 2.00 (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 6 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 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, and 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 2.00 (transfer work included) and a grade point average of 2.00 on all work taken toward a degree at Wichita State. Furthermore, students must maintain a grade point average of 2.00 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 University. Also, at least 24 of the last 30 semester hours or 50 of the last 60 semester hours must be completed at Wichita State University. 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 6 hours of such credit may be among the last 30 semester hours.

General Education Program

The General Education Program consists of 42 hours—12 hours of basic skills courses and 30 hours of distribution courses.

Students entering Wichita State University during or after the fall semester, 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, 1983, who receive a bachelor's degree from 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 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>No. of &quot;G&quot; and &quot;O&quot; hours to be included in column 2</th>
<th>Minimum No. of hours to be included in column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6</td>
<td>29-24</td>
<td>9</td>
</tr>
<tr>
<td>7-15</td>
<td>23-15</td>
<td>6</td>
</tr>
<tr>
<td>16-21</td>
<td>14-9</td>
<td>3</td>
</tr>
<tr>
<td>22-29</td>
<td>8-1</td>
<td>0</td>
</tr>
</tbody>
</table>

To complete the General Education Program each student must take:

I. 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 "O" 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 "O" during the semester in which the student was enrolled.
   B. Rules for Distribution Courses
      1. At least 9 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 6 hours must be completed in two different departments in Division B.
      3. At least 6 hours must be completed in two different departments in Division C.
      4. No more than 6 hours of work taken in any one department may be used to satisfy the distribution requirement.
      5. The remaining 9 hours may be taken in any division. If the course has a "G" or "O" designation during the semester in which the course is taken, performance and studio courses with the "G" or "O" designation may be taken to complete this portion of the distribution requirement.
      6. At least 9 of the 30 hour distribution requirement must be taken in General Studies Courses. These courses are offered only at 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 "G" or "O" designation may be used to fulfill both the requirements of the General Education Program and the 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/decisions 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; basic emergency medical care; biological sciences; chemistry; communicative disorders and sciences; computer science; cybernetics; dental hygiene; electrical engineering; engineering; engineering technology; geology; health sciences; industrial engineering; 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 Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities...
sities should see paragraph three under General Education Program.

General Studies courses, taken to fulfill this specific portion of the General 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 “G” 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
Amer. Stud. 201G, The American Hero
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. 231G, Exploring Literature in Media
Eng. 232G, Themes in American Literature
Eng. 307G, Narrative in Literature and Film
Eng. 400G, The Literary Imagination: Epic, Romance, Tragedy, Comedy
Hist. 101G, History of Western Civilization
Hist. 102G, History of Western Civilization
Hist. 106G, A History of Lost Civilizations
Ling. 110G, Learning Another Language
Ling. 150G, 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
Speech 143G, The Art of the Theater
Speech 190G, Crises in Communication

Division B, Social and Behavioral Sciences
Anthro. 100G, Anthropology of Modern Life
Anthro. 126G, Popular Archaeology
Econ. 101G, The American Economy
Econ. 200G, What Economics Is All About
HAE 231G, Current Issues in Food and Nutrition
Mgmt. 101G, Introduction to Business
PE 280G, Fitness for Life
Pol. Sci. 103G, Games Nations Play:
Problems in International Relations
Soc. 200G, Sociology and Everyday Life

Division C, Mathematics and Natural Sciences
Biol. 102G, Biological Science Survey
Biol. 105G, The Human Organism
Biol. 505G, Foundations of Human Heredity
CS 103G, Computers: Their Uses and Abuses
Engr. 300G, Technology and Society
Geol. 300G, Energy, Resources, and Environment
Math. 300G, The Evolution of Mathematics
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. They may not, however, be allowed to graduate under the requirements of a Wichita State University Catalog in effect earlier than two years preceding their enrollment at Wichita State.

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 Wichita State University upon completion of a minimum of 30 hours in residence, provided that none of the 30 WSU hours is counted in the first degree and provided that all Wichita State University college and department graduation requirements are met.

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

Commencement
Wichita State holds one commencement a year. All summer, fall, and spring graduates are invited to participate in the May commencement exercises.

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 their appropriate departments. Each placement is assessed by the faculty adviser for its potential to provide learning experiences 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 internship, 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 internship option must alternate a semester of full-time enrollment in course work before entering a second full-time position. Full-time interns 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 6 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

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:

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 non-traditional students.
3. Cooperate with business, industry, and the professions in providing specialized credit and noncredit courses.
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

Over 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, geography, 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. 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 program 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. Over 200 faculty teach more than 450 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
Wichita State University
Wichita, KS 67208

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, Kansas State, and Fort Hays State University 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 6 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 from the State of Kansas.

Comprehensive Fee Schedule

Fees given in this Catalog were proposed for 1985-86 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 McConnell AFB) 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</td>
<td>$33.00</td>
<td>$33.00</td>
</tr>
<tr>
<td>1 through 14 hours</td>
<td>$33.00</td>
<td>$33.00</td>
</tr>
<tr>
<td>15 hours and above</td>
<td>$93.15</td>
<td>$93.15</td>
</tr>
<tr>
<td>Graduate tuition fee</td>
<td>$495.00</td>
<td>$1,397.00</td>
</tr>
<tr>
<td>1 through 14 hours</td>
<td>$495.00</td>
<td>$1,397.00</td>
</tr>
<tr>
<td>15 hours and above</td>
<td>$1,397.00</td>
<td>$1,397.00</td>
</tr>
</tbody>
</table>

For credit courses, $8.20 for student fee, is assessed. Fees actual operating costs, noncredit workshops are based on actual operating costs.

Workshop Fees—On Campus
A workshop fee of $45.85 per credit hour, including $37.65 for tuition and $8.20 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. Military science—$5.00 per semester
2. Music (applied)—$7.50 per semester
3. Physical education (bowling)—$25.00 per semester
4. Physical education (bowling), PE 201B—$7.00 per course
5. Physical education (horseback riding)—$75.00 per semester
6. Physical education (motorcycling)—$35.00 per semester
7. Chemistry breakage—$20.00 per lab.
8. English composition placement fee—$8.00

Free Music Courses
During the academic school year, undergraduates enrolled in 6 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

Heskett Center Program Fees
- Student—$5.00 per semester
- Spouse of student—$40.00 per fiscal year
- Family of student—$50 per fiscal year
- Faculty or staff—$50 per fiscal year
- Faculty/staff and spouse—$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.

Special Fees, Deposits, and Waivers
Certain other fees are assessed as indicated below:

- Diploma replacement fee—$10.00
- Identification card fee—$2.50
- International student application processing fee—$75.00
- Orientation fee—$15.00
- Transcript and certification fee—$10.00
- Library fines and lost materials—cost per fine schedule as a percentage of replacement cost

- Special Fees, Deposits, and Waivers
- Faculty/staff and spouse—$5.00 per fiscal year
- Student—$5.00 per semester
- Alumni—$5.00
- College of Health Professions—Examination fee per credit hour—$8.00
- Medical assistant—$15.00
- Acceptance fees
- Emergency medical technician—$25.00
- Dental hygiene—$100.00
- Medical technology—$100.00
- Nursing—$100.00
- Physical therapy—$100.00
- Physician assistant—$100.00
- Respiratory therapy—$100.00

- 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. If 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 be assessed 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 except full withdrawals. 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 80 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 cancellation 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, misadvising, 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.

Late Enrollment
Students who enroll after the end of regular registration through the 20th day of classes are assessed a late enrollment fee of $10.00. After the 20th day of classes, the fee is $25.00.

At the beginning of each semester, the Registrar establishes the specific date for the assessment of the late enrollment fee.

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

Assessment and Collection
The University controller 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.

Student Housing Fees
Three rates are available for student housing at Wichita State University, depending on the number of meals the student chooses to eat in the residence hall. Prices are for air-conditioned suites in Brennan Hall or Fairmount Towers. Single rooms, if available, cost an additional $25 per semester.

Housing costs for the 1985-86 school year, including double room and specified number of meals: Any 10 meals Monday through Friday, $2,113; any 15 meals Monday through Friday, $2,266; any 19 meals Sunday through Saturday, $2,795.

A few non-air-conditioned rooms are available in Brennan Hall, and cost $75 less per semester.

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

Rates are for fiscal year 1986. 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 (Basic) Grants, National Direct Student Loans, Guaran-
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, financial aids, placement and career services, student health, student activities, counseling services, 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, which are 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 in the summer 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.

The International Program
The International Program, located in 303 Grace Wilkie Hall, serves the special needs of approximately 200 international students from over 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.

The International Program also sponsors the Host Family Program, 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 agencies, on-campus interviews with employer representatives, and matching of jobs and candidates through a Computerized Employment Matching System.

Placement services also include direct referral to part-time jobs, as well as summer employment opportunities.

Housing
The Wichita State housing policy for 1984-85 classifies housing units as follows:

1. University-approved housing which includes University-owned residence halls, and fraternity and sorority houses
2. University-approved housing which includes apartments, single rooms, and houses that are nondiscriminatory on the basis of race, creed, or color.

All single freshmen under 21 years of age enrolled for 9 or more credit hours who are not living with relatives or guardians are required to live in University-approved housing, with priority given to University-owned housing.

All other students can select their own accommodations; however, University-approved housing is highly recommended. Listings of registered housing facilities are available in the office of the Division of Student Affairs.

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
Wichita State University
Wichita, KS 67208

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 Thursday for children 2½ to 6 years old and 5 a.m. to 10:00 p.m. Monday through Thursday for children 2½ 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 and 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 1984-85 school year has included notetakers, readers, library assistants, wheelchair pushers, test proctors, escorts, cafeteria aides, 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 Brailler typewriters, slates and stylus, raised line drawing kits, the Speech Plus Calculator, Braille measuring instruments, mobility canes, print magnifiers, 4 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 both handicapped and non-handicapped individuals, promotes fellowship while exploring issues which affect the postsecondary education of individuals with physical disabilities.

Student Health and Hospitalization
The Student Health Services, located in 209 Ahlberg 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 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, surgery, and family practice are available.

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

International students are required to submit to the Student Health Services a physical examination form and chest x-ray report completed by a physician. The student body has chosen to participate in the Rhulen 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 Business and Economic Research
The Center for Business and Economic Research, a service of the College of Business Administration, engages in business-economic research for a wide variety of clients in both the 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, graduate and undergraduate students works together on policy-oriented research and publications, publishing Business & Economic Reports, a quarterly, 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 purpose of the center is to enhance understanding in the areas of entrepreneurship (new venture creation), small business management, and "American enterprise system." The center provides a comprehensive library and computer data bank for the small business subject area. Additionally, it conducts seminars and workshops, sponsors a visiting lecture series, and conducts primary and secondary research. Future objectives include the creation of films for public education.

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
Wichita State University, through the College of Business Administration, makes available to the business and professional community the Center for Management Development.

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 Productivity Enhancement
The WSU Center for Productivity Enhancement was established by the Kansas legislature in May, 1983, to assist in developing the appropriate atmosphere in Kansas for attracting new high technology industry. The Center is focused on CAD/CAM (computer-aided design and manufacturing), robotics, artificial intelligence, and composite materials. It promotes education, research, and transfer of technology to industry in these areas.
Center for Women's Studies
The Center for Women's Studies serves to promote research and other activities related to women and their concerns, to foster closer ties between academic and community efforts with respect to women's needs, to act as an information 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-campus employment. More information is available in the Special Academic Areas section of the Catalog.

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

Hugo Wall Center for Urban Studies
Wichita State University's role as a comprehensive urban institution was outlined by the Kansas Board of Regents in 1972. "As the Regents' urban institution, 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 Wichita and Sedgwick County governmental bodies and tax structures; and the origins of the city manager plan of government in Kansas; an assessment of industrial revenue bonds in Wichita; and a national study of women mayors.

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.

Marcus Center for Continuing Education
Many educational services are offered through the Marcus Center for Continuing Education; an adult education facility located 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 successfully complete courses of study. Operation Success is a federally funded program providing comprehensive, intensive, flexible, 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 about 250 students each year, and has been in operation at WSU since 1970.

Project Discovery, a federally funded talent search program, was established at Wichita State University in July of 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. Limited tuition help is available for high school students. 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 serves as the University liaison with local, state, and federal governmental units and organizations that support research, training, and other service programs. The office collects, maintains, and provides information regarding agency programs and interests in support of research and other activities; coordinates the preparation and submission of project proposals; and is responsible for the general administration and reporting of sponsored grants and contracts.

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 is responsible for development and coordination of 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, 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 Energy Studies Laboratory
The WSU Energy Studies Laboratory conducts energy research with particular emphasis on 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, especially in the area of computer-aided design. The laboratory is directed by the College of Engineering.

Special Facilities
Instructional facilities on the 320-acre Wichita State University campus are in use for educational purposes more hours per day than at any other Kansas college or university. Among notable campus buildings is the Corbin Education Center, which houses the College of Education. It is one of the last structures designed by the late Frank Lloyd Wright. An 18-hole golf course, tennis courts, and playfields are also a part of the campus.

During the past few years more than 300,000 square feet of space has been added to the campus in new buildings. Included are the McKnight Art Center with its Edwin A. Ulrich Museum of Art, Wallace Hall with laboratories for the College of Engineering, a new classroom-office building for Fairmount College of Liberal Arts and Sciences, and a new complex for the College of Health Professions. A $10 million structure for recreation and physical education was completed in 1983. The building is named for H. D. Hesket, a 1935 alumnus and benefactor of the University. It provides office and laboratory space; a 200 meter six-lane track; swimming and diving pools; two dance studios; gymnasiums for basketball, tennis, and volleyball; and eight racquetball courts.

During 1984 construction began on a recital hall to house a Mariussen organ (the first for the Americas), and an $11 million addition to Ablah Library.

Other special facilities meeting the needs of Wichita State are described on the following pages.

Cable Television
Wichita State University operates Channel 13 on Wichita's cable television system. WSU 13 broadcasts 85 hours per week of adult-oriented educational, cultural, and informational programming. Channel 13 produces programs featuring distinguished guest speakers, fine arts performances, and other campus events. WSU 13 is affiliated with The Learning Channel, which provides telecourses and professional development and community service programming. In addition to full-time staff, 15 students are involved in the operation of the channel and 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 Wichita State University. Through its facilities and services, the center serves students, faculty, staff, alumni, and guests of the University.

The CAC has five food service areas to provide a variety of atmospheres and menus; the University Bookstore, which stocks textbooks, supplies, and gifts; a recreation area for leisure use that includes bowling and billiards; a movie theater with a weekly film program; lounges; student offices; and meeting rooms. Through the CAC Activities Office, students have the opportunity to develop a variety of programs for the campus. The CAC reservations office schedules the use of all facilities in the center as well as nearly all of the University facilities for out-of-classroom use.

The Campus Activities Center is supported through student fees and revenues produced 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 1.5 My byte main memory with a Winchester Disk 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.

Digital Computing Center
The Digital Computing Center serves students, faculty, and staff of the University community 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, data preparation and data entry, interactive time-sharing, batch and remote batch computer 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 and more than 12 billion characters of on-line disk storage. Magnetic tape drives, line printers, card readers, a card punch, and an off-line digital plotter are available for general use. A network of more than 275 terminals provides interactive computing for campus classrooms, laboratories, and offices. These terminals may be used with the academic time-sharing system (CMS), interactive computer graphics, computer-assisted instruction, and the administrative terminal system (CICS). Interactive terminal facilities for students and faculty are located in Ablah 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 remote batch card reader and line printer are located. Over 250 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 Digital Computing Center terminal facility is located in Nuff 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.

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 all students for group or individual worship and meditation.

Helpern International Center
The Milton Helpern International Center for the Forensic Sciences serves as a vital resource of the Department of Administration of Justice and as an important depository 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 physical education 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 wells, a 200-meter indoor track which surrounds five courts and eight handball-racquetball courts. The outdoor area contains a six court tennis complex and four large 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 the largest residential facility in the world specializing in habilitation and rehabilitation of adults and 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 disabled 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.

KMNU-FM Radio Station
KMNU-FM radio broadcasts at 89.1 megahertz FM. The 10,000-watt stereo 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. KMNU-FM programming includes coverage of major speeches, concerts, and other special events held at Wichita State.

Library/Media Resources Center
Through a wide range of materials, services, and facilities, the Library/Media Resources Center supports WSU courses and research. Its growing collection of over 2 million items includes not only books and periodicals, but microforms, corporate records, college catalogs, videotapes, films, slides, phonograph records, filmstrips and audio tapes. The Library also serves as a depository for selected official publications of the United States. Media and telecommunications services support instruction and campus activities.

The Library has open stacks and reference librarians are ready to help students and faculty locate information and use the card 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 500,000 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 on regional and local history. The Media Resources Center houses films, video tapes, and the University's cable television station. Its facilities include a television studio, graphics and photographic production areas, satellite television reception terminals, audio studios, stage scenery shops, and classrooms with multimedia equipment. Qualified students have access to MRC's audio and video-editing facilities and may check out multimedia equipment for class-related activities. Besides offering courses for university credit, WSU Cable 13 and University television services provide job experiences for students who assist in television operation.

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.

In addition to formal course work, a math lab and other study skills workshops are made available to students enrolled at Wichita State.

Rehabilitation Engineering Center
The Kansas Board of Regents formally established the Rehabilitation Engineering Center in the WSU College of Engineering during 1976. 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
Two 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
Satellite Tracking Station

Tracking station facilities are available at Wichita State for faculty and students to use in electrical propagation studies. The station consists of an antenna system of crossed Yagi arrays, together with receiving and recording equipment for decoding video and infra-red information.

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 LASTIC measure of students' perceptions of teaching and the English Placement Examinations are 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 for use to students, faculty, and social science classes.

Sports and Recreation

Sports and recreation facilities available to 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 is under construction; ski equipment is also available. The Shocker Baseball Field has its own 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 new multipurpose complex, the Heskett Center, has been designed to provide activities for all students, faculty, and staff. In addition to intramurals and open recreation time, offerings include sport clubs; special events; children’s excursions for children of WSU students, faculty and staff; a family pro-

Ulrich Museum of Art and University Art Collection

The Edwin A. Ulrich Museum of Art, which opened to the public in December, 1974, is now recognized nationally for the outstanding quality of its programs. 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, and the work of other famous artists have been shown in the museum. Although the emphasis has been on contemporary art, there have also been exhibitions as diverse as prehistoric American Indian pottery; treasures from Spanish galleons sunk in 1724; art from the Civil War ironclad, USS Monitor; holography; electronic art; and the art of New Guinea. In addition, there have been numerous photographic, print, and ceramic exhibitions, as well as visits by 50 well-known artists.

The 8,000-object Wichita State University Endowment Association Art Collection is especially strong in 20th century American art. Its most visible works are the 37 major outdoor sculptures that are scattered throughout the University campus. These sculptures were created by Barbara Hepworth, George Rickey, Lynn Chadwick, Louise Nevelson, Auguste Rodin, Joan Miro, Henry Moore, Theodore Roszak, Ernest Trova, and many others. The largest and perhaps the most significant outdoor work is a 26' x 32' marble and glass mosaic mural entitled Personnages Oiseaux. It was created especially for the facade of the museum by Joan Miro and dedicated in October, 1978. The mosaic, the largest in the world by Miro, is constructed of more than two million pieces of colored Venetian glass and was interpreted from Miro’s maquette by Jacques Loire of Chartres, France.

Walter H. Beech and Supersonic Wind Tunnels

A variety of 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-foot 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 supersonic 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 tunnel are also available for flow visualization studies.

Student Activities and Organizations

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

Student Government

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 SGA is divided into three branches of student government: The Cabinet, Senate, and Courts carry out the executive, legislative, and judicial functions.

In addition to sponsoring such student activities as Homecoming, Hippodrome, and Parents Weekend, the Senate, which is completely student-elected, charts and registers all other student organizations. It appoints students to University committees and advises the University administration on student views about policy.

Student Rates

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

Fraternities and Sororities

Seven national sororities are active at the University: Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Gamma Phi Beta,
and Sigma Gamma Rho. Twelve 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 Phi Epsilon, and Omega Psi Phi.

Organizations

Honorary
Alpha Lambda Delta
ASME
Beta Gamma Sigma
Delta Sigma Rho—Tau Kappa Alpha
Epsilon Gamma Chapter of Sigma Theta Tau
Eta Kappa Nu
Honors Society
Kappa Delta Pi
Kappa Kappa Psi
Lambda Alpha
Mortar Board
Mu Phi Epsilon
Omicron Delta Epsilon
Omicron Delta Kappa
Phi Alpha Theta
Phi Delta Kappa
Phi Eta Sigma
Phi Kappa Phi
Phi Mu Alpha Sinfonia
Pi Delta Phi
Pi Epsilon Delta
Pi Mu Epsilon
Pi Omega Pi
Pi Sigma Alpha
Pi Tau Sigma
Psi Chi
Senior Honor Men
Senior Honor Women
Sigma Delta Pi
Sigma Gamma Epsilon
Sigma Gamma Tau
Sigma Pi Sigma
Spurs
Tau Beta Pi
Tau Beta Sigma
Zeta Phi Beta

Professional and Departmental
Administration of Justice Association
Administrative Management Society
Advertising Club
Agribusiness Association, WSU Chapter of the National
AESEC
Alpha Epsilon Rho
Alpha Eta Rho
Alpha Kappa Psi
Alpha Pi Mu
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
Beta Alpha Psi—Epsilon Tau chapter
Biology Club
Charla Especial
Chemistry Club
Childhood Education, Student Branch of the Association for Communicative Disorders and Sciences, Graduate Student Colloquium in Debate Society
Dental Hygiene Association, Junior American
English Graduate Student Association
Geology Club
German Club
Health, Physical Education, Recreation Majors Club
Industrial Education Club
Institute of Electronics and Electrical Engineers
Jazz Educators, National Association of KANS (Kansas Association for Nursing Students)
Le Cercle Français
Legal Assistants’ Society
Linguistics Society
Math Club
Medical Technology Students Society
Music Educators National Congress National Student Speech and Hearing Association
Pershing Rifles
Physical Education Majors Club
Physical Therapy, Student Association
Pi Sigma Epsilon—Gamma Theta chapter
Pelton Team
Political Science Club
Political Science Graduate Student Association
Potters Guild
Psychology Graduate Student Organization
Rho Epsilon
Rifle Team
Senior Classical League
Sigma Alpha Iota
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 Physics Society
Student Social Workers Organization
Urban Affairs Graduate Student Association
Women in Communications, Inc.
Women’s Studies Club

Special Interest

Amateur Radio Club
American Baptist Campus Ministries
Associated Malaysian Students of Wichita
Association for Women Students
Bahá’í Club
Black Scholarship Association
Black Student Union
Campus Advance (Churches of Christ)
Campus Girl Scouts (Trenton)
Central America Solidarity Committee
Chess Club
Chinese Association of WSU
Christian Science Organization
Circle K (Kiwanis)
Citizens for Information and Disarmament
College Republicans
Committee in Solidarity with the People of El Salvador
Crew Club
Cultural Organization of the Indian Continent
Democratic Socialist Club of America
Ecumenical Christian Ministries, Inc.
Fellowship of Christian Athletes
Flying Club
Free University
Handicapped Students, The Association for International Association of WSU
Inter-Varsity Christian Fellowship
Karate Club
Korean Student Association
Lebanese League
Lebanese Student Association
Little Sisters of the Poor
Mecha—Movimento Estudantil Chicano de Aztlan
Mid-America Dance Theatre
Mikrokosmos
Model United Nations
Modern and Contemporary Literature Association
Moslem Student Society
Muslim Student Association
Native American Heritage Association
Nurses Christian Fellowship
Paladins
Physical Therapy Student Christian Fellowship
Progressive Student Organizers Coalition
Professional and Departmental
St. Paul’s Newman Center
Soccer Club
Southern Africa Solidarity Committee
Students Against Capitalism
Students for Alternatives and Change
Students for Home Birth
Student Alumni Association
Students for Origins Research
Tai Chi Club
Thai Students Association
Ultimate Frisbee Association
Unitarian Student Organization
University Lutheran Center
Veterans on Campus
Vietnamese Student Organization
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 non-credit 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 2.00 grade point average or who have not declared academic
majors; (3) nondegree-bound adult students who were formerly designated Continuing Education 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 principal.

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; professional development courses in reading, writing, listening, and study skills; adult seminars and occupational seminars for personal development and vocational exploration.

**Admission to University College**

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

**Nondegree-bound Students, Regular:** Students who are not currently working toward specific undergraduate degrees at Wichita State are admitted as regular nondegree-bound students. To be admitted, they must submit high school transcripts or GED scores—and if they have attended college, college transcripts—to the Wichita State Admissions 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.

**Orientation**

Orientation and educational planning programs help new students become a part of the learning community; teach the requirements, expectations, and procedures of that community; and 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 not preludes to education, but rather are a part of college education itself, all first-semester 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 payment for the Wichita State University Catalog and a special guidebook. Orientation programs are scheduled in advance of both the fall and spring semesters. Information about Orientation and registration is sent by University College to all degree-bound students who have been admitted to University College.

**Nondegree-bound Students:** No special program of orientation is required. PD 100A, Adult Seminar, a class designed for adults who have been out of school for one year or more, is available as an enrollment option. Parts of the course serve as an ongoing orientation and the class is offered fall and spring semesters. Contact University College for more information.

**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 enrolled primarily in day courses 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. Evening students are encouraged to seek advice and counsel from University College staff members and should contact the University College office to find out which evenings the office is open.

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 adviser 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 plans.

**Career/Life Planning**

**Degree-bound Students:** The Career/Life Planning program is available to help degree-bound students begin to develop systematic career plans after realistically assessing their interests, values, and capabilities.

University College academic counsel-
ors 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 program 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 the program.

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.

The general education requirements include a wide variety of courses organized into several divisions, as shown in the Academic Information—Requirements for Graduation section of the Catalog. Students must develop personalized general education programs by choosing courses from each of the divisions. Students often select courses that meet both general education requirements and major requirements.

Nondegree-bound students should be aware of the general education requirements in the event they decide to pursue a degree at some later date.

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, writing, 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
All students are expected to familiarize themselves with course prerequisites, enrollment dates and procedures, and all other policies stated in the current Wichita State University Catalog and in the Wichita State University 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 card or they must complete the course. If students fail to withdraw from 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; meet the minimum GPA required by the college, and have 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 2.00 (C) average is required for graduation, students are placed on academic probation whenever their cumulative grade point average falls below 2.00. (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 2.00 grade point average on work at Wichita State, and have a 2.00 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 attempted any credit hours after being placed on probation (unless other standards were specified as a condition of admission or readmission), who have accumulated a total of 12 attempted hours, and who do not have a 2.00 grade point average for the most recent semester or Summer Session will be academically dismissed. Once degree-bound students accumulate 48 hours, they will be transferred or dismissed from University College. The grading system is explained in the Academic Information section of the Catalog.

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 nondegree 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 advisor for a personal interview and to prepare a written petition which is considered by the University College'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 college 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 Wichita State University. Covers career information, interest testing and interpretation, educational planning, and other activities. J 10 100A 2 0601

102. Occupation Seminar. (1). A study of occupations and curricula, development of a personal profile from test results and past experiences, selection of a major curriculum and development of a master plan to be followed. J 11 102 1 4999

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

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 sets 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 actively participate 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.

The MS in accounting is being phased out and will be replaced by the MPA.
further admissions to the MS degree program in accounting are being accepted. Students currently pursuing such a degree have the option of transferring to the MPA program or completing the MS degree in accounting by December 31, 1986.

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 their 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 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 the College of Liberal Arts and Sciences for students interested in specializing in a foreign area of the world, international business, international economics, or international 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 core 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 2.25, and (3) completed 6 hours of English composition, 3 hours of speech, and 3 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 2.25, (3) completed 6 hours of elementary accounting, 6 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 Business, 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

- Composition (6 hours)
- Speech (3 hours)
- Computer Science

- Any programming language (3-4 hours)

Humanities (8 hours)

Social Sciences

- 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 readmission on a final probationary status. Application should be made in the student records office, 106 Clinton Hall.

Extension or Correspondence Work

Not more than 6 hours of the last 30 hours or 10 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 pertaining to courses taken for A/Pass/Fail credit apply 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's 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 faculty and staff of the college feel that students should have impartial and knowledgeable advising. The college's advising system offers students:
1. Guidance in the consideration of career objectives
2. Suggestions of specific courses of study that will satisfy career objectives and degree requirements of the college and university
3. Additional counsel and advice as required.

Types of Advising Assistance Available
For advising to be successful, students must know the major types of assistance available. These types are summarized in the following paragraphs.

Career Planning. The first major decision students must make for admission to Advanced Standing in the College of Business Administration is the selection of an emphasis area within the college. Selection of a major area of study will determine the school or department within the college with which a student will most closely associated while at Wichita State. Once the major area and department or school is chosen, students must select the specific course of study that will best satisfy their career objectives. In addition to meeting the University’s and college's requirements for graduation, students need to select appropriate courses for their chosen major. Courses best suited for the major must be selected in consultation with a faculty adviser.

Transcript Evaluation. Two aspects of transcript evaluation affect students: (1) the evaluation of courses transferred to Wichita State for a degree; and (2) the continuing evaluation of completion of graduation requirements.

Evaluation of course work being transferred to Wichita State is done by the college's student records office. 106 Clinton Hall, working in conjunction with the dean's office, the various departments within the college, and the University's admissions office. If students have applied for admission to Wichita State well in advance of their first semester on campus, this evaluation should be complete and on file in the student records office.

The student records office also keeps a current record of each student's progress at Wichita State. Students should periodically check their records to be certain that they are informed of their progress toward completion of degree requirements.

Schedule Building. Schedule building is the determination of what 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 to determine the courses they should consider for a given semester. Selection of specific sections and times for courses to be taken is the student's responsibility. The tentative schedule must be approved by a faculty adviser.

Counseling. For types of assistance not covered here, students are urged to seek advice from individual instructors, department chairpersons, faculty advisers, the dean's office, or the University Counseling Center.

Graduation Requirements

Bachelor of Business Administration
Candidates for the Bachelor of Business Administration must satisfy the following College of Business Administration requirements:
1. Complete at least 56 hours of course work offered outside the college. (Econ. 201 and 202 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, given later in this section.
5. Achieve a grade point average of 2.25 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. 202, 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
- Mgmt. 360, Concepts of Administration
- Mkt. 300, Marketing
- Upper-division economics course
- Major courses

**Senior Year**
- Mgmt. 430, Business and Society
- Mgmt. 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 3.25 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:

### Major/Minor Areas

Candidates for the BBA 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>
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<tbody>
<tr>
<td>Acctg. 300, Accounting Systems and the Microcomputer</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 310, 410, and 510, Financial Accounting I, II, and III</td>
<td>9</td>
</tr>
<tr>
<td>Acctg. 320, Managerial Accounting</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. electives</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>

Accounting Minor—Undergraduate. A minor in accounting is available to any student whose major field or area of emphasis is outside of accounting. A minor consists of 15 hours: Acctg. 210 plus 12 hours of accounting course work beyond Acctg. 210.

#### Business Administration Major

#### Department of Marketing and Small Business

<table>
<thead>
<tr>
<th>Required courses:</th>
<th>Hrs.</th>
</tr>
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<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:**

- Av. Mgt. 222, Ground School 2
- Av. Mgt. 223, Private Flight 3

#### Aviation Management Major

<table>
<thead>
<tr>
<th>Required courses:</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 310, Financial Accounting II (3); Acctg. 320, Managerial Accounting II (3); Acctg. 410, Financial Accounting III (3); Acctg. 430, Taxation I (3)</td>
<td>15</td>
</tr>
<tr>
<td>DS 575, Decision Making Techniques (3); DS 651, Design of Operations Systems (3); DS 652, Operations Planning Systems (3)</td>
<td></td>
</tr>
<tr>
<td>Econ. 304, Managerial Economics (3); Econ. 340, Money and Banking (3); Econ. 661, Collective Bargaining and Wage De-</td>
<td></td>
</tr>
</tbody>
</table>
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. 110 and 120; Econ. 201; Bus. Ed. 138 and 237; and 9 hours from business administration courses or shorthand, of which one course must be upper division.

**Acctg. 110, Financial Accounting I**
**Acctg. 210, 220**
**Bus. Ed. 133, Beginning Typewriting**
**Bus. Ed. 233, Advanced Typewriting**
**Bus. Ed. 234, Technical Typewriting**
**Bus. Ed. 231, Elementary Shorthand**
**Bus. Ed. 234, Advanced Shorthand**
**Bus. Ed. 240, Technical Shorthand**
**Bus. Ed. 136, Records Management**
**Bus. Ed. 203, Office Procedures and Organization**
**Bus. Ed. 204, Office Machines**
**Bus. Ed. 260, Automated Word Processing**

**Electives: Selected from any of the above or other upper-division courses in the College of Business Administration. These may be "concentrated" or spread over a number of different disciplines.**

**Business Administration Minor.** A minor in business administration is available to any student who is not pursuing a degree in the College of Business Administration. The minor consists of the following:

**Courses**
**Hrs.**
Acctg. 210, 220 6
Bus. Ed. 201Q, 202Q 6
Three of the following four courses (DS 350, Fin. 340, Mgmt. 360, Mkt. 300) 9
Electives from upper-division CBA courses 6

**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 DS 350 must have Math. 114 and Econ. 231 or the equivalent as prerequisites. Students who have not met these prerequisites as a 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

**Finance Major**

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

**Required courses:**
Fin. 640, Financial Management 3
Fin. 641, Investments 3
Fin. 643, Capital Markets and Financial Institutions 3

**Electives, from the following:**

**Hrs.**
6

**International Business Major**

**Department of Management**

**Required courses:**
Fin. 644, Contemporary Issues in Banking 3
Mgmt. 561, Introduction to International Economics and Business 3
Mgmt. 683, Comparative and International Management 3
Mkt. 601, International Marketing 3

**Directed electives:**
Two of the following courses selected in consultation with the student's major adviser.

**Hrs.**
6

**Econ. 580, Economic Geography**
**Mgmt. 492, Internship in Management**
**Mkt. 403, Marketing Research**
**Free business elective**

**Hrs.**
3

**Within the student's total degree program, at least 9 hours are required in the areas of language, culture, history, and politics of countries other than the United States.**
Production Management Major
Department of Finance, Real Estate, and Decision Sciences

Required courses:
- DS 575, Decision Making Techniques 3
- DS 651, Design of Operations Systems 3
- DS 652, Operations Planning Systems 3

Directed electives: Two courses selected from a list of department-approved electives, in consultation with a Decision Sciences faculty adviser 6

Electives: selected with consent of major adviser 6

Real Estate and Land Use Economics Major
Department of Finance, Real Estate, and Decision Sciences

Required course:
- RE 310, Principles of Real Estate 3

Electives, from the following:
- RE 438, Real Estate Law 6
- RE 618, Real Estate Investment Analysis 3
- RE 619, Residential, Management, and Development 3

Electives, selected with consent of major adviser 12

Master of Professional Accountancy

The Master of Professional Accountancy is a five-year degree program designed to prepare the student for a successful career as a professional accountant in business, public accounting, government, or education. The candidate must complete a 96-hour preprofessional curriculum, meet specified admission requirements to the School of Accountancy, and complete the 55-hour professional program.

Preprofessional Curriculum

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

1. The candidate must complete the general education requirements for Wichita State University, plus additional nonbusiness course work, for a total of 56 semester hours. The following courses are specifically required by the School of Accountancy and may be counted within this 56 hours:
   - Acctg. 300, Accounting Systems and the Microcomputer 3
   - Econ. 201Q and 202Q, Principles of Economics I and II 6
   - Eng. 210, Composition: Business, Professional, and Technical Writing 3
   - Eng. 685Q, Advanced Composition 3
   - Math. 111, College Algebra 3
   - Math. 144, Business Calculus 3
   - Phil. 144Q, Moral Issues 3

2. The candidate must complete the following College of Business Administration core requirements:
   - Acctg. 210, Financial Accounting I 3
   - Acctg. 220, Managerial Accounting I 3
   - DS 350, Introduction to Production Management 3
   - Econ. 231, Introductory Business Statistics 3
   - Econ. 340, Money and Banking 3
   - Fin. 340, Finance 3
   - Mgmt. 360, Concepts of Administration 3
   - Mkt. 300, Marketing 3

3. The candidate must complete the following courses required by the School of Accountancy:
   - Acctg. 310 and 410, Financial Accounting II and III 6
   - Acctg. 320, Managerial Accounting II 3
   - Acctg. 430, Taxation I 3
   - B. Law 435, Law of Commercial Transactions 3

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 coursework 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 1.000 points based on the formula of 200 times the overall grade point average (4.0 system) of the last 60 hours plus the Graduate Management Admission Test (GMAT) score

3. A minimum GMAT score of 400

4. A grade point average not less than
Conditional Admission

Students who have completed 96 semester hours and lack no more than 9 hours of specific preprofessional course requirements may be admitted on a conditional basis. These 9 hours must be completed in the first semester following conditional admission or as soon thereafter as course scheduling permits.

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 School of Accountancy 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 3.0 or better based on all courses taken while in professional status.

Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acct. 710 and 715, Financial Accounting IV and V</td>
<td>6</td>
</tr>
<tr>
<td>Acct. 720, Managerial Accounting III</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 730, Taxation II</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 760 and 860, Accounting Information Systems I and II</td>
<td>6</td>
</tr>
<tr>
<td>Acct. 740, Auditing I</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 890, Professional Seminar*</td>
<td>1</td>
</tr>
<tr>
<td>B. Law 436, Law of Associations</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 830, Business and Society</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 862, Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 885, Administrative Policy (to be taken during the last semester of the program)</td>
<td>3</td>
</tr>
</tbody>
</table>

Fin. 841, Financial Management 3
DS. 871, Multivariate Statistical Methods, or Econ. 631, Intermediate Business Statistics 3
Accounting electives (courses numbered 800 and above) 9
Other College of Business Administration courses, excluding accounting (courses numbered 500 and above) 6

Associate of Science in Legal Assistant

A legal assistant program is offered through the Department of Finance, Real Estate, and Decision Sciences to prepare students for law-related employment in law firms, corporations, and government. The 64-hour program is geared to the role concept of the legal assistant who is not a lawyer but who is trained to handle extensive professional responsibilities under the supervision of a lawyer. Some of the tasks a graduate of the program might be expected to perform are legal research, preparing briefs, interviewing clients and witnesses, preparing corporate instruments, drafting wills and probate instruments, drafting pleadings and interrogatories, 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 2.25, and (3) completion of 6 hours of English composition, 3 hours of speech, and 3 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 130Q 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 preprofessional 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. General Education Requirements</td>
<td></td>
</tr>
<tr>
<td>Basic Skills (12 hours)</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 and 102, College English</td>
<td>6</td>
</tr>
<tr>
<td>I &amp; II</td>
<td></td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Division A—Humanities and Fine Arts &quot;G&quot; or &quot;Q&quot; course electives</td>
<td>3-12</td>
</tr>
<tr>
<td>Division B—Social and Behavioral Sciences &quot;G&quot; or &quot;Q&quot; course electives</td>
<td>3-12</td>
</tr>
<tr>
<td>Division C—Mathematics and Natural Sciences &quot;G&quot; or &quot;Q&quot; course electives</td>
<td>3-12</td>
</tr>
<tr>
<td>II. Professional Curriculum (34 hours)</td>
<td></td>
</tr>
<tr>
<td>A. Required Courses (16-19 hours)</td>
<td></td>
</tr>
<tr>
<td>B. Law 130Q, Introduction to Law</td>
<td>3</td>
</tr>
<tr>
<td>Legal 230, Introduction to Paralegalism</td>
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</tr>
<tr>
<td>&quot;Legal 231A, Legal Research and Writing&quot;</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Legal 233, Litigation I&quot;</td>
<td>3</td>
</tr>
<tr>
<td>Legal 238, Legal Assistant Internship</td>
<td>(3)</td>
</tr>
</tbody>
</table>
students attain the status of Certified Professional Secretary. The degree requirements are summarized as follows:

**Course** | **Hrs.**
---|---
Composition and Speech | 3
Eng. 101, College English | 3
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication | 3
Social Sciences | 3
Humanities | 6
Science and/or Mathematics | 6
Electives | 7
Administration | 3
Mgmt. 360, Concepts of Administration | 3
Bus. Education | 3
Bus. Ed. 133, 138, 237, Typewriting | 6-9
Bus. Ed. 136, Records Management | 3
Bus. Ed. 203, Office Procedures and Organization | 3
Bus. Ed. 204, Office Machines | 3
Bus. Ed. 231, 234, and 240, shorthand | 6-9
Bus. Ed. 260, Automated Word Processing | 3
Total hours | 64-70

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 only to seniors. Graduate students may not receive graduate credit for these courses.

Business courses numbered 700 to 999 are structured primarily for graduate students, but undergraduate, upper-division students may be admitted if they meet course prerequisites.

Courses numbered 800 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**


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. 108 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. Prerequisite: Acctg. 210. 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. Acctg. 300 or concurrent enrollment. B 11 300 0 0502

310. Financial Accounting II | (3).


320. Managerial Accounting II | (3).

The study of accounting for manufacturing operations. The processing, analysis and interpretation of cost data for income determination, inventory valuation and internal management use are stressed. Prerequisite: Acctg. 220 and Math. 144. B 11 320 0 0502


Repeatable for credit with School of Accountancy consent. B 11 390 3 0502

410. Financial Accounting III | (3).

Continuation of Acctg. 310. Liabilities, equity, and the statement of changes in financial position are emphasized. Prerequisites: Acctg. 300 and 310. B 11 410 0 0402

430. Taxation I | (3).

An examination of the federal income tax law relating to individual income taxation. Prerequisite: Acctg. 300 or concurrent enrollment. B 11 430 0 0502

451. Independent Study in Accounting | (1-3).

Individual study for CnRCrM only. Prerequisites: 2.75 grade point average in accounting, junior standing and School of Accountancy consent. B 11 451 3 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. 410. Acctg. 710 requires admission to the MPA program or School of Accountancy consent. Prerequisite: Acctg. 410. B 1 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. 300. B 11 560 0 0502; B 1 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. 510/710. 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 planning, decision making, planning and control, quantitative analysis of financial data, and capital budgeting. The application of selected quantitative methods of accounting is included. Prerequisites: Acctg. 320 and 300; Econ 231. Acctg. 720 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 income tax laws, that are deductible from corporat e, partnerships, estates, trusts and gifts. Prerequisites: Acctg. 430. Acctg. 730 requires admission to the MPA program or School of Accountancy consent. 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, and the preparation and control of audit work. Prerequisites: Acctg. 320 and 300; Econ 231. Auditing I requires admission to the MPA program or School of Accountancy consent. B 11 640 0 0502; B 11 740 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 for ownership equity. 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 departmental 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, income determination, investment analysis, and operations and capital budgeting are covered. May not be taken for credit in the School of Accountancy. Prerequisite: Acctg. 800 or equivalent. B 11 801 0 0502

802. Federal Taxes and Management Decisions. (3). An examination of how substantially different tax liabilities sometimes attach to nearly identical economic events. Emphasizes practical results, giving little or no consideration to political considerations inherent in those results. Designed for the management student who has little accounting background. This course is not open to accounting majors or those who have had previous income tax courses. May not be taken for credit in the School of Accountancy. Prerequisite: Acctg. 800 or equivalent. B 11 803 0 0502

810. Accounting Evolution and Social Environment. (3). Study and discussion of accounting concepts from an evolutionary point of view. Emphasis is given to the interaction between accounting and socioeconomic factors. Prerequisite: undergraduate emphasis in accounting, admission to the MPA program, or instructor's consent. B 11 810 0 0502

812. Theoretical Foundations of Accounting. (3). A systematic treatment of the basic concepts and methodology of accounting theory and their application to problems of income determination and asset/liability valuation. Prerequisite: undergraduate emphasis in accounting, admission to the MPA program. B 11 812 0 0502

820. Managerial Accounting IV. (3). An advanced study of theoretical concepts underlying cost accounting, with emphasis on the nature of business costs, establishing a conceptual framework for cost and managerial accounting, and selected problem areas in cost determination and analysis. Prerequisite: undergraduate emphasis in accounting, admission to the MPA program. B 11 820 0 0502

825. Analytical Methods in Accounting. (3). An examination of applied mathematical models in accounting. Emphasis is placed on the mathematical representation of cost and management accounting models. Prerequisites: Math. 340 and either an undergraduate emphasis in accounting, admission to the MPA program, or instructor's consent. B 11 825 0 0502

830. Taxation III. (3). A research course emphasizing the utilization of the various income tax research materials in the preparation of written reports on tax problems. A review and discussion of current problems in taxation and tax practices. Prerequisite: Acctg. 630/730. B 11 830 0 0502


860. Accounting Information Systems II. (3). A study of the concepts of information systems, their design and operation, and the relationship of accounting to the economic information requirements, information flows, decision criteria and control mechanisms in the business organization. Prerequisite: Acctg. 560/760. B 1 11 860 0 0502

880. Contemporary Issues in Accounting. (3). An examination of current issues in accounting, with emphasis on the releases of the American Institute of Certified Public Accountants and of other professional organizations and governmental agencies. Prerequisite: Acctg. 510/710. B 11 880 0 0502

890. 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 3 0502

895. Research Seminar in Accounting. (3). An advanced seminar offering an opportunity for oral discussion and written reports on matters of current interest in diverse areas of accounting. A major course objective is to develop the student's ability for independent research and the presentation and defense of findings. Prerequisite: undergraduate emphasis in accounting, admission to the MPA program, or instructor's consent. B 11 895 9 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 management majors. Graded on Cr/NCR 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 majors. Graded on Cr/NCR basis only. Prerequisite: Av. Mgt. 222. B 17 223 0 0506

Upper-Division Courses

330. Introduction to Aviation. (3). A study of all of the branches of aviation: aircraft manufacturing, fixed base operations, airport management, government activities, airline operations and military aviation. Covers employment opportunities in the field. 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, its 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 air facilities, plus an understanding of the techniques of airport management, including airport design, financing of construction, services provided, income rate setting, accounting procedures, personnel and public relations, marketing, and maintenance. Also includes current problems in certification security, safety, land acquisition, zoning and state and federal participation in airport development. Prereq-
Business Education

Department of Business Education

Lower-Division Courses

133. Beginning Typewriting. (3). A survey of the correct finger and mechanical operation of a typewriter and an introduction to business forms. B 14 153 0 0154

136. Records Management. (3). A study of modern management methods and practices used in the collection, utilization, maintenance, retention, preservation and disposition of business records. B 14 136 0 0154

138. 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 14 138 0 0154

190. Selected Topics. (1-3). Repeatable with departmental consent. B 14 190 0 0154

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 0154

204. Office Machines. (3). A course covering the operation of office machines and electronic calculators, operation of dictating machines, voice transcription, as well as the study of copying machine processes. Prerequisite: Bus. Ed. 133. B 14 204 0 0154

231. Elementary Shorthand. (3). A study of the theory of Gregg Series 90 Shorthand. Prerequisite: Bus. Ed. 133, or 1 unit of high school typewriting or departmental consent. B 14 231 5 0154

234. Advanced Shorthand. (3). A review of Gregg Series 90. Emphasis is placed on advanced dictation and administrative transcription. Prerequisite: Bus. Ed. 231 with a grade of C or better, or departmental consent. B 14 234 5 0154

237. Technical Typewriting. (3). A study of longhand forms used in business, difficult tabulating projects, legal 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 2 units of secretarial training in high school or departmental consent. B 14 237 5 0154

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 0 0154

260. Automated Word Processing. (3). This course provides a basic background of the concepts, procedures, and careers in the automated office. Each student will receive individualized instruction on the Magna II and the Magna III with a CRT covering basic functions of input, revision, playback procedures, thought reorganization, pagination, decimal tab, boiler plate documents, and merging. The course is designed to become efficient and productive in word processing. Evaluation is based on quality and quantity of work done. Special emphasis is placed on typewriter copies. Prerequisites: Bus. Ed. 138 or departmental consent. B 14 260 0 0154

Upper-Division Courses

300. Office Practice. (3). An exploration into advanced office duties, techniques and procedures. Also included are methods of teaching office machines, the functional use of selected machines, and a survey of available equipment. Special attention is given to typing and machine operators in the automated office. B 14 300 5 0154

460. Directed Studies. (1-5). Prerequisites: departmental consent and junior standing. B 14 460 0 0154

Business Law

Department of Finance, Real Estate, and Decision Sciences

Lower-Division Courses

130Q. Introduction to Law. (3). A basic introduction to law. Consider the nature and functions of law, the structure of the American legal system, and legal processes and procedures. Also surveys the major areas of substantive law. Open to students with a general interest in law. Students interested in the Legal Assistant Program should enroll in Legal 230. B 15 130Q 0 0154

190. Selected Topics. (1-3). Repeatable with departmental consent. B 15 190 3 0154

Upper-Division Courses

331. Legal Environment of Business. (3). An introduction to the legal environment within which the business system operates. The course considers the functions of law in relation to the business system, the institutions and processes involved in the interaction between business, society, and government and the major frameworks of private and public law. 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 0154


435. Law of Commercial Transactions. (3). Law of contracts, bailments, sales, commercial paper and secured transactions. This course centers on the Uniform Commercial Code. Prerequisite: junior standing. B 15 435 0 0154

436. Law of Business Associations. (3). Law of agency, partnerships and corporations. This course considers the organizational and relational aspects of both small, closely held businesses and large corporate enterprises. Prerequisite: junior standing. B 15 436 0 0154

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 covered include trade regulation, occupational health and safety, product safety and environmental law. Prerequisite: junior standing. B 15 437 0 0154

491. Independent Study. (1-5). Offered for Cr/Nr or credit/departmental consent. B 15 491 2 0154

492. Internship in Business Law. (1-3). Offered for Cr/Nr only. Prerequisite: junior standing and 2.75 grade point average in business law and departmental consent. B 15 492 2 0154

Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. B 15 690 0 0506

750. Workshop in Business Administration. (1-4). Prerequisite: junior standing. B 15 750 0 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 functions of law in relation to the business system, the institutions and processes involved in the interaction between business, society, and government and the major frameworks of private and public law. Emphasis is placed on the realm of public law from a managerial perspective, including the ethical and social re-
responsibility aspects of business behavior. B 15 831 0 0501

890. Seminar in Special Topics. (1-3). Repeatability with departmental consent. B 15 890 9 0501

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 operation function of an organization. Topics include facility location and layout, scheduling, quality control, inventory planning and control, work design, and measurement. 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 2.75 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 and 2.75 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, including 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, queuing 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 9 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 models and warehousing 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-quantity-production forecasting methods for business and industry. Application of forecasting methods and some operations research models to real-world productive systems. Prerequisite: DS 350 or 850. 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, 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 are examined from both theoretical 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. Includes an introduction to a programming language. 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. Not open to students with credit in DS 895. 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 the MS 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

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. It should be noted that the courses BA 211 and BA 212 may appear in the course listings as prerequisites to certain courses. These courses have been dropped, but students who have already successfully completed them may use them as prerequisites to certain courses, as indicated in the Catalog.

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

International 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, 631, 831, 836

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

Public finance—Econ. 653, 655, 853

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, 885, 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 forces reshaping the underlying structure of the American economy and the determination of the policy implications which accompany this restructuring. 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 the programs for consumer protection are included. Not open to upper division students in the College of Business Administration. B 13 102Q 0 2204


203H. Honors Principles of Economics. (4). A general survey of economic method, character and scope, and basic microeconomic and macroeconomic principles with applications aimed at helping the student develop an analytic framework for interpreting economic events, trends, institutions and public policies. Includes an analysis of resource allocation, consumption, inflation, 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 making public policy. Topics considered 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 honors students. B 13 204H 0 2204

231. Introductory Business Statistics. (4). An introduction to statistical inference, estimation and hypothesis testing. Included are measures of location and dispersion, probability, sampling distributions, discrete and continuous random variables, non-parametric methods, elements of Bayesian decision theory, linear regression and correlation, and time series analysis. Prerequisite: Math. 111 or 112. B 13 231 0 0503

Upper-Division Courses

301. Intermediate Macroeconomics. (3). The concepts of aggregate demand and aggregate supply are introduced. After developing theoretical foundations for these, policy applications are discussed, including policy issues such as unemployment, inflation, government and international trade defin- ites, and interest rates. 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 the determination of 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 Geront. 303. An examination of the special economic problems 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 principles and on improving the consumer knowledge and management skills of the elderly. Prerequisite: Econ. 202Q or departmental consent. B 13 303 Q 0 2204

304. Managerial Economics. (3). An application of microeconomic theory and policy to the solution of business problems. Prerequisites: Econ. 202Q, one course in calculus, and junior standing. B 13 304 Q 0 0517

340. Money and Banking. (3). A study of money, credit and inflation. The structure and role of the 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. 201Q and junior standing. B 13 340 Q 0 0504

491. Directed Study. (1-3). Individual study of various aspects and problems of economics. Repeatable for credit. Cr/No Cr only. Prerequisite: junior standing, departmental consent and a minimum grade point average in economics. B 13 491 3 2204

Courses for Graduate/Undergraduate Credit

605. History of Economic Thought. (3). A critical analysis of economic thought, the factors that influenced this thought, and its impact upon the social and economic development of the modern world. Prerequisites: Econ. 202Q and junior standing. B 13 605 Q 0 2204

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

615. Economics of Transportation. (3). A study of economic characteristics of transportation problems and policies. Prerequisites: Econ. 202Q and junior standing. B 13 615 0 0510

616. Economics of Air Transportation. (3). A study of economic characteristics of air transportation. Prerequisites: Econ. 202Q and junior standing. B 13 616 0 0510

617. Economics of Regulation. (3). A study of the economic characteristics 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. 202Q and junior standing. B 13 617 0 0510


625. Economic History of Europe. (3). Cross-listed as Hist. 614. An analysis of the development of economic institutions: the rise of capitalism and its overseas expansion, technology, precious metals, politics and war, changes in economic ideologies, and cultural effects of economic change. Prerequisites: Econ. 202Q and junior standing. B 13 625 Q 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 reputations and influence of businessmen in American society. Prerequisites: Econ. 201Q and junior standing. B 13 626 Q 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, industry and development. Emphasis is on the role of government in economic activity are explored. Prerequisites: Econ. 201Q and junior standing. B 13 627 Q 0 2204

631. Intermediate Business Statistics. (3). A study of the regression model with extensions, analysis of variance models, and other related statistical methods, with emphasis on the application to business and economic data. Prerequisites: Econ. 231 and junior standing. B 13 631 0 0503

640. Monetary Problems and Policy. (3). An analysis of monetary problems and policy, and debt management problems. The structure of interest rates are included. Prerequisites: Econ. 202Q, 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, debt and fiscal policy. Prerequisites: Econ. 202Q and junior standing. B 13 653 Q 0 2204


660. Labor Economics. (3). An introduction to labor economics, surveying both theoretical and empirical research in this field. Topics include labor markets, wage determination, human capital theory, and others. Prerequisites: Econ. 202Q and junior standing. B 13 660 Q 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 under various institutional policies is explored. Prerequisites: Econ. 202Q and junior standing. B 13 661 0 0516

662. Work and Pay. (3). The orientation of this course will investigate the economic aspects of work and the workplace. Its scope will deal with the demographics of the labor force, methods of rewarding the worker, and the nature of work under capi-
talism. Prerequisites: Econ. 202Q and junior standing. B 13 662 0 0516

663. Economic Insecurity. (3). Cross-listed as Geron. 663. Personal economic insecurity, such as unemployment, old age, health care, disability, and erratic economic fluctuations. Determinants of government action in aid in meeting such insecurities are included. Prerequisites: Econ. 202Q or instructor's consent, and junior standing. B 13 665 0 2204

665. Health Economics. (3). Cross-listed as HACE 4205. Analysis of health care systems in the United States, including the demand for and supply of health services: the quality and quantity of health services; the need for regulation; and the government's role in the health sector. Prerequisites: Econ. 202Q and junior standing. B 13 667 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 developing and underdeveloped economies. Determinant of real income, resource allocation, investment criteria, balance of payment problems, national policies and related topics are analyzed with the international framework. Prerequisites: Econ. 202Q and junior standing. B 13 671 0 2204

672. Introduction to International Economics and Business. (3). Cross-listed as Mgmt 4906. Survey of the fundamentals of international trade and investment. 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 13 672 0 0513

674. International Finance. (3). Cross-listed as Fin. 692. A study of foreign exchange, balance of payments, the international monetary system and the world's money and capital markets, and their relations with the international financial management are explored through a series of case studies. Prerequisites: Econ. 202Q and junior standing. B 13 674 0 2204

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 importance of various public policies on the use of energy and natural resources. Prerequisites: Econ. 202Q 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 determining the optimal use of resources and the evaluation of the social and economic benefits and costs of the use of resources through time are examined. Prerequisites: Econ. 202Q and junior standing. B 13 685 0 2204

687. Introduction to Urban Affairs. (3). Cross-listed as Pol. Sci. 687 and Soc. Sci. 687. An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 202Q, 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 on both the microeconomic and macroeconomic levels. The application of regional economic analysis in the study of urban areas as economic regions is stressed. Prerequisites: Econ. 201Q and 202Q, or Econ. 800, 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 9 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 literature 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 macroeconomics 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 analytical topics in economics that are useful in decision making by managers. Not for graduate credit in the MA program in economics. Prerequisites: Econ. 202Q and one course in calculus. B 13 804 0 0517

810. Business and Public Policy. (3). A study of the effects of government regulation, monetary and fiscal policy on business, as well as the social responsibility 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 the regulated industries (i.e., transportation and public utilities), with emphasis on problems, issues and public policy in these industries. Prerequisite: one of 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 selection of models and methods. 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). An examination of the use of regression, multiple and partial correlation, analysis of variance and introduction to econometric techniques. Prerequisites: Econ. 831 and one course in calculus. B 13 831 9 0503

836. Methodology of Economics. (3). A study of the methods of economic inquiry. Prerequisites: one of Econ. 301, 302 or 202Q. B 13 836 9 2204

840. Seminar in Monetary Theory. (3). An examination of the evolution of 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 9 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 9 2204

861. Seminar in Contemporary Labor Issues. (3). An intensive analysis of contem­porary problems in the field of labor. The specific nature of the problems are determined by the interests of those enrolled in the course. Repeatable for credit with departmental consent. Prerequisite: Econ. 360. B 13 861 9 0516

870. Seminar in International Trade and Finance. (3). Cross-listed as Fin. 820. A seminar in the methods of the analysis of contemporary selected issues of international eco­nomics and finance. Selected issues include such areas as foreign exchange markets, the Eurodollar market, Arab oil dollars in the international monetary system, transference of inflation between countries, developments in the common markets, etc. Prerequisites: Econ. 674 or Fin. 684, or instructor's consent. B 13 870 9 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 aggregate planning, allocation of resources, selection and evaluation of investment projects, and other current issues, are included. Prerequisite: Econ. 671, 301 or 302. B 13 871 9 2204

885. Seminar in Environmental Quality Control. (3). Examination of actual problems, projects and/or current approaches to the control of environmental pollution. A critical look at current happenings and trends is taken. Prerequisite: Econ. 685. B 13 885 9 2204

888. Seminar in Urban Economics. (3). An analysis of the determinants of city structure, the location of economic activity and land use. Problems such as crime, pollution, zoning, housing and optimal city size are discussed with specific reference to current empirical research. Prerequisite: Econ. 302 or 688. B 13 888 9 0504
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The foJlowlng abbreviations are used in the c our se de­

890. Legal Assistant
Department of Finance, Real Estate, and
Decision Sciences

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 3 0504

893. Special Project in Finance. (1-4). A special project including original case re­
search, supervised internships or field re­
search. Prerequisite: approval of the MS
Committee. Open only to MS in administration
candidates. B 15 893 2 0504

895-896. Thesis. (2-2). B 15 895 4 0504; B 15 896 4 0504

Courses for
Graduate/Undergraduate Credit

640. Financial Management. (3). An explo­
rated treatment of basic business finance,
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 contracts, business organizations, partnerships, agreements and corporate documents. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 231 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 procedure, preparation and use of pleadings, discovery, law of evidence and appeals. Prerequisite: Admission to the Legal Assistant Program or departmental consent. B 15 232 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 15 233 0 5096

235. Law Office Management and Technology. (3). An introduction to the management of business organizations. Topics covered include management and systems technology to the law office. Emphasis is placed on the use of systems approaches and the proper use of non-lawyers in the handling of clerical and 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, 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 lawyer 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 Cr/Nc 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 the 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 Research and Writing I. 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). An introduction to the current issues, concepts and functions of business and its environment. Not open to students in the College of Business Administration. Students may not receive credit in both Mgmt. 101G and Mgmt. 100. B 16 100 0 5096

101G. Introduction to Business. (3). Everyone spends a lifetime dealing with and being influenced by business firms. Whether or not a student ever takes a formal course in business administration, everyone needs some awareness of business in order to more intelligently select a career and to be a better informed consumer. 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 5096

163. Women in Business. (3). Cross-listed as WS 163. Considers women in all phases of business, with an in-depth look at women in management. Includes women in management, a study of the impact of women in the workplace on the corporate environment and the environment for women. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 163 0 5096

190. Selected Topics. (1-3). Repeatable with departmental consent. B 16 190 0 5096

Upper-Division Courses

360. Concepts of Administration. (3). A study of the management of businesses and the environment in which they operate. Analysis of administrative structures and the environment in which they operate is included. Prerequisite: junior standing. B 16 360 0 5096

390. Special Group Studies in Management. (1-3). Repeatable with departmental consent. B 16 390 0 5096

430. Business and Society. (3). An examination of the economic, political, social and legal environment in which business operates. Consideration is given to the philosophy of business, capitalism and government-business interaction, with government, consumers and labor over time. Emphasis is placed on the role of business in dealing with various societal problems. Current issues, such as the social responsibility of business, affirmative action, occupational safety and health, environmental protection and the challenge to the legitimacy of the firm are dealt with from the perspective of the decision-making manager. Prerequisite: junior standing. Completion of Mkt. 300. Fin. 340. DS 350 and Mgmt. 360 is strongly recommended. B 16 430 0 5096

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 5096

464. Organizational Communication. (3). An examination of the design of organizational communication and the steps in 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 5096

491. Independent Study. (1-5). Offered for credit only. Prerequisite: junior standing and 2.75 grade point average in management. B 16 491 0 5096

492. Internship in Management. (1-3). Offered for credit only. Prerequisites: junior standing in management and departmental consent. B 16 492 0 5096

Courses for Graduate/Undergraduate Credit

561. Introduction to International Economics and Business. (3). Cross-listed as Econ. 672. A survey of the economic foundations of international trade and investment. After a study of international trade, theory and policy, the course explores the operations of the multinational firm within that environment. Prerequisites: Econ. 202G and junior standing. B 16 561 0 5096

663. Organizational Interactions. (3). A study of interpersonal intraorganizational and interorganizational interactions. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 663 0 5096

665. Organizational Development. (3). Planned organizational change. Emphasis is placed on team building in organizations. Individual, group, and structural developments are included. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 665 0 5096

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. Prerequisite: junior standing and Mgmt. 360. B 16 687 0 5096

689. 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. Prerequisite: junior standing and Mgmt. 360. B 16 689 0 5096

690. Decision Making. (3). Cross-listed as USA 710. A study of the theories of decision making, with attention directed to the factors of decision making and the quest for subjective certainty, irrationality, cognitive inhibitors, problem identification, evaluation of alternatives, applications of quantitative methods to decision processes and a decision-making model. Prerequisites: Mgmt. 360 or concurrent enrollment and junior standing. B 16 690 0 5096

681. Administrative Policy. (3). An investigation of all aspects of business administration
860. Management of Organizations. (3). An introduction to management and organizational 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 and learning in human relation-
468. 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 17 607 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, 3 additional hours of marketing and junior standing. B 17 609 0 0509

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 17 890 9 0501

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 individual 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 macroenvironmental conditions upon micromarketing decisions. Analysis includes identification and study of environmental issues, issue 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 probed. Prerequisite: Mkt. 801 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. Prerequisite: Mkt. 800 or departmental consent. B 17 805 0 0509

809. Marketing Theory. (3). A utilization of market research findings to analyze current marketing theory. Conceptual and theoretical frameworks for marketing analysis are developed. Prerequisite: 6 hours of marketing, including Mkt. 801. B 17 809 0 0509

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 17 890 9 0501

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 17 891 3 0509

893. Special Project in Marketing. (1-4). A special project including original case research. Prerequisite: approval of the MS Committee. Open only to MS in administration candidates. B 17 893 3 0509

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 personnel procedures, evaluation of personnel, training, motivation, job evaluation, discipline, and personnel research. Prerequisite: Mgt. 360, or concurrent enrollment, and junior standing. B 16 466 0 0515

468. 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. 366 or consent of instructor. B 16 468 0 0515

491. Independent Study. (1-5). Offered for Cr/NCr only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in personnel. B 16 491 3 0515

492. Internship in Personnel. (1-3). Offered for Cr/NCr only. Prerequisites: junior standing, 2.75 grade point average in personnel and departmental consent. B 16 492 2 0511

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). Analysis of advanced programs of employee selection, training and placement. Testing, interviewing, counseling, appraisal, job analysis and job design are explored. Prerequisite: 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

750. Workshop in Personnel. (1-4). Prerequisite: junior standing. B 16 750 9 0515

Courses for Graduate Students Only

867. Seminar in Personnel Administration. (3). An in-depth study and analysis of several critical and/or 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

888. Wage and Salary Administration. (3). A study of job evaluation and other procedures that lead to the development of a sound wage and salary structure. Prerequisite: Pers. 466 or instructor's consent. B 16 888 0 0515

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 16 890 9 0501

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

390. Special Group Studies in Real Estate. (1-3). Repeatable with departmental consent. B 15 390 3 0511

438. Real Estate Law. (3). Laws and regulations affecting real estate ownership and use, including ownership interests, conveyancing, 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/NCr only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in real estate. B 15 491 3 0501

492. Internship in Real Estate. (1-3). Offered for credit/no credit only. Prerequisites: junior standing, 2.75 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 financing and underwriting, primary and secondary mortgage markets. Prerequisite: Fin. 340. RE majors should have completed RE 310. B 15 611 0 0511
Small Business/Entrepreneurship

Department of Marketing and Small Business

Lower-Division Courses

160Q. Introduction of 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 1600Q 0 0506

190. Selected Topics. (1-3). Repeatable with departmental consent.
B 17 190 3 0506

Upper-Division Courses

361. Comparative Entrepreneurship. (3). The focus of this course is fourfold: (1) to study the issues affecting management, finance, marketing, and economics of small business; (2) to study the different types of small businesses; (3) to examine current small business trends; and (4) to familiarize potential entrepreneurs with the vast body of specialized literature designed to assist small business operators. Other related topics will be treated also.
Prerequisite: senior standing.
B 17 361 0 0506

B 17 390 3 0506

465. Small Business Management. (3). The focus of this course is on the techniques of managing small businesses, from startup to growth to efficient operations. Topics to be covered include: management concepts; marketing techniques; record-keeping procedures; new product strategies; and small business finance.
Prerequisite: Acctg 220 and senior or graduate standing.
B 17 465 0 0506

491. Independent Study. (1-5). Offered for Cr/Nr-only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in entrepreneurship.
B 17 491 3 0506

492. Internship in Entrepreneurship. (1-3). Offered for Cr/Nr-only. Prerequisite: junior standing and 2.75 grade point average in entrepreneurship and departmental consent.
B 17 492 3 0506

Courses for Graduate/Undergraduate Credit

560. Small Business Practicum. (3). This is an applied course extending the material learned in the classroom into real situations that involve problem solving. One fourth of the course is an intensive review of the functional areas of a business. The student then assumes the role of consultant or problem solver for a particular firm. The instructor serves as director, helping to define problems and recommending solutions for the firm's difficulties or needs. Prerequisites: Mkt 300, Fin 340, DS 350, Mgmt 360, Acctg 220, and senior or graduate standing.
B 17 560 2 0506

688. Venture Creation. (3). The focus of this course is on identifying and developing a written analysis of the procedures for starting a new business. Topics include the substance of an actual business plan, such as the definition of the business, analysis of the market, sales forecasting, proforma development, business organization, financial analysis, capital requirements, etc. Prerequisites: Mkt 300, Fin 340, DS 350, Mgmt 360, Acctg 220, and senior or graduate standing.
B 17 688 0 0506

700. Workshop in Entrepreneurship. (1-4). Prerequisite: junior standing.
B 17 700 2 0506

Courses for Graduate Students Only

688. New Venture Feasibility Seminar. (1-5). The focus of this course is on the analysis of student ideas and current small business ideas. Students are given the opportunity to practice methods of selecting financial sources and in raising seed capital through the preparation of a comprehensive feasibility study. Topics to be covered include: (1) sources of capital, such as venture capitalists, investment bankers, banks, and creative forms of financing; (2) marketing opportunities; (3) proforma development; (4) feasibility decision making; and (5) actual preparation of the loan package. Prerequisites: Bus 668, Mkt 500, Fin 384, DS 350, Mgmt 360, and approval of the instructor.
B 17 868 9 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 candidates.
B 17 893 2 0506

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.

Degrees Offered

Undergraduate

The college offers programs leading to the baccalaureate degree and/or 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 non-teaching 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 course work 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 skill levels. 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 2.25 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 must meet the following criteria:

1. successfully complete IS 231
   (a) competency tests in English and mathematics
   (b) health examination
   (c) audio-visual check
   (d) computer awareness instruction

2. complete 50 semester hours of University credit

3. maintain a minimum grade point average of 2.50 overall as well as 2.50 in the major field. (An applicant whose GPA does not meet the minimum 2.50 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 6 hours for each four-week session or 12 hours during the eight-week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 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. Students in the College of Education are formally placed on probation at the conclusion of any semester in which their overall grade point average falls below 2.25. 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 2.25, and they will remain on probation until they achieve a cumulative grade point average of 2.25. Students who fail to earn at least a 2.25 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 re-enroll only with the special permission of the Admissions, Exceptions, and Retention 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 satisfactorily, 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.

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.
Bureau of Educational Placement

Through the Bureau of Educational Placement, 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 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 the Bureau of Educational Placement, 221 R. Dee Hubbard 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 must maintain at least a 2.25 grade point average. Admission to the student teaching semester requires an overall grade point average of at least 2.50 and at least a 2.50 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.

General Education

A total of 42 hours of general education courses is required for teacher certification, including the following requirements for graduation.

I. Basic Skills (12 hours)
   A. Written Communication (6 hours)*
   B. Oral Communication (3 hours)*
   C. Mathematics (3 hours)—College Algebra

II. Distribution Requirements (G or Q courses only)
   A. At least 9 hours of humanities and fine arts—Literature (3 hours required), American studies, art education, art history, foreign languages, history, linguistics, musicology—composition, music education, philosophy, religion, or other
   B. At least 6 hours of social and behavioral sciences—Psychology 111 (required), anthropology, economics, geography, political science, sociology, or other
   C. At least 6 hours of natural sciences and mathematics—Biology, chemistry, geology, mathematics, physics, or other
   D. At least 9 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.

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 (Logopedics)

I. General Education

   Students majoring in Communicative Disorders and Sciences are expected to meet all General Education requirements. In Division B, at least 6 hours of psychology are required. Within Division B, or in the Professional Education section, either Psych 314, 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

Eleclives in special education (3-9 hours) to be selected in consultation with an adviser.

* In the Professional Education section, or in Division B, either Psych 314, Child Psychology, or IS 233, Educational Psychology: Child Development, must be taken.

Elementary Education

I. General Education

   Students majoring in elementary education must meet all requirements in the General Education Program. In Division C, both a biological science and a physical science are required.

   II. Professional Education (55 hours)

   The following courses must be completed:
   IS 231, Entry to Teacher Education, 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
   ISEP 233, Educational Psychology: Child Development, 3 hours
ISEP 433, Educational Psychology: Learning and Evaluation, 3 hours
IS 456, Multicultural Education, 3 hours
ISSP 601, Introduction to Exceptional Children, 3 hours
ISEE 316, Children's Literature, 3 hours, or
ISSE 616, Literature for Adolescents, 3 hours
ISEE 319, Language Arts in the Elementary School, 3 hours
ISEE 321, Science in Elementary Education, 3 hours
ISEE 406, Social Studies in the Elementary School, 3 hours
ISEE 420, Reading in the Elementary School, 3 hours
ISEE 421, Teaching Methods and Instructional Materials for Elementary Reading, 3 hours
ISEE 444, Mathematics in the Elementary School, 3 hours
*IS 453, Classroom Dynamics, 2 hours
*ISEE 446, Elementary Education-Student Teaching Seminar, 1 to 3 hours
*ISEE 447, Student Teaching in the Elementary School, 13 hours, and/or
*ISEE 448, Student Teaching in the Elementary/Early Childhood School, 13 hours.

*Student Teaching Seminar

III. Allied Fields (27 hours)

The following course must be completed:

Math 501, Elementary Mathematics, 5 hours

Plus courses in each of the following areas:

Art Education 110, 210, 211
Music Education 351, 352, 606, 611
Physical Education 115, 117, 210, 260, 325, 326, 327, 515
Health Education (3 hours)

Courses must be taken in three of the following areas, if not taken as part of the General Education program: sociology, economics, anthropology, political science, and geography.

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 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 of 50 hours is elected.

III. Professional education

a. IS 232, Introduction to Professional Education, 2 hours.
b. IS 231, Teacher Education Lab (health examination, English and mathematics competency examinations, and audiovisual and computer equipment check), 0 hours.
c. The following course sequence must be followed.

Courses

IS 333, Educational Psychology: Adolescent Development 3
IS 234, Philosophy and History of Education 2
IS 428, Social and Cultural Foundations of Education 2
For majors in art, speech and drama, English, social studies, science, and mathematics:
IS 433, Educational Psychology: Learning and Evaluation (fall only) 3
IS 454, General Methods of Secondary Teaching (fall only) 3
IS 455, Advanced Methods of Secondary Teaching (spring only) 1
Student Teaching—Secondary School * (spring only) 3
IS 456, Multicultural Education 3
IS 453, Classroom Dynamics (Optional) 2
IS 601, Introduction to Exceptional Children 3
IS 401, Secondary Reading Foundations 3
For majors in industrial education, music, physical education, foreign languages, and business education:
IS 433, Educational Psychology: Learning and Evaluation 3
IS 442, Special Methods in Teaching 4
Student Teaching—Secondary School * 1

*See specific listing of course numbers under "Instructional Services." Secondary Student Teaching

IS 456, Multicultural Education 3
IS 453, Classroom Dynamics (Optional) 2
IS 601, Introduction to Exceptional Children (music majors take Mus. Ed. 611) 3
IS 401, Secondary Reading Foundations 3

Secondary Teaching Fields

The major is generally made up of not fewer than 30 semester hours. (For specific exceptions see languages and the combined curricula programs.) Students may elect certain of the majors offered in the College of Liberal Arts and Sciences, the College of Fine Arts, the College of Business Administration, or the College of Education. Students must 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 must complete the history major as prescribed by the history department in the College of Liberal Arts and Sciences. In addition, they must complete the University's general education requirements, the professional education sequence, and other requirements for the teacher's certificate prior to graduation. Students should work closely with a College of Education advisor 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 must be made with an academic counselor representing the College of Education. The teaching major or minor should be declared no later than the beginning of the junior year. Students who plan to teach in secondary schools may elect 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

Art*

Biological sciences

*Needs no minor if a 30-hour field major is outlined in consultation with an advisor from the College of Education
† A major in psychology, sociology, or economics must be accompanied by specific course work in history or political science.
‡ 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 or a minor—no more than 8 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 extensive study in the following combined disciplines is offered in lieu of a departmental major and minor. Students should work closely with advisors to ensure proper course selection for certification.

Business Education

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

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td>Acctg. 210 and 310 or 210 and 220</td>
<td>6</td>
</tr>
<tr>
<td>CS 190 or CS 200 and 205</td>
<td>3 or 4</td>
</tr>
<tr>
<td>DS 350 and 495</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 210 and 202Q* and 231</td>
<td>10</td>
</tr>
<tr>
<td>Fin. 340</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 360, 430, and 681</td>
<td>10</td>
</tr>
<tr>
<td>Mktg. 300</td>
<td>3</td>
</tr>
<tr>
<td>Business Education</td>
<td>27</td>
</tr>
<tr>
<td>Typewriting</td>
<td>6</td>
</tr>
<tr>
<td>Shorthand†</td>
<td>6</td>
</tr>
<tr>
<td>Records management</td>
<td>3</td>
</tr>
<tr>
<td>Office procedures</td>
<td>3</td>
</tr>
<tr>
<td>Office Machines</td>
<td>3</td>
</tr>
</tbody>
</table>

Automated word processing—Bus. Ed. 260 \( \ldots \) 3
Office practice—Bus. Ed. 300 \( \ldots \) 3

68 or 69

Minor. For a business education minor, students must take Acctg. 210 and 310; Econ. 210 and 231; Bus. Ed. 138, 237, and 260; and 9 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.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Econ. 210Q and 202Q†</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
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</tr>
</tbody>
</table>

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 213Q; additional requirements—Chem. 112Q and 531, Physics 214Q and 195Q, and 196; plus the following—Physics 551, Geol. 111Q and 312, or Chem. 523. Math. 144 must be taken as general education.

Minor. A teaching minor in the natural sciences—physical consists of at least 25 hours including: Biol. 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. 2 of the following survey series: Hist. 515 and 516 (economic), Hist. 517 and 518 (constitutional); Hist. 519 and 520 (social and cultural); Hist. 521 and 522 (diplomatic).
   b. 6 hours from the following: Hist. 300Q, The Americans; Hist. 513, Popular American Culture; Hist. 530, American Women; Hist. 533, The American City; Hist. 535Q, History of Kansas.
2. World History (8 hours)—Hist. 101Q and 102Q, History of Western Civilization.
3. Political Science (12 hours)—Pol. Sci. 121Q, American Politics, plus 5 hours from (a) for interest in U.S. government or (b) for international emphasis.
are required for students wishing to 

CDS 417 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 765 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 Fairmount 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 Fairmount College of Liberal Arts and Sciences. In either case, all students must satisfy the general education requirements of the University. Students in the College of Education must select certain courses from the General Education Program that will satisfy teacher certification requirements. These are stated under general requirements at the beginning of the College of Education section of the Catalog.

Speech 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, 216, 218, 220, 315, 318, 322, 417, 431, 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, 216, 218, 220, 315, 318, 540, 561, 747, 760, and 785. In addition, selected methods courses in elementary education will be chosen in consultation with an adviser.

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 10 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 441, or 447 and 457). They must have an overall grade point average of 2.50; a 2.50 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 17 hours and may
be earned in either the College of Education or Fairmont College of Liberal Arts and Sciences. The following courses are recommended for a minor unless other arrangements are made:

COS 111Q, 132, 214, 216, 218, and 220.

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 701. 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 is 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.

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

216. Introduction to Speech and Hearing Sciences. (3) Examination of elements in the chain of events that leads to human communication. Speech production and perception are studied at the physiologic and acoustic levels, with primary emphasis on acoustics. Prerequisites: sophomore standing and prior or concurrent enrollment in COS 111Q. D 12 216 0 1220

218. Phonetics: Theory and Application. (3) Cross-listed as Linguistics 218. The study of phonetic, acoustic and perceptual characteristics 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 COS 111Q. D 12 218 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 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 210. D 12 220 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 nervous system, with particular emphasis on the processes resulting from neurological impairment. Prerequisite: at least senior 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 431. 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 and language disorders in the light of current psychological and linguistics thought. Prerequisite: CDS 216 or equivalent or departmental consent. D 12 826 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 applications within the laboratory. Prerequisite: CDS 828. D 12 830 1 1220

867. Introduction to Psychoacoustics. (3) 3R; 1D. Basic principles underlying the perceptual hearing process, with emphasis on the interdependencies between sound stimuli and subjective auditory experience as related to communication behavior. Prerequisite: CDS 540. D 12 867 0 1220

900. Communicative Sciences: Physiological Phonetics. (3) 3R; 2L. A critical review of pertinent research concerning the physiologic bases of speech: respiratory, laryngeal, and articulatory function. Prerequisite: CDS 828. D 12 900 1 1220

910. Communicative Sciences: Acoustic Phonetics. (3) 3R; 2L. A critical review of research dealing with the acoustic characteristics of speech. Also included are speech perception and techniques of speech synthesis and analysis. Prerequisite: CDS 828. D 12 910 1 1220

920. Neurophysiology of Communication. (2) Special lectures, seminars, clinical demonstrations and independent study. D 12 920 0 1220

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.

Speech and Language Pathology

Lower-Division Courses

111Q. Disorders of Human Communication. (3) An orientation to disorders of human communication, communicative and psycho-social problems commonly encountered, and general approaches to habilitation. D 12 111Q 0 1220

132. Introduction to Clinical Management in Speech and Language Pathology and Audiology. (2) 2R; 2D. An overview of management procedures for communicative disorders in relation to other educational disciplines. Techniques for observation of speech-language pathology management and audiological diagnostics will be presented, along with opportunities for practice in a clinical setting. Prerequisites: CDS 220 and junior standing. Participation in many of the department's clinical practicum courses is required. Prerequisites: prior or concurrent enrollment in CDS 111Q and medical clearance. D 12 132 1 1220

Upper-Division Courses

315. Articulation Disorders: Diagnosis and Clinical Management. (3) Contrast normal and deviant articulation. Etymology, evaluation and methods of modification are also included. Prerequisites: CDS 214 and 218. D 12 315 0 1220

318. Behavioral Analysis of Speech and Language Disorders. (2) 2R; 3L. A presentation of principles and applications of behavior analysis and behavior modification with persons exhibiting speech and language disorders. Interviewing procedures with parents, clients, and professional workers and the use of clinical equipment are discussed. Ongoing observation of training programs of two clients in a clinic setting is required. Prerequisites: CDS 220 and junior standing and medical clearance. D 12 318 1 1220

322. Clinical Management of Speech and Language Disorders. (3) 3R; 3L. Supervised application of techniques with simpler disorders; observation of more difficult communicative disorders and an introduction to assessment and language intervention techniques. Forty-five hours of direct observation and practice are required. Prerequisites: junior standing, CDS 315, and medical clearance. D 12 322 1 1220

327. Clinical Methods in the Public Schools. (3) Organization, administration and professional relationships in public school speech and language management programs on the elementary and secondary school levels. Emphasis is given to procedures and materials for surveying, schedul-
705. Communicative Disorders. (3). Cross-listed as Speech 665. A survey of speech, language and hearing disorders; their identification and treatment, and consideration of the roles of health and educational specialists in the total habilitative process. Background in normal communicative structures, processes and acquisition is provided for understanding communicative disorders. Areas introduced include language disabilities in children, adult aphasia, articulation disorders, voice disorders, cleft palate, laryngeotomy, stuttering, cerebral palsy and hearing impairment. Not open to students majoring in CDS. Credit in both CDS 111Q and 705 is not allowed. D 12 705 0 1220

720. Stuttering: Diagnosis and Clinical Management. (3). Review of current theories on the etiology and development of the disorder. Behaviorally based diagnostic procedures for children and adults are covered. Knowledge of language, speech, and real-life generalization, including procedures for parent and client interviewing and counseling. Opportunities for observation and consultation therapy are provided. D 12 720 0 1220

726. Voice Disorders: Diagnosis and Clinical Management. (3). Review of current knowledge on the symptomatology and etiology of commonly encountered voice disorders in children and adults. Presentation of pitch, resonance, and amplitude. Clinical and management, based on a working knowledge of the anatomy and physiology of the normal voice production. Prerequisite: at least senior standing and CDS 214. D 12 726 0 1220

727. Teaching English as a Second Language. (2-3). Cross-listed as Eng. 727 and Ling. 727. Current methods of teaching English to nonnative speakers are discussed. Students learn to analyze interlanguage patterns and to design appropriate teaching units for class and language laboratory use. D 12 727 0 1220

Courses for Graduate Students Only

805. Adult Aphasia: Evaluation and Clinical Management. (3). Review of historical and contemporary literature; standard tests for evaluation of communicative disorders in aphasia and procedures for planning rehabilitation regimens for adults. Prerequisite: prior or concurrent enrollment in CDS 710. D 12 805 0 1220

810. Cerebral Palsy: Evaluation and Clinical Management. (3). The study of cerebral palsy and related neurological disorders. An evaluation and modification of speech and speech-related functions and a study of the cerebral palsied individual in society are included. Prerequisite: prior or concurrent enrollment in CDS 710. D 12 810 0 1220

815. Interviewing and Parent Counseling. (3). Presentation of current techniques of case history taking and interviewing as they apply to speech, language, hearing, learning and behavior disorders in handicapped children and adults. Procedures employed in ongoing and terminal counseling are considered. D 12 815 0 1220

820. Examination Methods in Speech and Language Pathology. (3). Cross-listed as Speech 654. Review of language pathology. Weakly, diagnostic practicum in communicative disorders is held, with experiences in report writing and follow-up procedures provided. Prerequisites: medical clearance and terminal semester of course. 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. Prerequisites: CDS 520 or departmental consent. 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. Corequisite: must be taken concurrently with CDS 834. D 12 833 0 1220

834. Beginning Graduate Practicum in Communicative Disorders. (1). Repeatable. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Introduction to supervised practicum at the graduate level. Clinic and practicum procedures are stressed in the course portion of the course. Fifty hours of practicum are required. Repeatable. Prerequisites: CDS 834 of equivalent, departmental consent and medical clearance. D 12 834 2 1220

835. Graduate Practicum in Communicative Disorders. (1-3). 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 of equivalent, departmental consent and medical clearance. D 12 835 2 1220

Audiology

Upper-Division Courses

431. Introduction to Audiology. (3). Cross-listed as Speech 431. History and scope of the field. Basic aspects of the normal hearing function are studied, and a survey of audiology testing procedures, including audiometric screening, are made. An introduction to the use of hearing aids, auditory training, lip reading and rehabilitative counseling is also included. Prerequisites: CDS 214 and 216, and at least junior standing. D 12 531 1 1220

441. Beginning Practicum in Audiology. (1). Repeatable. Clinical and practical techniques in clinical situations. Lecture stresses clinic and practicum procedures. Four hours of audiological practicum per week are required. Prerequisites: CDS 431 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 and supervision of an experienced clinician and a college supervisor. Prerequisites: CDS 327, 431 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 audiology skills:...
Courses for Graduate/Undergraduate Credit

747. Rehabilitative Audiology. (3). Educational and psychological impact of hearing loss. Methods of improving the educational and family environment for the benefit of the hearing impaired are covered. Prerequisite: CDS 431 and at least junior standing.
D 12 740 1 1220

785. Supervised Practicum in Rehabilitative and Diagnostic 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 of practicum per week are required for each hour of credit. Repeatable. Prerequisites: prior or concurrent enrollment in CDS 540 and 747. Departmental consent one semester prior to enrollment, and medical clearance.
D 12 7256 2 1220

Courses for Graduate Students Only

850. Supervised Practicum in Audiology. (1-3), 1R; 3-4L. Application of audiological techniques in clinical situations. Experience is gained in complete patient management, counseling, and rehabilitation follow-up visits. Hours for practicum are included. Prerequisite: CDS 431. D 12 850 2 1220


860. Hearing Aids. (3). 2L. The history and function of hearing aids. The measurement and significance of the audiometric characteristics, principles and procedures for the selection and programming of hearing aids for individual hearing losses, hearing aid orientation and counseling related to hearing loss. Prerequisite: CDS 540 and medical clearance.
D 12 865 1 1220

865. Advanced Clinical Audiology. (3). 3R; 2L. Diagnostic and rehabilitative procedures in the audiological clinic. Techniques and procedures for the administration and interpretation of special audiological tests, including acoustic impedance and evoked auditory response measurements, are included. 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. Physiological Measures 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), electroencephalography (ENG), and acoustic reflex. Test administration practice is included. Prerequisites: CDS 540, 735 and 719 (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 1 1220

561. Signing Exact English II. (1, 2R). An advanced class in the theory and use of Signing Exact English (SEE) as a means of communication with the hearing impaired. 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 surveyed. Also included is a review of common communication systems and social and vocational considerations. Prerequisite: CDS 431.
D 12 760 0 1220

General

Lower-Division Course

281. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. Offered Cr/NCr only. D 12 281 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 group study in specialized areas of communicative sciences and disorders. Repeatable.
D 12 715 0 1220

750. Workshop in Communicative Disorders and Sciences. (1-4). A course offered periodically on selected aspects of speech and hearing habilitation.
D 12 750 0 1220

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 communicative science or communication pathology.
D 12 800 0 1220

880. Presentation of Research. (1-3). A directed research project culminating in a manuscript appropriate for publication. Repeatable, but total credit hours may not exceed 3. Prerequisite: CDS 800 and instructor consent prior to enrollment. D 12 880 4 1220

890. Independent Study in Speech and Language Pathology or Audiology. (1-3). Arranged individual, directed study in specialized areas in speech and language pathology or audiology. 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 2. D 12 895 4 1220

899. Thesis. (1-2). Repeatable, but total credit hours counted toward degree requirements shall not exceed 2. D 12 899 4 1220

915. Advanced Selected Topics in Communicative Disorders and Sciences. (1-4). Advanced individual or group study in specialized areas of communicative sciences and disorders. Intended for doctoral students or advanced master's-level students. Repeatable. D 12 915 0 1220

925. Clinic and Program Administration. (2). Approaches to clinical administration and rehabilitation program planning and development. Attention is given to community analysis and problem utilization, personnel management, evaluation of program effectiveness, standards for accountability and fiscal procedures. D 12 925 0 1220

930. Seminar in Clinical Research. (3). Presentation of advanced models in research design applicable to the investigation of communicative disorders in a clinical setting. Prerequisites: CDS 800 and competency in statistics.
D 12 930 9 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 Methodology, 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

990. Advanced Independent Study in Speech and Language Pathology, Audiology or Speech Science. (1-3). Arranged individual, directed study in specialized con-
Industrial Education

The overall goal of industrial education is to provide a broad concept of industrial technology. Within this broad concept students are given specific educational content and skills to aid them to pursue their desired career objectives. The primary employment markets for industrial education majors are teaching in industry. Teaching opportunities are available in both the secondary and post-secondary levels. Opportunities in industry are found in the areas of production, service, and supervision.

Undergraduate Major—Teaching Emphasis. Persons preparing to teach industrial education subjects in the public schools must satisfy certification requirements established by the Board of Education.

A major in industrial education with a teaching emphasis requires a minimum of 50 semester hours, including Ind. Ed. 111, 112, 113, 120, 121, 170, 180, 190, 501, 519, and not fewer than 21 hours of electives. Students seeking recommendation for state certification must also complete a 32-hour sequence described under the Secondary Education heading at the beginning of the College of Education section of the Catalog.

Undergraduate Major—Industrial Technology Emphasis. This option requires a minimum of 60 semester hours, including Ind. Ed. 111, 112, 113, 120, 121, 170, 180, 190, and not fewer than 12 semester hours selected from upper-division industrial education courses. Courses in the General Education Program must include: Math. 123, Chem. 103Q, Phys. 111Q, and Psych. 406. Courses offered in related departments may be counted toward an industrial education major. Students may select related courses to satisfy their particular needs, provided they have consulted with their major adviser.

Admission to the Industrial Technology major requires a 2.25 grade point average. Students who fail to make satisfactory progress in their studies are governed by College of Education policies on probation and dismissal.

Undergraduate Minor—Technical Emphasis. This minor requires a minimum of 18 semester hours selected from laboratory course offerings. Courses must be chosen in consultation with the department.

Graduate Courses. The Master of Education program provides for specialization in secondary education with an emphasis in industrial education. Courses must be elected in consultation with the student's graduate adviser. For further information consult the Wichita State University Graduate School Bulletin.

Lower-Division Courses

111. introduction to Industrial Education. (2). Industrial education as a career; an introduction to present-day programs and the opportunities available. The course is recommended as a first course to be taken in the department. D 11 111 0 0839

112. Construction Technology. (3). 2R; 3L. A course emphasizing the understanding of technology and the scope of industry as it applies to construction. Inclusion includes occupational oriented laboratory activities to reinforce the student's understanding of how man plans, organizes, and controls all available resources to produce products on a site. D 11 112 0 0839

113. Manufacturing Technology. (3). 2R; 3L. 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. D 11 113 0 0839

120. Drafting I. (3). 2R; 3L. An introduction to orthographic projection, pictorial representations, with emphasis placed on auxiliary views, sectional views, sketching, revolution, dimensioning, lettering, and care and use of drafting instruments. D 11 120 0 0839

121. Drafting II. (3). 2R; 3L. A study of the relationship of views in drafting, with emphasis on rotation, projection of solids, planes and lines using standard drafting techniques and procedures. Prerequisite: Ind. Ed. 120. D 11 121 0 0839

170. Materials and Processes. (3). 2R; 3L. A study of basic material processing methods, emphasizing those processes most common to all materials. Through laboratory applications, the student can learn to interpret material selection and processing that will facilitate the appropriate selection of suitable materials and processes for particular products. D 11 170 0 0839

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 thereof. D 11 180 0 0839

190. Visual Communications. (3). 2R; 3L. A study of systematic procedures common to development of visual communications including analysis of communication problems, selection of media, communication preparation, communication dissemination, communication planning and coordination, information storage and retrieval systems. Students develop communication projects using each of the following: media, technical graphics, print, television and photography. D 11 190 0 0839

230. Metals I. (3). 2R; 3L. A basic course dealing with the processes, equipment, materials and products of the metal-working industry, lab experience in sheetmetal, benchmetals, forging, founding, welding and machine tools. D 11 230 1 0839

240. Woodwork I. (3). 2R; 3L. A study of the use and care of hand and power tools, methods of finishing and technology and an overview of the woods industry. D 11 240 1 0839

255. Power Mechanics I. (3). 2R; 3L. A study of the operation of motor vehicles, including chassis and drive-line components. Lab experiences include repair techniques and procedures. D 11 255 1 0839

260. Plastics I. (3). 2R; 3L. A study of plastic materials being used in industry, fundamental operations including molding, casting, thermoforming, fabrication and finishing. D 11 260 1 0839

280. Electricity I. (3). 2R; 3L. A study of basic principles of electricity and electronics as related to home and industry. Emphasis is on testing, transmission and utilization of electrical systems. Laboratory activities include experimentation and fabrication of electrical components. D 11 280 1 0839

281. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. Offered only with permission. D 11 281 2 0839

Upper-Division Courses

235. Woodwork III. (3). 2R; 3L. A study of advanced woodworking students, with special emphasis on tools, materials and construction practices as they relate to the building trades. Prerequisite: Ind. Ed. 240. D 11 235 1 0839

268. Drafting III. (3). 2R; 3L. Development of working drawings in machine, aircraft, structural steel, electrical, architectural details, pipe, map, and patent drawings—al conformity to industrial and prescribed standards. Prerequisite: Ind. Ed. 240. D 11 268 1 0839

331. Metals II. (3). 2R; 3L. A study of materials, machines, and hand tools used by the sheetmetal industry and an introduction to basic machine tool operations. Prerequisite: Ind. Ed. 240. D 11 331 1 0839

337. Metals III. (3). 2R; 3L. A study of the structure, physical and mechanical properties of metals and the effect of heat treatment on these characteristics. The methods of hot working metals, including forging, foundry and arc, acetylene and tungsten inert gas welding are included. Prerequisite: Ind. Ed. 240. D 11 337 1 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: Ind. Ed. 240. D 11 341 1 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

361. Plastics II. (3). 2R; 3L. Technical information and product development and construction of molds and forms for molding, casting, laminating and thermoforming. Prerequisite: Ind. Ed. 260. D 11 361 1 0839

362. Plastics III. (3). 2R; 3L. Advanced problems in production techniques, compression and injection molding, recent developments and experimental work. Prerequisite: Ind. Ed. 260. D 11 362 1 0839
370. Directed Study in Materials and Processes. (1-4). The directed study will deal with content related to trade and occupational titles such as building construction, metalworking, cabinetmaking and plastics tooling. The course provides depth of conceptual knowledge and psychomotor skills. Repeatable with advisor's consent. Prerequisites: Ind. Ed. 112, 113 and 170. 1-4 D 11 370 3 0839

380. Directed Study in Power and Energy. (1-4). A directed study dealing with content related to trade and occupational titles such as auto maintenance, plumbing, electrical wiring and hydraulics. This course provides depth of conceptual knowledge and psychomotor skills. Repeatable with advisor's consent. Prerequisites: Ind. Ed. 112, 113 and 180. 1-4 D 11 380 3 0839

381. Electronics I. (3). 2R; 3L. A basic study of electronics, including the function of components, DC and AC theory, vacuum tube characteristics and applications of power supplies. Experimentation and project construction. Prerequisite. Ind. Ed. 280. 1-4 D 11 381 1 0839

384. Electronics III. (3). 2R; 3L. Course includes the theory, instrumentation and application of semiconductors in electronic circuits. Emphasis is placed on the utilization of transistors and newly developed semiconductors. Prerequisite. Ind. Ed. 381. 1-4 D 11 384 1 0839

390. Directed Study in Visual Communications. (1-4). A directed study dealing with content related to trade and occupational titles in drafting, photography, printing, production, illustration and architecture. This course provides depth of conceptual knowledge and psychomotor skills. Repeatable with advisor's consent. Prerequisites: Ind. Ed. 112, 113 and 190. 1-4 D 11 390 3 0800

426. Woodwork IV. (3). 2R; 3L. Advanced study for specialists in the woodworking field, with emphasis placed on problems growing from the needs of the student. Prerequisite. Ind. Ed. 341. 1-4 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 their needs and progress. Complete dwelling and machine problems, with special emphasis on industrial practices and procedures, are included. Prerequisite. Ind. Ed. 328. 1-4 D 11 429 1 0839

443. Methods of Teaching in the Comprehensive General Shop. (3). 2R; 3L. Preparation for teaching industrial education in the comprehensive general shop. Emphasis is placed on theory, organization and operations of a comprehensive general shop program. Offered spring semester only. Prerequisite: departmental consent. D 11 443 1 0839

450. Metals IV. (3). 2R; 3L. Fundamentals of bench work and basic operations of lathes, mills, grinders, shapers, and drills. Prerequisite: Ind. Ed. 331. 1-4 D 11 450 1 0839

457. Power Mechanics IV. (3). 2R; 3L. Advanced study in the power mechanics field, with emphasis on problems growing from the needs of the student. Prerequisite: departmental consent. D 11 457 1 0839

463. Plastics IV. (3). 2R; 3L. Advanced problems in production techniques, extrusion, rotational casting and foaming are included, and recent developments and experimental work are explored. Prerequisite. Ind. Ed. 362. 1-4 D 11 463 1 0839

481. Cooperative Education. (1-8). A course offered to allow students to participate in the cooperative education program. Offered Cr/NCr only. D 11 481 2 0839

485. Electronics IV. (3). 2R; 3L. Motors and generators, synchros and synchrocontrol systems, servocontrol devices and systems, industrial measurement and control systems, introduction to microwaves and microwave oscillators, microwave transmitters, microwave duplexers and antennae, amplifiers and microwave mixers, microwave receivers, multipath, range, and navigation systems. Prerequisite. Ind. Ed. 384. 1-4 D 11 485 1 0839

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 written paper 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 perception. This course may be repeated by selecting specific areas from the industrial principles listed above. D 11 500 2 0839

519. Shop Planning and Organization. (3). Selection, purchase, and organization of shop equipment and supplies. Developing and maintaining necessary records and reports and the planning of shop facilities are also included. D 11 519 0 0839

750. Workshop in Industrial Education. (1-4). Offered from time to time on various aspects of industrial education. D 11 750 2 0839

751. Institute in Industrial Education. (1-4). A course designed to develop knowledge and competence related to curricular and methodological problems in industrial education. The content is designed to satisfy those competencies that are identified as essential for teaching a defined subject area. Prerequisite: departmental consent. D 11 751 0 0839

790. Special Problems in Industrial Education. (1-4). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent. D 11 790 4 0839

Courses for Graduate Students Only

820. Foundations for Curriculum Development in Industrial Education. (3). A study of the theory and practice of curriculum development, including historical, cultural and industrial changes, including current industrial education curriculum designs, problems and trends. D 11 820 0 0839

821. Curriculum Construction in Industrial Education. (3). Selection and construction of curriculum content for general and specialized areas of study in industrial education. Prerequisite: Ind. Ed. 820. 1-4 D 11 821 0 0839

840. Instructional Technology in Industrial Education. (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 pictures, computer-assisted instruction, learning resource centers and other pertinent topics. Students are involved in planning and preparing instructional materials using systematic procedures. Prerequisite: departmental consent. D 11 840 0 0839

860. Seminar in Industrial Education. (1-3). Innovations and critical analysis of contemporary problems in industrial arts and vocational education. Open only for seminar and research. Repeatable. D 11 860 9 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

100. The Teacher Aide—Introduction. (1). The first course in a 15-hour sequence designed to introduce the para-professional aide to higher education and Wichita State University. D 21 100 0 0801

101. The Teacher Aide—Self-Awareness and Interpersonal Relations. (2). The second course in a 15-hour sequence designed to provide teacher aides with a better understanding of their own behavior, how it affects others and some ways to control their own behavior. D 21 101 0 0801

102. The Teacher Aide—Group Dynamics. (1). Designed for the teacher aide in working with students, classroom teachers and colleagues in group situations. D 21 102 0 0801

103. The Teacher Aide—Cultural Differences. (1). Designed to assist the teacher aide in understanding the social and family patterns of various minority groups. D 21 103 0 0801

104. Introduction to Child Development. (2). An overview of child growth and development designed as an introductory course for the para-professional in the public schools. Prerequisite: 110, 101. 102. 103 or departmental consent. D 21 104 0 0821

105. Operation of Media Equipment. (1). Basic operation and simple maintenance of media equipment used in schools. D 21 105 0 0899

106. Overview of Instructional Materials. (1). An examination of available commercial materials used in public schools for teaching specific skills and concepts. Prerequisite: 105 or departmental consent. D 21 106 0 0801

107. Preparation of Material and Supervised Practice—Early Childhood. (3). Designed to provide the prospective para-professional aide with the knowledge necessary for the development and preparation of skill and concept building material in early childhood.
early childhood. Included is a 40-hour supervised practicum experience. Prerequisites: IS 104 and 106. D 21 107 2 0801

108. Preparation of Material and Supervised Practicum—Mathematics. (6). Designed to provide the prospective paraprofessional aide with the knowledge necessary for the development and preparation of skill and concept building material in mathematics. Included is a 40-hour supervised practicum experience. Prerequisites: IS 104 and 106. D 21 108 2 0801

109. Preparation of Material and Supervised Practicum—Reading. (6). Designed to provide the prospective paraprofessional aide with the knowledge necessary for the development and preparation of skilled and concept building material in reading. Included is a 40-hour supervised practicum experience. Prerequisites: IS 104 and 106. D 21 109 2 0801

150. Workshops in Education. (1-4). D 21 150 2 0802

231. Teacher Education Lab. (0). During the sessions, students receive information concerning development and health examinations and the English and mathematics competency examinations, and are given the audio-visual and computer equipment usage check. D 21 231 2 0801

232. Introduction to Professional Education. (2). This first course in professional education permits students to become acquainted with what goes on in 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 experiences in the schools is required. Prerequisites: sophomore standing and grade of C or better in Eng. 101 and 102. D 21 232 0 0801

235. Introduction to Public Education. (3). A course designed to assist school administrators to become acquainted with the various role that educational activities play in society. Emphasis is given to the teaching-learning relationship, with special emphasis given to the role of the school in society. D 21 235 2 0801

290. Directed Study. (2-3). D 21 290 2 0801

Upper-Division Courses

452. Special Studies in Education. (1-3). Designed primarily for elementary and secondary education majors. Repeatable with advisor’s consent. D 21 452 2 0802

453. Classroom Dynamics. (2). Study of concepts from sociology and psychology with purpose of learning to effectively use groups to prevent classroom problems. D 21 453 2 0801

456. Multicultural Education. (3). Examination of concepts of race, racism, culture, social class, oppression, cultural pluralism and their implications for education generally and classroom instruction specifically. Educational materials and instructional strategies are analyzed with regard to the concepts studied. D 21 456 2 0801

481. Cooperative Education. (7-8). The goal of this course is to provide the student a work-related placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic program. Prerequisites: successful completion of 24 credit hours, 2.25 grade point average, and IS 232. Repeatable for credit. Offered Cr/Ncr only. D 21 481 2 0801

490. Individual Studies in Education. (1-3). D 21 490 2 0802

Courses for Graduate/Undergraduate Credit

620. 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 21 620 0 0829

621. Curriculum/Instruction Alternatives for Middle Level Education. (3). An exploration into the development of alternative curriculums and instructional strategies for meeting the needs of preadolescents in grades 5 through 9. D 21 621 0 0829

703. Research and Implementation of Learning Centers. (3). This course will consider a variety of alternative approaches to the teaching of students at all grade levels and subject matter areas via learning centers. D 21 703 0 0801

714. Activities for Human Relations I. (3). Topics covered are values, communications, and conflict resolution. Group areas can be used by individuals 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 by individuals and 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, communication skills through word study and writing practice, and improved reading through stepped and comprehension practice. Special emphasis is placed on utilizing the daily newspaper as a supplement to other materials in 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 are given an overview of the role career education plays in the curriculum. 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

752. 753 or 754. Special Studies in Education. (1-3). See WS 752. Designed for elementary and secondary school teachers. Repeatable with advisor’s consent. Prerequisite: teacher certification or departmental consent. D 21 752 2 0802; D 21 753 2 0802; D 21 754 2 0802

755. Aerospace-Aviation Education. (3). A course for those who have an interest in aviation education and particularly for those who plan to teach aviation in the secondary classroom. The course covers theoretical knowledge of the airplane and flight and general knowledge about aviation and aerospace. Part I includes the basic ground subjects of aerodynamics, structures and materials, !terpretation of blueprints, communication and federal aviation regulations. Part II presents information concerning occupational opportunities and the influence of powered flight on modern society. D 21 755 0 0899

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 photography, audio recording and mixing, video tape recording, and the operation of institutional audio-visual equipment. Sudents are given an overview of design and production of materials for teaching. D 21 785 0 0899

789. Values Clarification Education. (3). An introduction to one approach to values education. Students develop competence in the use of 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 alternative 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


862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum total of 2 hours of credit. Prerequisite: IS 860. D 21 862 4 0824

875-876. Master’s Thesis. (2-3). Prerequisite: IS 860. D 21 875 4 0824; D 21 876 4 0824

890. Special Problems in Education. (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent. D 21 890 3 0902
Courses for Graduate/Undergraduate Credit

760. Parent Education for Preschool

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

766. Day-Care Services. (3). Instructional methods and operational procedures for day-care center workers. D 21 764 0 0823

Course for Graduate

870. Research and Contemporary Influences in Early Childhood Education. (3). Analysis of current early childhood education research with an in-depth study of contemporary programs influencing the education of young children. D 21 870 0 0823

Instructional Services—Educational Psychology

Lower-Division Course

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 E-Intelligence. (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 second year 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

728. Growth and Development I: Infancy and Early Childhood. (3). The growth of the infant from birth to approximately age 5 in the areas of physical, cognitive, psychosocial, and moral development. Not open to students who have taken Ed. Psych. 731 (no longer offered). Prerequisite: IS 233 or instructor’s consent. D 21 728 0 0822

729. Growth and Development II: Later Childhood. (3). The growth of the child from about age 5 through age 11-12 in the areas of physical, cognitive, psychosocial, and moral development. Not open to students who have taken Ed. Psych. 731 (no longer offered). Prerequisite: IS 233 or 333 or instructor’s consent. D 21 729 0 0822

730. Growth and Development III: Adolescence. (3). Adolescent growth and development in the areas of physical, cognitive, psychosocial, and moral development. Prerequisite: IS 233 or 333 or instructor’s consent. D 21 730 0 0822

731. Growth and Development IV: Adults and Aging. (3). Cross-listed as Geront. 731. The process of adult growth and development as well as the process of aging and death in the areas of physical, cognitive, psychosocial and moral development. Prerequisite: IS 233 or 333 or instructor’s consent. D 21 731 0 0822

732. Behavior Management. (3). Presentation and utilization of psychological principles and techniques for dealing with developmental behavior and learning patterns. Emphasis is on the preschool and elementary school age child. Prerequisite: IS 233 or departmental consent. D 21 732 0 0818

Courses for Graduate

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. Prerequisite: IS 233, or 333, or 433 or instructor’s consent. D 21 800 0 0822

801. Introduction to Educational Research. (3). An introduction to research in education including the course content area: (1) a survey of current educational research, (2) the nature of research methodology, (3) the preparation of research reports and (4) criticism of current research. D 21 801 0 0824

811. Educational Measurement and Evaluation. (3). Issues and techniques for measurement and evaluation in the cognitive, affective and psychomotor domains. D 21 811 0 0825

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 experimental design, theory, design for testing hypotheses about populations from samples, testing correlation coefficients, means and difference between means, simple factorial designs, designs involving matched groups, designs involving repeated measures, and analysis of variance. Prerequisite: IS 704. D 21 823 0 0824

Instructional Services—Elementary Education

Lower-Division Course

290. Directed Study in Elementary Education. (1-6). D 21 290 0 0826

Upper-Division Courses

316. Children’s Literature. (3). Books, materials and activities suitable for use with children in the preschool and elementary grades. Reading and examination of a wide selection of children’s books, recordings, poems and film. Development of evaluation techniques for identifying materials and practice in the use of selection aids. Prerequisite: junior or senior standing or departmental consent. D 21 316 0 0826

318. Language Arts in the Elementary School. (3). Exploring teaching strategies and materials applicable to an elementary school language arts curriculum. Prerequisites: IS 232 and 233. D 21 318 0 0829

321. Science in Elementary Education. (3). Encompasses the areas of development of scientific concepts in children: strategy, tactics and audio visual instructional materials in elementary science: science. Prerequisites: IS 232 and 233 and a physical and biological science. D 21 321 0 0834

406. Social Studies in the Elementary School. (3). Objectives, methods of teaching, equipment and resources, and evaluation and measurement in the social studies in the elementary school. The unit method of
instruction is stressed. Prerequisites: IS 232 and 233. D 21 406 2 0829

420. Reading in the Elementary School. (3). A survey of the methods of teaching reading, scope and sequence of reading skills, instructional materials, and the organization of learning experiences. Observation and participation in a public school may be required. Prerequisites: IS 232 and 233. D 21 420 2 0830

421. Teaching Methods and Instructional Materials for Elementary Reading. (3). A concentrated study with emphasis on independent study component and a 22-hour practicum experience. Study is conducted in the Robert T. Pete Reading Center. Students refine and develop additional competencies in teaching reading to elementary school children. All hours are on an arranged basis, but the student must have one free hour two days a week from 4:00 to 5:30 p.m. Prerequisite: IS 420. D 21 421 2 0830

444. Mathematics in the Elementary School. (3). A study of the basic methods of instruction, with emphasis given to relating mathematical concepts to cognitive development. Specific attention is given to the documentation of instructional strategies, and student evaluation technique. Prerequisites: IS 232, 233 and Math 501. D 21 444 2 0833

445. Elementary Education Student Teaching Seminar. (1-3). Study and discussion of practices and problems emerging from student teaching, planning school programs and assuming responsibilities of a teacher. Graded Cr/NC only. Prerequisites: IS 319, 321, 406, 420 and 444 and concurrent enrollment in IS 447 or 448 and 453. D 21 445 2 0839

447. Student Teaching in the Elementary School. (13). The student teaching program provides for the completion in the public schools under guidance of a master teacher and a college supervisor. Prerequisites: IS 231, 319, 321, 406, 420 and 444. Students must be recommended for the program by IS 446 and 453. Prerequisites may be waived for equivalent experience with departmental consent. The student teaching semester is required of all 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, Exceptions and Retention. D 21 447 2 0829

448. Student Teaching in the Elementary/Early Childhood School. (13). The student teaching program provides half-time participation in the elementary (K-6) 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, 321, 406, 420 and 444 and 9 semester hours of early childhood education. Prerequisites may be waived for equivalent experience with departmental consent. Note deadline dates 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 2 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 school; and the student is expected to follow the public school calendar for a semester. Prerequisite: IS 231. D 21 449 2 0829


459. Student Teaching in the Elementary School—Art. (3). Prerequisites: art major and IS 231. D 21 459 2 0829

Courses for Graduate/Undergraduate Credit

518. Methods for the Kindergarten Teacher. (3). To acquaint students with all aspects of the 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 familiarize students and teachers with all of the aspects of current reading theory and pertinent reading research to point out the possibilities of applying this theory and research to the actual teaching of children. D 21 705 2 0829

734. Affective Approaches to Teaching Reading. (3). The course develops specific methods for developing a literature program with children (preschool—elementary years). Specific emphasis is on extending literature and media through the reading environment, language arts, the arts, and creative expression. Prerequisite: junior, senior or graduate standing. D 21 734 0 0820

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 2 0836

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 examined. Research 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. Elementary Reading Practicum. (3). Designed to provide practical experience in delivering developmental and corrective reading instruction in the classroom setting. Prerequisites: IS 705 and 846, or 802, or equivalent. D 21 821 2 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 assumes responsibility. The content and goals of the curriculum are explored as means of developing the elementary learner characteristics. Prerequisite: IS 780. 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. (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 0 0830

852. Improvement of Instruction in Language Arts. (3). Recent developments in the teaching of language arts in elementary and/or middle school grades: problems, concerns, methods, materials, and research related to listening, and oral, written, and visual communication, including "school" writing and creative writing. Students may select particular concepts and related skills for special attention. Excellent for teachers who want to review and apply developments during the past five 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 conceptual approaches are reviewed and practiced. Prerequisite: IS 406 or equivalent. D 21 854 0 0829

856. 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 materials and methods are included. Prerequisite: IS 444 or equivalent. D 21 856 0 0833

858. Improvement of Instruction in Science. (3). A study of the teaching of science designed to identify and explore the principles of science that teachers should recognize, understand and consider from kindergarten through graduation. Prerequisite: IS 321 or equivalent. D 21 858 2 0834

859. Seminar in Elementary Education. (3). Prerequisite: IS 780. D 21 859 0 0820

863. Trends in Theories of Instruction. (3). A study of educational research, as viewed 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 780. D 21 863 0 0829
Instructional Services—Foundations of Education

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 Courses

428. Social and Cultural Foundations of Education. (2). Attention is given to the contributions of sociology and anthropology to the understanding of the school 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 less familiar areas of foundations: (A) cultural pluralism, (B) religion and morality, (C) film and fiction, (D) economics and policy, (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). An introduction to the analysis of concepts such as mind, experience and knowledge in their relationship to educational problems and practices and to philosophical systems. 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 educational processes 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 other institutions (political, religious, etc.) in promoting and inhibiting social change in American history. 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, including 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

985. Advanced Studies in Foundations. (3). A course designed for the predoctoral student in any foundational specialty. Prerequisite: 9 graduate hours of foundations education. D 21 985 0 0821

Instructional Services—Library Science

Students wishing to become school librarians in Kansas must have valid teaching certificates plus specific courses in library science, 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 will learn how to apply the Dewey Decimal classification system and selected subject headings. Descriptive cataloging, types of entries, and indexing rules are also covered. D 21 707 0 1601

708. School Library Media Center Book Collection. (3). Basic resources for the development and evaluation of a school library media center collection are considered. Emphasis is placed on selection policies and procedures, the school library media specialist’s responsibilities in the selection process, and the development of a selection resource file. D 21 708 0 1601

709. School Library Media Center Administration. (3). The course provides a study of national and state standards as well as an investigation of the role of the school library media center in the educational structure. Specific topics explored are: goal setting and budgeting, administrative styles and personnel, evaluation of the center, and the design and implementation of procedures and policies. D 21 709 0 1601

710. School Library Media Center Reference Materials. (3). Resources and techniques of providing reference service in a school setting are investigated. D 21 710 0 1601

711. School Library Media Center Program. (3). The leadership role of the school library media specialist in the school program is studied. Strategies needed to design and implement an integrated center program are considered as well as special library skills teaching activities. D 21 711 0 1601

712. Current Trends in Librarianship. (3). The course covers the history and development of libraries and newer functions, aspects of professional leadership, the study of library literature, and current societal and educational changes that have an impact on the school library media center. D 21 712 0 1601


779. Practicum/Internship. (3). A elemen-
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 2 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

832. Secondary School Curriculum. (3). Develops 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 current trends in curriculum design. D 21 832 0 0829

834. The Teaching of English. (3). Recent developments in the 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 0829

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 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, 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 0834

450. Seminar in Secondary Education. (3). D 21 450 9 0830
841. Program Development in Special Education. (3). Designed to study in-depth occupational, information, curriculum, and methods employed by teachers of the mentally retarded in secondary schools. Prerequisites: IS 601 or 840, D 2 1 841 0 0810.

842. Practicum and Internship in Education: Learning Disabilities. (1-4). 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 2 1 865 2 0808.

843. Methods for Teaching the Gifted. (3). Planning for a qualitatively differentiated curriculum to meet the unique needs of the gifted learner will be stressed. A variety of suitable program models including grouping, acceleration, guidance and combinations of these will be explored. Prerequisite: concurrent enrollment in IS 4 74K and L. D 2 1 866 2 0808.

844. Occupational Aspects in Mental Retardation. (3). Designed to study in-depth the establishment and operation of methods for the mildly and severely disabled. Prerequisites: IS 604 or departmental consent. D 2 1 844 0 0810.

845. 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 2 1 865 2 0808.

846. 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 4 74K and L. D 2 1 866 2 0808.

847. 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 2 1 868 0 0808.


849. Practicum Seminar: Gifted. (3). Supervised teaching experiences with gifted learners. Applied teaching approaches will be stressed. The course will provide opportunities to apply various theoretical, structural and technological methodologies related to the education of the gifted learner. Repeatable for a total of 6 hours. Prerequisites: instructor's consent and IS 603, D 2 1 847M 2 0808.

850. Practicum and Internship in Education: Gifted. (3). Supervised teaching experiences with gifted learners. Applied teaching approaches will be stressed. The course will provide opportunities to apply various theoretical, structural and technological methodologies related to the education of the gifted learner. Repeatable for a total of 6 hours. Prerequisites: instructor's consent and IS 603, D 2 1 847M 2 0808.

851. Special Topics in Early Childhood Education and Practice. (1-4). Full-time participation in a class for emotionally disturbed children/adolescents supervised by a master teacher and university professor. Emphasis is on applied teaching techniques for the mild and severely disturbed, formal-informal psycho-educational assessment devices, curriculum strategies, behavior management and prescriptive remediation for learning disabilities. Prerequisites: instructor's consent. IS 749, and 866, D 2 1 847K, and L 2 0808.

852. Practicum Seminar: Gifted. (3). Supervised teaching experiences with gifted learners. Applied teaching approaches will be stressed. The course will provide opportunities to apply various theoretical, structural and technological methodologies related to the education of the gifted learner. Repeatable for a total of 6 hours. Prerequisites: instructor's consent and IS 603, D 2 1 847M 2 0808.

853. Advanced Seminar in Early Intervention: Policy Issues, Research Problems, and Future Directions. (3). Topics presented for study will include ethical issues associated with biomedical and related scientific interventions related to the development of mental retardation across domains in early intervention, specialty, and across cultural groups. Concurrent enrollment in an early childhood special education practicum is strongly recommended. D 2 1 892 0 0820.

854. Advanced Topics in Early Childhood Special Education. (1-4). Special topics seminars in early intervention will be periodically offered to facilitate opportunities for the in-depth study of critical issues or topical research in this rapidly developing field. Prerequisites: IS 728, 729, 740, 761, 762, 840 (or 601), 847T, 891, 892, or permission of instructor. Repeatable for credit. D 2 1 894 0 0820.

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 Wichita State University as special students and thereby qualify for a commission.

Currently, university graduates who are commissioned through United States Army ROTC may serve on active duty in the United States Army for a period of three years. In special cases students may be permitted to delay entry into active duty for a period of up to three years in order to pursue graduate-level studies.

Students enrolled in ROTC may compete for scholarships which pay tuition, fees, books, supplies, as well as $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

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. Freshmen and sophomores attend one conference hour each week, plus an additional 16 hours of leadership laboratory each semester (scheduled by arrangement). Enrollment in the basic course does not obligate students to enter the advanced course or for any period of military service.

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 16 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 duty service credit, or have three years Junior ROTC (high school)
2. Be physically qualified
3. Have a scholastic grade point average of 2.00 or above
4. Successfully complete survey and general screening tests.

The testing and physical examinations are scheduled and arranged by the military science department.

Students are furnished a uniform (advanced course only) and military science texts. In addition, advanced course students receive $100 per month for approximately 20 months. Attendance at advanced camp is reimbursed by $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 Orienteering Team, Intramural athletic teams, Ranger Platoon, Pershing Rifles, and Rifle Team. Participation in these activities may be applied toward leadership laboratory requirements in both basic and advanced courses.

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 between their sophomore and junior years. 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 advanced course.

Lower-Division Courses

101. Introduction to Marksmanship. (1) 1R; 1 Marksmanship Laboratory, An introduction to basic marksmanship skills. In addition to range firing, subjects covered include fundamentals of marksmanship, coaching, safety rules, range courtesy and weapons maintenance. D 15 101 5 1801

113. United States Defense Establishment. (1) 1R; 1 Leadership Laboratory, An introduction to the leadership role and the organization of the national defense system. For credit only. Prerequisite: Marksmanship Laboratory. D 15 113 5 1801

200. ROTC Basic Camp. (4). A six-week training period of classes and field work. Subjects include planning, organizing, coordinating, directing and controlling as a basis for an understanding of application in military organizations. D 15 114 5 1801

223. Fundamentals of Military Training. (1) 1R; 1 Leadership Laboratory, A course designed to develop leadership in the individual, emphasizing planning, organizing, exercising command, and executing tactical missions. D 15 223 5 1801

224. Introduction to Tactics. (1) 1R; 1 Leadership Laboratory, An introduction to tactics. D 15 224 5 1801

Upper-Division Courses

333. Advanced Military Tactics. (2) 2R; 1 Leadership Laboratory, Military instruction and training. A course designed to develop leadership in the individual, emphasizing the planning, organizing, exercising command, and executing tactical missions. Prerequisites: Military Science course (all), or basic summer camp or military service credit and departmental consent. D 15 333 5 1801

334. Advanced Leadership Development. (3) 3R; 1 Leadership Laboratory, An interdisciplinary approach to leadership theory. Provides a degree of sophistication in the fundamental principles of leadership and organization and follows the military framework. Prerequisites: MS 333 and 334 or departmental consent. D 15 334 5 1801

444. Seminar in Leadership and Management. (2) 2R; 1 Leadership Laboratory, Topics and procedures. Preparation for active duty includes roles and responsibilities of the junior officer and leadership seminar. Prerequisite: MS 443 or departmental consent. D 15 444 5 1801

Music Education

Mus. Ed. 351, 352, 501, 606, 610, 611 and 706 are specifically available for students in the College of Education. Service courses in special music education are also 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 interested in counseling education. A seminar for undergraduate students interested in counseling education. Prerequisite: education minor. 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, and communication 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 school psychology. Different preselected topics may be emphasized during a semester. Repeatable with advisor's consent. D 18 452 2 0826
Courses for Graduate/Undergraduate Credit

652. Student Development. (3). Training for students involved as small-group leaders. Prerequisite: DARE student leader. D 18 652 9 0826

653. Studies in Student Development. (1-2). Designed as a supervised experience for students participating as peer advisers and leaders in developing activities for students entering or assigned to University College. Peer counseling and consulting skills are emphasized. Prerequisites: CSP 652 (former 752x) and DARE student leader. D 18 653 2 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 6 hours credit. Prerequisite: departmental consent. D 18 655 9 0826

732. Counseling: Child Abuse and Neglect. (2). The etiology, symptoms and indicators, treatment, and prevention issues 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 advisor'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 persons 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. The course is designed to assist the prospective counselor in developing personal understanding of self as a variable in the counseling process. Prerequisites: CSP majors and instructor's consent. To be taken concurrently with CSP 825. D 18 802 2 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 problem of emotional disturbed or deficient 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 appear to be 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 services to elementary pupils 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. Also studied are current occupational trends and developments and their impact on occupational choice. 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 both measurement 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 explained 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 0826

830. Introduction to Marriage and Family Counseling. (3). A survey course on marriage and family counseling, including theory, techniques and research in the field. Prerequisites: 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 procedures vary according to topic. Repeatable. Prerequisite: instructor's or departmental consent. D 18 852 2 0826

855. Individual Intelligence Assessment. (2). Use of individual tests for appraisal of intelligence, adaptive behavior and learning styles. Research and clinical theory are considered in a lecture-discussion format, which includes some case simulation activities. Concurrent enrollment in CSP 870 is recommended. Prerequisites: CSP 823 or concurrent enrollment. D 18 855 0 0826

856. Practicum in Individual Counseling. (3). Practicum practice in individual counseling. Course requirements include at least 60 hours applied experience. Repeatable for credit. Prerequisites: CSP 824, admission to the school, and instructor's consent. D 18 856 2 0826

857. Seminar in Guidance. (2). Prerequisite: 15 hours in CSP sequence. D 18 857 9 0826

858. Diagnostic Testing. (2). Use of individual tests, rating procedures and behavioral techniques for the appraisal of perceptual development, social and emotional adjustment, classroom behavior and academic skills. Assessment theory and research relevant to these areas are considered in a lecture-discussion format, which includes some case simulation activities. Concurrent enrollment in CSP 870 is recommended. Prerequisites: CSP 823 and instructor's consent. D 18 858 2 0825

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Requires for a minimum of 6 hours credit. Prerequisite: IS 860. D 18 862 4 0826

864. Personality Assessment. (2). An introduction to projective techniques in which both clinical theory and current research are considered in relation to data from other sources, such as direct behavioral observations, rating scales, case histories and personality inventories. Concurrent enrollment in CSP 870 is recommended. Prerequisites: CSP 823 and instructor's consent. D 18 864 0 0825

866. Practicum in Guidance Services. (2-3). Supervised practice in administration, test interpretation, groups and other activities of the guidance department. Prerequisites: CSP 833 and instructor's consent. D 18 866 2 0826

867. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and group counseling. Repeatable for 3 hours credit. Prerequisites: CSP 823 or concurrent enrollment. The second practicum must be in a different area or have a different focus from that of the first. Prerequisites: CSP 825, 855 and instructor's consent. D 18 867 2 0826

870. Assessment Practicum. (2). Supervised experience in the administration, scoring and interpretation of individual assessment techniques in a school, agency or institutional setting. Report writing and case consultation also are considered in terms of the information needs of the referral agent. Repeatable to a maximum of 6 hours credit if students have completed appropriate courses from the lecture-discussion portion of the assessment sequence. Prerequisites: CSP 823, concurrent enrollment in CSP 855 or 865, or successful completion of one or more of these courses or their equivalents, and instructor's consent. D 18 870 0 0825

875-876. Master's Thesis. (2-2). D 18 875 4 0826, D 18 876 4 0826

881. Seminar in School Psychology. (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent. D 18 881 9 0826

890. Special Problems in Guidance. (1-4). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent. D 18 890 3 0826

903. Counseling Theory II. (3). In-depth critical review of research and applicability of major theories to the evaluation and diagnosis of interpersonal and group interaction. D 18 903 0 0826
914. Consultation Techniques. (3). Intensive study of the literature in counseling, social psychology and administration that provides a basis for consultation techniques in the interpersonal context of school and work settings. D 18 914 0 0826

915. Intervention Design. (2). Designed to give the student further experience and skill in utilizing theories of interpersonal relations in creating micro- and macro-learning experiences through designing individual or group experiences. Individual and group interpersonal assessment skills are stressed. D 18 915 0 0826

926. Seminar: Selected Topics. (2). Intensive study of current issues, techniques, research and application of the selected topic. Repeatable for different topics for a maximum of 8 hours. Prerequisite: 15 hours of related graduate coursework. D 18 926 9 0826

928. Seminar: Postsecondary Student Services. (2). Intensive study of issues, theories, approaches, research in topics related to postsecondary student services. Repeatable for different topics for a maximum of 9 hours. D 18 928 9 0826

930. Marriage and Family Counseling II. (3). An advanced course on marriage and family counseling, including theories, techniques, and research in the field. Prerequisite: CSP 803, CSP 850, 30 graduate hours, or permission of instructor. D 18 859 9 0826

946. Practicum in School Psychology. (3 or 6). Supervised practice in providing school psychological services to children in school, clinical or community agency settings. Requires at least 300 hours applied experience per 3 hours of credit. Repeatable for a maximum of 6 hours. Prerequisite: departmental consent. D 18 946 2 0826

947. Internship: Internal or External. (6-8). The internship is normally a full-time placement, appropriate to career objectives, in a position within an agency, institution or school. Internship is normally a series of planned placement internship experiences in a variety of settings designed to develop expertise in interpersonal consulting. 24 units. D 18 947 2 0826

948. Practicum in Marriage and Family Counseling. (3). Prerequisite: CSP 803, graduate status, or departmental consent. D 18 948 2 0826

977. Internship in School Psychology. (2). Supervised experience as a school psychologist in a school or agency setting. Requires at least 500 hours of applied experience. Repeatable for a maximum of 4 hours. Prerequisites: CSP 946 and departmental consent. D 18 977 2 0826

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 801 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 in the community college coupled with improvement of educational services in the community through continued education. Emphasis on methods of finance, facilities, services for improving student and evaluation of the entire program are stressed. D 16 715 0 0827

750. Experienced Administrator's Workshop. (1-2). Offers a variety of administrative topics. D 16 750 2 0827

752. Special Studies in Educational Administration and Supervision. (1-3). A study in the preselected specialized area of educational administration and supervision. Repeatable for credit with departmental consent. Prerequisite: departmental consent. D 16 752 0 0827

Courses for Graduate Students Only

801. Introduction to Administration and Supervision. (3). An examination of the major theories of administration and their application. Includes problems of emphasis on an overview of administration of the school district. Prerequisites: CSP 801, 930. 40 units of credit. Repeatable for credit with departmental consent. D 16 801 0 0827

804. Supervision and the Improvement of Instruction. (3). The application of curricular theories, psychology and methods of supervision to the problems of improving classroom instruction and teaching methods. D 16 804 0 0827

810. The Principalship. (3). Designed primarily for individuals who are completing a master's program in educational administration and supervision. Course content focuses on the role of the principal at the elementary, middle and high school levels. Specific work is designed for each student's projected work level. Prerequisite: EAS 801. D 16 810 2 0827

826. Planning, Implementation, and Evaluation of School Programs. (3). A study of curriculum philosophies, theories and developmental processes. Emphasis on the following topics: evaluation of recent programs and proposed new programs; development of the building and school system levels; and techniques of program evaluation. Prerequisite: EAS 704. D 16 826 0 0826

828. Management and Evaluation of Alternative Programs. (3). A study of the management, organization and planning of alternative programs. Prerequisite: 826. D 16 828 0 0827

836. School Personnel Management. (3). An advanced study of staff problems—selection and recruitment, certification, orientation, in-service training, evaluation, transfer and dismissal, and retirement. Prerequisites: master's degree or instructor's consent. D 16 836 0 0827

842. School Law. (3). General concepts of law, interpretations of statutes and court decisions affecting education, and legal responsibilities of school personnel. D 16 842 0 0827

843. Kansas School Law. (3). An examination of specific Kansas legislation, court decisions affecting educational institutions 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, maintenance, food, and transportation services. Prerequisites: 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 advanced study with a research orientation. 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 adviser's consent. D 16 860 0 0824

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum of 2 hours of credit. Prerequisite: EAS 860. D 16 862 0 0827

871. Group Process for Administrators and Supervisors. (3). A laboratory-based course in which group dynamics of group processes are experienced by class members in a group setting and activities. These experiences for potential and practicing 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, beliefs on 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

879. Strategies for School Improvement. (3). An examination of organizational/instructional 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 in organizational effectiveness that correlates with school effectiveness as well as related teacher effectiveness variables. Prerequisites: EAS 801 and 804. D 16 879 0 0827

884. School Plant Design and Operation. (3). Planning new educational facilities based upon educational programs. The evaluation of existing schools, remodeling 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 literate students in extending
the student to extend basic skills relevant to a particular administrative assignment. The student must register for 3 hours of credit in EAS 991 to meet recertification requirements. Prerequisites: completion of master's degree and departmental consent. D 16 991 2 0827

90. Special Problems in Administration. (1-4). Directed problems in research for master's students primarily under supervision of a graduate instructor. Prerequisite: instructor's consent. D 16 890 3 0827

946. 947. 948. 949. The Internship. (2, 3, 4, 5). Administration in educational institutions. Prerequisites: 9 semester hours of post-master's graduate courses in educational administration and supervision and 3.10 graduate grade point average. Arranged on an individual basis. D 16 846 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 401 and 804 or instructor's consent. D 16 953 0 0827

955. Field Project 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 a need for research 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. 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 better 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 specialist 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 recertification in Kansas. The course of study will be individually designed by an EAS faculty member with the student and his/her school district supervisor. The course will address the needs of the student and of the district. The thrust will be to assist

### 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, 105A, 107A, 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 IS 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 2 hours within the area of rhythm activities (PE 515, aerobics, ballet, ballroom dance, or folk dance of many countries).

Field Option Specialization. Candidates may select one of the four approved options: fitness, sport business management, safety, and athletic training. All candidates must maintain a 2.5 GPA in their major and a 2.25 overall.

Fitness. Required courses are PE 105A, 106E, 106F, 107A, 111, 115, 117, 229, 270, 328, 331, 360, 530, 533, 544, 481, 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, 530, 533, 544, 481, and 547, plus at least 31 hours of approved electives.

Safety. Required courses are PE 111, 117, 206, 210, 229, 270, 300, 301, 328, 331, 360, 530, 533, 544, 481, and 547, plus at least 29 hours of approved electives.

### Administrative Data Processing

Administrative data processing skills and concepts of management information systems. Hands-on experience in machine language programming, data base management, word processing, and spreadsheet programs, using Apple computers. D 16 888 0 0827

### Athletic Training A (Non-Teaching Option)

Required courses are Psych. 111, PE 111, 117, 229, 270, 328, 331, 360, 430, 432, 530, 570, 481, 547, Phys. 116, Biol. 225, 226 and HS 331, plus at least 7 hours approved electives and 1,800 clock hours under direct supervision of a Certified Athletic Trainer.

### Athletic Training B (Teaching Option)

If the candidate is not a physical education major, the following courses are required: Psych. 111, PE 111, 115, 117, 229, 270, 328, 331, 360, 430, 431, 432, 530, 570, 481, 547, HS 331, Phys. 116, Biol. 225 and 226, plus 7 hours of approved electives. If the candidate is a physical education major the following courses are required in addition to those required for the physical education major: PE 331, 430, 432, 570, Chem. 103Q, Phys. 111Q, Biol. 225, 226, 470. The candidate also must have 1,800 clock hours under direct supervision of a Certified Athletic Trainer.

### Recreation

Students majoring in recreation must meet all College of Education entrance requirements and fulfill the following program requirements:

1. Complete the core courses—PER 112, 126, 226, and 302.
2. Complete the career program—PER 426, 427, and 481.
3. Complete 6 hours approved by the recreation coordinator in two of the following areas: physical education, music, art, dance, theater.
4. 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.

### Areas of Certification

**Driver's Education (state certification).** (18 hours) Required are Psych. 111 and PE 210, 300 and 301. Electives consist of 6 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.

**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. Principals 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).

Service Program

Physical education activity courses carry 1 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. Recreation in America. (3). Emphasizes the practical aspects of recreation in the lives of people today as well as provides the theoretical and historical background to allow students to gauge the magnitude of recreation as a social phenomenon. The course will also survey the professional opportunities available in the field of recreation. D 13 112 0 0835
115. Personal and Community Health. (3). D 13 115 0 0837
117. First Aid. (2). Standard and/or advanced first aid with certification by the American Red Cross. D 13 117 0 0837
126. Challenge of Leisure. (2). The central objective of this course will be to take a systematic look at the phenomenon of leisure and its changing concepts, leisure behavior patterns, leisure delivery systems, and leisure's relationship to other community support systems. D 13 126 0 0835
150. Workshop. (1-3). D 13 150 2 0835
152. Special Studies in Health, Physical Education, and Recreation. (1-3). Group study activities in preselected areas of health, physical education, or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent. D 13 152 0 0835
200. Observation in Physical Education. (1). A course that provides students with observation experiences in selected elementary schools. D 13 200 1 0835
201A. Introduction to Activities. (2). This course introduces the major student to the basic skills of badminton, tennis, flag football, and fencing. D 13 201A 5 0835
201B. Introduction to Activities. (2). This course introduces the major student to the basic techniques of archery, and combatives. D 13 201B 5 0835
201C. Introduction to Activities. (2). This course introduces the major student to the basic skills of softball, volleyball, handball, racquetball, and table tennis. D 13 201C 5 0835
201D. Introduction to Activities. (2). This course introduces the major student to the basic skills of baseball, basketball, and fitness activities. D 13 201D 5 0835
206. Aquatics. (2). 1R; 2L. An introduction to aquatic techniques and an orientation to all levels of aquatics that enable individuals to manage themselves adequately and satisfactorily in water. Prerequisite: PE 107A or departmental consent. D 13 206 0 0835
210. Safety Education. (3). A general survey of the field of safety. Emphasis is on the philosophical implications, psychological considerations, concepts, safety instruction and safety program development. Culminates with the different areas of safety concern being analyzed in terms of needs, development and trends. D 13 210 0 0836
220. Officiating Techniques. (3). Theory, rules and mechanics of officiating major sports common to the high school and college athletic programs. D 13 220 1 0835
226. Introduction to Community Recreation. (2). A study of the philosophy, origin and development of modern recreation programs. D 13 226 0 0835
229. Applied Human Anatomy. (3). 3R; 2L. A study of the structure and function of the skeletal and muscular systems of the human body, with direct application to body movements in physical activities. D 13 229 1 0835
254. Gymnastics. (3). Principles of body mechanics and application to gymnastics, including free exercise and apparatus. Prerequisite: PE 105A or departmental consent. D 13 254 2 0835
270. Motor Learning. (3). The introduction and examination of the physiological and psychological factors that affect the acquisition of motor skills. D 13 270 1 0835
280G. Fitness for Life. (2). 1R; 2L. The whys and hows behind activities designed to develop and maintain the muscular and cardiorespiratory systems of the human body. Two days per week will be spent in a laboratory situation to assess fitness components and participate in an individually designed fitness program. One day per week will be lectured to enhance understanding of exercise, weight control, cardiovascular disease, and fitness parameters. D 13 280G 1 0835

Upper-Division Courses

300. Basic Driver Education and Training I. (3). D 13 300 0 0836
301. Advanced Driver Training II. (3). D 13 301 2 0836
302. Urban Recreation. (3). This course exposes students to urban recreation from a philosophical and practical view. The course will treat the historical relationship of urban recreation to the recreation movement in America. The inner city and its recreational characteristics will be examined in light of trend, recreational planning, programming, and career opportunities. D 13 302 0 0835
311. 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: PE 201B, PE 270, IS 310, PE 201A, 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 fitness activities. Prerequisites: PE 201C, PE 201D, PE 270, IS 310. or departmental consent. D 13 313 1 0835
325. Preschool Physical Education. (3). 3R; 2L. The first of a three-course series designed for a major in physical education with an emphasis in elementary school physical education. The course content focuses on the development of preschool children. Emphasis is placed on designing learning activities that will enhance the development of their movement awareness, motor patterns and perceptual-motor skills. The course includes 15 hours of laboratory experiences in day care and/or preschool settings. D 13 325 1 0835
326. Physical Education in the Primary Grades. (3). 3R; 2L. The second in the series designed for an emphasis in elementary school physical education. It focuses on developmental movement activities for children in grades K-3. The course includes 15 hours of laboratory experiences with primary school children. D 13 326 0 0835
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 4, 5 and 6. The course includes 15 hours in laboratory experiences with intermediate grade school children. D 13 327 0 0835
328. Kinesiology and Biomechanics. (3). The understanding of the kinethetics and mechanics of human motion, with respect to performance of sport activities. Prerequisite: Phys. 116 or departmental consent. D 13 328 0 0835
331. Athletic Injuries and Training Techniques. (2). 1R; 1L. Injuries common to athletic activities. emphasizing prevention, first aid, treatment and care as prescribed by the team physician. D 13 331 1 0835
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 13 510 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 2 0835

530. Physiology of Exercise. (3), 3R; 1L. 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; included in the course content: (1) basic statistical procedures, (2) evaluating students, (3) evaluating teaching and (4) a survey of measurement methods. D 13 533 1 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 will spend the equivalent of full-time employment in the appropriate agency for one full semester. Prerequisite: senior standing and departmental consent. D 13 547 2 0835

570. Psychology of Sport. (3). An in-depth analysis of the psychology of motor learning and its implications for the teacher-coach. D 13 570 0 0835

590. Independent Study. (1-3). Prerequisite: departmental consent. D 13 590 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 12 hours counting toward the graduate degree. Offered Cr/NCr only. D 13 781 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

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

The following abbreviations are used in the course descriptions: A 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 Wichita State University. The curriculum provides a vigorous, challenging experience through a broad spectrum of fundamental technical knowledge as well as courses in humanities, social sciences, communications, mathematics, and physical sciences. This balance in the curriculum prepares students for professional positions in the scientific-industrial community after the 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 Board of the Accreditation Commission of the Accreditation Board for Engineering and Technology. The curricula of the electrical, mechanical, and manufacturing options of the engineering technology program are accredited by the Technology 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 (BSE) also allows students to pursue in-depth studies in additional fields, such as computer science, bioengineering, engineering management, as well as other interdisciplinary programs. A program leading to the Bachelor of Engineering Technology (BET) is offered students who seek an application-oriented curriculum and plan to enter engineering support occupations.

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 engineering. Typical fields of specialization include analytical and computational fluid mechanics, applied statistical methods, avionics, biomechanics, communications, computers, control systems, engineering management, 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 Graduate School 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 2.00 grade point average and a WSU 2.00 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 or Speech 111 or Speech 112; (c) Math. 2420 or its equivalent; (d) one required basic science course; and (e) Engineering 125.

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. 213Q. These students are then required to take Phys. 3140 when they have fulfilled the prerequisites for this course, which are: Math. 243 with a grade of C or better and Phys. 213Q 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 2.00 and if they have attempted at least 12 hours in that grade point average at 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 2.00.

Students on academic probation may not enroll for more than 12 semester hours in a 16-week term, 6 semester hours in an eight-week term or 3 hours in a four-week term. Exceptions to these limitations may be made on the recommendation of the student's department advisor with the approval of the student's department chairman.

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 2.00 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 D grade work in excess of one-quarter of their total hours. At midsemester, 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 5 hours for each four week session or 10 hours during the eight week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 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 de-
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 on an as-available basis 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 non-engineering 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 students entering the University, requirements for the College of Engineering are:

**Area** | **Hrs.**
--- | ---
Basic skills | 12
Humanities and fine arts* | 9
Social and behavioral sciences** | 6
Mathematics and natural sciences | Satisfied by college requirements
Elective distribution courses | Satisfied by college requirements

To qualify for graduation, all engineering and engineering technology 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 are required by the Engineering Accrediting Board. In addition, at least two courses are required in one of the departments in humanities and fine arts, and social and behavioral sciences. The two-course sequence must include at least one course numbered 200 and above.

At least 9 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.

* Courses must be taken in at least three departments.

** Courses must be taken in at least two departments.

General Engineering Requirements

Except for BET students, 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 ¼ year of mathematics beyond trigonometry, ½ year of basic sciences, 1 year of engineering sciences, and ½ year of engineering design.

2. The equivalent of ½ 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 subjects such as accounting, industrial management, finance, personnel administration, introductory language, 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 6 hours is required in the social and behavioral sciences, and a minimum of 9 hours in humanities and fine arts. At least 9 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 (19 Hours Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics I</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ME 400, Fluid and Heat Flow</td>
<td>4</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</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.

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 2.50 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 minor area. 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 must 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 cosponsored 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) in 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 table below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Plan A</th>
<th>Plan B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>W</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>W</td>
<td>W</td>
</tr>
<tr>
<td>5</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

These plans make it possible for each industrial position to be filled by two students, one from Plan A and one from Plan B.

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 2.5 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.

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 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. Prerequisites: the basic requirements for admission include successful completion of 30 hours toward an engineering degree and approval by the appropriate faculty sponsor. Grade is credit/no credit. E 10 281 A 2 0901

481A. Co-op Education. (1). This course provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work with a planned and supervised professional experience. 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. Prerequisites: successful completion of at least two units of Engr. 281A and approval by the appropriate faculty sponsor. E 10 481 A 2 0901

481P. Co-op Education. (1). This course provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and Cooperative Education coordinators. Students enrolling in Engr. 481P must enroll concurrently in a minimum of 20 hours per week at their co-op assignment. Prerequisites: successful completion of at least two units of Engr. 281P and approval by the appropriate faculty sponsor. E 10 481 P 2 0901

Engineering—General Education

The following courses explore general education engineering topics.

Lower-Division Courses

101. Introduction to Computing Methods. (1). Introduction to computing methods and FORTRAN programming, utilization of Digital Computing Center facilities, application of computers to technological problems and familiarization with engineering laboratories. Offered for Co/Cr only. E 10 1 01 T 0901

125. Introduction to Engineering Concepts. (2). 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. Prerequisites: freshman standing with 1/2 units of high school algebra. Not open for enrollment to students with more than 48 hours of credit. E 10 125 T 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 upon conceptual understanding of relationships between technology and its users. Responsibility of nonengineers to be familiar with technical developments in order to effectively control technology for survival and enrichment is stressed. Guest lecturers and demonstrations are used extensively. For non-engineering 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 anthropology, sociology, economics, and technology. Senior standing recommended. Prerequisite: instructor's consent. E 10 400 0 0901

Course for Graduate/Undergraduate Credit

565. Computer Graphics. (3). 2R; 2L. Forms of computer graphics, input-output devices, generation of points, vectors, etc, include interactive versus passive graphics and the mathematics of three dimensions, projective and the line problem. Animated movies, computer-aided design and instruction are included as well as applications. Prerequisites: Math. 344, EE 199 or AE 327 or equivalent. E 10 565 1 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, independent study in specialized content areas in engineering under the supervision of a faculty adviser; repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent. E 10 990 4 0901

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-Learett 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>Freshman</th>
<th></th>
<th>Sophomore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>Hrs</td>
<td>Hrs</td>
</tr>
<tr>
<td>Eng. 101 and 102, College English</td>
<td>6</td>
<td>Eng. 110 and 213, Engineering Graphics I and II</td>
</tr>
<tr>
<td>Chem. 1110, General Chemistry</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Math. 2420 and 243, Calculus I and II</td>
<td>10</td>
<td>Engr. 125, Introduction to Engineering Concepts</td>
</tr>
<tr>
<td>Phys. 3130 and 3150, University Physics I</td>
<td>5</td>
<td>IE 110 and 213, Engineering Graphics I and II</td>
</tr>
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<td></td>
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<tr>
<td>Speech 111, Basic Public Speaking</td>
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<tr>
<td>Math. 311, Introduction to Linear Algebra</td>
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<tr>
<td>Math. 344, Calculus III</td>
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<td></td>
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<tr>
<td>Math. 550, Ordinary Differential Equations</td>
<td>3</td>
<td></td>
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<tr>
<td>Phys. 314Q, University Physics II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AE 324, Introduction to Aeronautical Engineering</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>AE 327, Engineering Digital Computation</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>AE 333, Mechanics of Deformable Solids I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
<td></td>
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<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
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<td></td>
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<tr>
<td>AE 424, Aerodynamic Theory</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Engr. 565, Computer Graphics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
<td>4</td>
<td></td>
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<tr>
<td>Natural sciences electives</td>
<td>3</td>
<td></td>
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<tr>
<td>Humanities and fine arts or social and behavioral sciences electives*</td>
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<td></td>
</tr>
<tr>
<td>Technical electives</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

* Refer to Graduation Requirements at the beginning of this section for details.

Upper-Division Courses

323. Engineering Mechanics: Statics. (3). Statics is the study of the condition of equilibrium of rigid bodies under the action of forces. Rigid bodies include beams, trusses, frames, and machines. Three-dimensional bodies are considered. Also included is the study of centroids, centers of gravity, and moments of inertia. Corequisites: Math. 243 and Phys. 3130. E 11 323 0 0921

324. Introduction to Aeronautical Engineering. (2). 1R; 2L. Introductory course in Aeronautical Engineering. The study of atmosphere, historical development of science of aeronautics, aircraft and aerodynamic nomenclature, non-dimensional forces and moments, and equilibrium of aircraft in flight. Introductions to aircraft materials, structural analysis and experimental stress analysis. Flow visualization and force measurements in wind tunnel and student participation in light plane flight demonstrations. Prerequisites: AE 323 and 327. E 11 324 0 0902


333. Mechanics of Deformable Solids I. (3). Deformable Solids is the study of mechanical properties of materials, transformation of stresses and strain, stresses and
deformations in structural elements of various shapes and loading, statically determinate structures. Prerequisites: AE 323 with C or better, and Math 344 which may be taken concurrently. E 11 333 1 0921


420A. Airplane Aerodynamics I, Qualitative Aspects. (1). Aircraft nomenclature. Structure of the atmosphere. Aircraft forces and moments and their nondimensionalizations. Lift and drag phenomena, separation and stall. Wing pressure distribution. Aircraft design procedure. Not acceptable as a technical elective for the BS in aeronautical engineering. Prerequisite: AE 420A or departmental consent. E 11 420A 0 0902


Courses for Graduate/Undergraduate Credit

512. Experimental Methods in Aerodynamics. (2). 4L. A study of experimental methods and test planning, error analysis and propagation, model design, instrumentation, and flow visualization. Use is made of subsonic and supersonic wind tunnels. Prerequisite: AE 424. E 11 512 1 0902


525. Flight Structures I (3). Stress analysis of flight vehicle components. Prerequisites: AE 324, AE 333, Math 550 and ME 350 both of which may be taken concurrently. E 11 525 0 0902

527. Numerical Methods in Engineering. (3). Error analysis. Polynomial approximations and power series, iterative solutions of equations, matrices and systems of linear equations, numerical differentiation and integration, approximate solution of differential equations. Additional typical topics are included. Prerequisites: AE 327, and Math 550 which may be taken concurrently. E 11 527 1 0901

532. Propulsion. (3). Theory and performance of propellers and reciprocating, turbofan, and rocket engines. Prerequisite: AE 400. E 11 532 0 0902

560. Selected Topics in Aeronautical Engineering. (1-3). Prerequisites: departmental consent. E 11 560 0 0902

625. Flight Structures II. (3). 2R; 3L. Strength analysis and design of flight vehicle components. Special projects in structural analysis and design. Prerequisite: AE 225. E 11 625 0 0902

628. Airplane Design. (3). 1R; 4L. Preliminary design procedure and systems analysis. Prerequisite: AE 514. E 11 628 1 0902

633. Mechanics of Deformable Solids II. (3). The course is an extension of AE 333. Typical topics studied include transformation of stress and strain in three dimensions, noncircular torsional members, curved beams, beams with unsymmetrical cross sections, energy methods and the finite element method of analysis, stress concentration, theories of failure, fracture mechanics, etc. Prerequisite: AE 333. E 11 633 0 0921

664. Field Analysis. (3). Potential theory: applications of the equations of Poisson and Helmholtz, and of the divergence and wave equations to various field and flow phenomena. Analysis of representative problems is also made. Prerequisite: ME 400. E 11 664 0 0902

675. Selected Topics in Aeronautical Engineering. (1-3). Prerequisite: departmental consent. E 11 675 0 0902

676. Selected Topics in Engineering Mechanics. (1-3). Prerequisite: departmental consent. E 11 676 0 0921

677. Vibration Analysis. (3). A study of free, forced, damped and undamped vibrations for one and two degrees of freedom, and as classical, numerical and energy solutions for both underdamped and critically damped systems and for continuous systems is given. Prerequisites: Math 550 and AE 373. E 11 677 0 0921

700. Structural Dynamics I. (3). Matrix methods for the analysis of the free and forced vibrations of multiple degrees of freedom structures. Prerequisite: AE 677. E 11 700 0 0921

702. Jet Propulsion. (3). Analysis of jet propulsion devices: study of cycles, effect of operating variables, presentation of problems of installation, operation and instrumentation. Prerequisite: AE 532 or equivalent. E 11 702 0 0902

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 0902

711. Aerodynamics of Nonviscous Fluids. (3). A study of equations of motion, potential flow, conformal transformations, finite wing theory and nonsteady airfoil theory. Prerequisites: AE 424 or AE 420 or ME 621. E 11 711 0 0902

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. Hypersonic potential functions, method of characteristics, conical shocks and subsonic/supersonic similarity laws. Prerequisite: AE 424 or AE 420 or ME 621 or equivalent. E 11 716 0 0902

731. Analysis of Elastic Solids I. (3). The theory and analyses of stresses and deformations in two-dimensional plate and shell structures, stresses and strains, compliances and stiffness matrices for two- and three-dimensional problems. Additional typical topics include stress concentrations, and uses are made of advanced composite materials, such as graphite-epoxy, kevlar-epoxy, boron-epoxy, etc., are designed and analyzed. Prerequisites: AE 333 and Math 311 or instructor's consent. E 11 731 0 0921

734. Mechanics of Fiber Composites. (3). An introduction to the analysis of composite materials and their use in aerospace engineering. Prerequisites: AE 420 or equivalent. E 11 734 0 0902

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 0902

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 0902

773. Engineering Mechanics: Dynamics II. (3). A study of kinematics and kinetics of planar and rigid body 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.

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.
numerical and energy solutions, and an introduction to problems of aerodynamics. Prerequisite: AE 677. E 11 810 0 0921

812. Aerodynamics of Viscous Fluids. (3). Viscous fluids flow theory and boundary layers. Prerequisite: AE 424 or 420 or ME 621. E 11 812 0 0902

822. Finite Element Analysis of Structures. (3). Analysis of structures by the direct stiffness method and comparison of methods and selected design in finite element analysis. Prerequisite: AE 333 and instructor's consent. E 11 822 0 0902

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 design methods for random data are included. Prerequisite: instructor's consent. E 11 838 0 0921

876. MS Thesis. (1-4). 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 the MS directed study option up to 2 hours. Prerequisite: graduate standing. E 11 878 4 0902

913. Aerodynamics of Aerolasticity. (3). A study of thin airds and finite wings in steady flow and thin airds oscillating in incompressible flow. Extension to compressible and three-dimensional airds and modern methods for low aspect ratio lifting surfaces are included. Prerequisites: AE 711 and 677 or instructor's consent. E 11 913 0 0902

916. Aerodynamics of Compressible Fluids II. (3). An exploration of perfect gas flows past bodies of revolution. Also included are axisymmetric methods of characteristics, hypersonic and sonic similarity, Navier-Stokes theory, high temperature gases in equilibrium, and frozen flows and one- and two-dimensional moving shock waves. An introduction to isentropic flow and mixing is included. Prerequisite: AE 716. E 11 916 0 0902

936. Theory of Plasticity. (3). Includes criteria of yielding, including plastic strain-stress relationships, and stress and deformation in thick-walled shells, rotating discs and cylinders, bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Two-dimensional and axially symmetric problems of finite deformation and variational and extremum principles are included. Prerequisite: AE 731. E 11 936 0 0921


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 as well as behavior in 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, electrical 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 a 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>
</tr>
</thead>
<tbody>
<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 Lab I*</td>
<td>4 or 5</td>
</tr>
<tr>
<td>Phys. 315Q, University Physics Lab</td>
<td>1</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>Humanities and fine arts electives</td>
<td>3</td>
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</table>

### Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<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, Classical College Physics Lectures I*</td>
<td>4 or 5</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EE 199, Engineering Computing Fundamentals</td>
<td>3</td>
</tr>
</tbody>
</table>

### EE 382, Electrical Dynamics | 4 |
### ME 398, Thermodynamics | 3 |
### Humanities and fine arts or social and behavioral sciences electives | 5 |
### Technical electives ** | 2 |

### Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 363, Electromagnetic Field Theory</td>
<td>3</td>
</tr>
<tr>
<td>EE 488, 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>ME 400, Fluid and Heat Flow</td>
<td>4</td>
</tr>
<tr>
<td>Math. 671, Probabilistic Models and Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>Natural sciences electives</td>
<td>3 or 4</td>
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<tr>
<td>Social and behavioral sciences electives</td>
<td>4</td>
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<tr>
<td>Technical electives **</td>
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</table>

### Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>EE 585 and 595, Electrical Design Project I and II</td>
<td>2</td>
</tr>
<tr>
<td>EE 681, Electronic Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>EE 682, Energy and Information Transmission</td>
<td>2</td>
</tr>
<tr>
<td>EE 686, Information Processing</td>
<td>4</td>
</tr>
<tr>
<td>EE 689, Electrical Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Social and behavioral sciences electives</td>
<td>5</td>
</tr>
<tr>
<td>Technical electives **</td>
<td>15</td>
</tr>
</tbody>
</table>

* One of the following courses must be taken: EE 199 or 199L. (3) An introduction to basic concepts of computer organization and operation. A study is made of machine and
assembly language programming concepts that illustrate basic principles and techniques. Prerequisite: EE 319 or equivalent. E 12 794 1 0909

Upper-Division Courses

376. Electrical Dynamics. (4). 3R; 3L. Electric circuit analysis with emphasis on the time varying case; sinusoidal excitation, frequency response, network theorems, coupled circuits, and telegraphic circuits. Prerequisites: Math. 344, Phys. 314, and EE 199 or AE 327. E 12 382 1 0909

488. Electromechanical Energy Converters. (4). 3R; 3L. Theory and analysis of electromechanical energy conversion devices. Prerequisite: EE 382 or departmental consent. E 12 448 1 0909

492. Electronic Circuits I. (3). 3R. An introduction to microcircuit topics including digital devices and integrated circuits and the application of these devices to linear and digital circuits. Applications include, but are not limited to, signal conditioning, logic circuits, active filters, and power supplies. Prerequisites: EE 382 and Math. 550. E 12 492 1 0909

Courses for Graduate/Undergraduate Credit

580. Transient and Frequency Analysis. (3). 3R. A study of classical transient analysis and Fourier techniques. An introduction to Laplace and Fourier transforms, with emphasis on network responses; complex frequency concepts and signal spectra. Prerequisite: EE 382 and Math. 550. May not be counted toward a graduate electric major. E 12 580 0 0909

585. Electrical Design Project I. (1). 3L. A design project under faculty supervision chosen according to the student's interest. Prerequisite: departmental consent. May not be counted toward a graduate electric major. E 12 585 3 0909

588. Advanced Electromechanical Energy Converters. (3). 3R. A continuation of EE 488, including solid-state control. Computer applications are stressed. Prerequisites: EE 492 and 488. E 12 588 1 0909

594. Logic Design and Switching Theory. (3). 3R. An introduction to the function and application of digital integrated circuits. Combinational and sequential design techniques are covered in detail. Prerequisite: junior standing or departmental consent. May not be counted toward a graduate electric major. E 12 594 1 0909

595. Electrical Design Project II. (1). 3L. May not be counted toward a graduate electric major. Prerequisite: EE 588 or departmental consent. E 12 595 3 0909

598. Electric Energy Systems. (3). 3R. Concepts of electric energy systems, high-energy transmission lines, system representation, load-flow analysis, load control, economic operation, symmetrical and unsymmetrical faults, and system stability. Computer applications are stressed. Prerequisite: EE 488. E 12 598 0 0909

638. Engineering Applications of Small Computers. (3). This course is designed to provide an understanding and appreciation of small computer capability and the application of these computers to engineering problems. Through hands-on operation, topics such as digital computer operation, memory, peripheral equipment, and software are covered. Prerequisites: EE 282 or equivalent and at least one EE course at 500 level or above. E 12 638 0 0909

654. Probabilistic Methods in Systems. (3). This is a course in random processes which is designed to prepare the student for the study of computer systems, information theory, and signal processing. The course covers basic concepts and useful analytical tools for engineering problems involving discrete and continuous random processes. Applications to system analysis and identification, random and digital signal processing, data compression, and communications disciplines will be discussed. Prerequisites: EE 580 and IE 354 or departmental consent. E 12 654 0 0909

663. Waves, Waveguides, and Antennas. (3). A study of radiation and transmission of electromagnetic waves. Topics include plane waves, magnetic, electric, and oblique reflections, dielectric waves, transmission through waveguides, and introduction to antennas. Prerequisite: EE 363, and IE 354. E 12 663 0 0909

677. Selected Topics in Electrical Engineering. (1). A variety of special courses are offered under this heading on a periodic basis. Repeatable for credit. Prerequisite: departmental consent. E 12 677 0 0909

681. Electronic Circuits II. (4). 3R; 3L. An investigation of the theory and application of discrete and integrated circuits. Topics include, but are not limited to, feedback, active and switched capacitor filters, non-linear circuits, analog and digital phase locked loops, switched-mode power conversion, and circuits. Prerequisite: EE 581 and 580 or departmental consent. May not be counted toward a graduate electric major. E 12 681 1 0909

682. Energy and Information Transmission. (2). 4R. A study of the theory and application of discrete and integrated circuits. Topics include, but are not limited to, feedback, active and switched capacitor filters, non-linear circuits, analog and digital phase locked loops, switched-mode power conversion, and circuits. Prerequisite: EE 581 and 580 or departmental consent. May not be counted toward a graduate electric major. E 12 682 0 0909


684. Introductory Control System Concepts. (3). 3R. An introduction to system modeling and simulation, dynamic response, feedback, state feedback, and compensator design. Prerequisite: EE 580. E 12 684 0 0909

686. Information Processing. (4). 3R; 3L. Properties of signals and noise, introduction to information theory, and analog and digital systems for information processing are included. Prerequisite: EE 580 or equivalent. E 12 686 1 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, depending on the background of the students enrolled. May not be counted toward a graduate electric major. Prerequisite or corequisite: EE 682 and any two of EE 594, 588, 638, 663, and 684. E 12 689 1 0909

694. Digital Computer Design Fundamentals. (3). An introductory but reasonably detailed study of digital computers from an integrated hardware-software approach. Consideration is given to computer logic design, arithmetic units and operation, large capacity storage systems, output units and systems integration. Prerequisite: EE 594 or departmental consent. E 12 782 0 0909

782. Methods of Discrete Systems Analysis. (3). A study of methods of analysis of discrete-time signals and systems. Time-domain techniques include difference equations and discrete convolution. Z-transform methods, frequency response of discrete systems, discrete Fourier transform, and fast Fourier transform are covered. Applications in digital signal processing and sampled-data systems are surveyed. Prerequisite: EE 580 or departmental consent. E 12 782 0 0909

796. Digital Communication Systems. (3). A course designed to cover theoretical and practical aspects of digital communication. Topics to be covered include sampling and analysis of digital information transmission; digital modulation schemes such as ASK, PSK, FSK, DPSK; error control; coding and detection for digital transmission; and computer analysis of digital systems. Prerequisites: EE 682 and any two of EE 594, 588, 638, 663, and 684. E 12 786 0 0909

790. Independent Study in Electrical Engineering. (1-12). Arranged Individual independent student study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent. E 12 790 4 0909

792. State-Variable Techniques in Systems I. (3). A course designed to cover state-space techniques. Prerequisite: mathematics fundamental to state-space concepts. Formulation of state-variable models for linear and nonlinear continuous and discrete systems, and concepts of controllability and observability. Prerequisites are studied in addition to Liapunov and Lagrange stability and computational approximation techniques. Prerequisite: EE 560 or departmental consent. E 12 792 1 0909

794. Advanced Digital Systems. (3). A course covering primarily two topics: (1) microprocessor concepts and programming. The operation and application of microprocessors are covered, and a survey of available devices is reviewed. The characteristics of microprogrammable architecture are covered, and the techniques of microprogramming are presented. The techniques are applied on the department's microprogrammable minicomputer. Prerequisites: EE 684 and 226 or equivalent. E 12 794 0 0909
Courses for Graduate Students Only

854. Stochastic Control Systems. (3). Review of the pertinent aspects of deterministic system models; stochastic processes and linear dynamic system models with emphasis on linear systems driven by white Gaussian noises, linear and quadratic optimal filters, design and performance analysis of Kalman filters. Prerequisites: EE 684 and 654. E 12 854 0 0909.

876. MS Thesis. (1-3). Repeatable for credit toward the MS thesis option up to 6 hours. Prerequisite: prior consent of MS thesis advisor. E 12 876 4 0909.

877. Special Topics in Electrical Engineering. (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 12 877 0 0909.

882. Analog and Digital Filters. (3). A course covering the basic knowledge and the tools of filter design. Both analog and digital filters are treated. Topics include filter approximations, passive and active analog filter realizations, sensitivity analysis, and digital filter concepts and design methods. Prerequisite: EE 782 or departmental consent. E 12 882 0 0909.


887. Communication Theory. (3). Theory of information and noise: communication of information in the presence of noise, channel capacity, modulation and multiplexing, sampling and coding: detection theory, including effects of noise and nonlinear circuits; and correlation techniques. Prerequisite: EE 654 and 686 or departmental consent. E 12 887 0 0909.

888. Selected Topics in Antennas and Propagation. (3). Determination of characteristics of practical antenna systems: radiation patterns and antenna impedance, diffraction, horns, slots, etc; and wave propagation in the earth's environment, including tropospheric and ionospheric phenomena. Prerequisite: EE 663. E 12 888 0 0909.

893. State-Variable Techniques in Systems II. (3). A continuation of the study of state-space concepts in the areas of nonlinear state models and optimal and suboptimal control systems with wide classes of control systems. Prerequisite: EE 792 or departmental consent. E 12 893 0 0909.

902. Topics in Control Systems. (3). A study of various concepts such as multi-loop systems, multi variate systems and decoupling, nonlinear systems, and sampled-data systems. Repeatable for credit. Prerequisite: EE 684 or departmental consent. E 12 890 0 0909.


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 12 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 advisers.

Modern, well-equipped laboratories are available to supplement classroom instruction in human factors engineering, manufacturing processes, and computer analysis. The industrial engineering department also has modern drafting and 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

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Freshman</td>
</tr>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
</tr>
</tbody>
</table>

Chem. 111Q, General Chemistry 5
Math. 242Q and 243, Calculus I and II 10
Phys. 313Q, University Physics I 5
Phys. 315Q, University Physics II 1
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication 3
Engr. 125, Introduction to Engineering Concepts 2
IE 110, Engineering Graphics I 2

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Math. 311, Introduction to Linear Algebra 1</td>
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</tbody>
</table>
Math. 344, Calculus III 3
Math. 550, Ordinary Differential Equations 3
Phys. 314Q, Classical College Physics II 4
AE 323, Engineering Mechanics: Statics 3
EE 199, Engineering Computing Fundamentals 3
AE 373, Engineering Mechanics: Dynamics 3
EE 382, Electrical Dynamics 4
IE 213, Engineering Graphics II 2
ME 398, Thermodynamics I 3
Econ. 201Q, Principles of Economics I 3
Econ. 202Q, Principles of Economics II 3

Junior

<table>
<thead>
<tr>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 333, Mechanics of Deformable Solids I 3</td>
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</tbody>
</table>
IE 354, Engineering Probability and Statistics 3
IE 355, Engineering Economy 3
IE 452, Work Measurement 3
IE 460, Engineering Management 3
IE 549, Human Factor in Engineering Design 3
IE 550, Applied Operations Research 3
ME 400, Fluid and Heat Flow 4
Natural sciences electives 3
Humanities and fine arts or social and behavioral sciences electives 3

* Out-of-department engineering courses.
† Of any calculus-based mathematics course approved by the industrial engineering department.
‡ At least 9 hours must be taken in at least 3 departments in Division A. At least 3 additional hours must be taken in Division B outside of the Department of Economics. At least 9 hours of general studies courses designated "G" courses must be included within Divisions A and B. At least two courses are required in one department of Division A or B, and the two-course sequence must include at least one course numbered 200 or above.
§ Chosen from approved list. (A minimum of 6 hours must be taken within the Department of Industrial Engineering, and must include a minimum of 3 hours of engineering science.)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 553</td>
<td>Production Control</td>
<td>3</td>
</tr>
<tr>
<td>IE 554</td>
<td>Statistical Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>IE 556</td>
<td>Introduction to Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>IE 558</td>
<td>Manufacturing Methods and Materials</td>
<td>3</td>
</tr>
<tr>
<td>IE 590</td>
<td>Senior Projects in Industrial Engineering</td>
<td>2</td>
</tr>
<tr>
<td>Social and behavioral sciences electives</td>
<td></td>
<td>9</td>
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<tr>
<td>Technical electives</td>
<td></td>
<td>12</td>
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</tbody>
</table>

### Lower-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 558</td>
<td>Manufacturing Methods</td>
</tr>
<tr>
<td>IE 554</td>
<td>Statistical Quality Control</td>
</tr>
<tr>
<td>IE 553</td>
<td>Production Control</td>
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</table>

### Upper-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>IE 354</td>
<td>Engineering Probability and Statistics</td>
</tr>
<tr>
<td>IE 355</td>
<td>Engineering Economy</td>
</tr>
<tr>
<td>IE 356</td>
<td>Introduction to Numerical Control</td>
</tr>
<tr>
<td>IE 357</td>
<td>Safety Engineering</td>
</tr>
<tr>
<td>IE 358</td>
<td>Manufacturing Methods and Materials</td>
</tr>
<tr>
<td>IE 452</td>
<td>Work Measurement</td>
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### Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>IE 354</td>
<td>The Human Factor in Engineering Design</td>
</tr>
<tr>
<td>IE 355</td>
<td>Production Control</td>
</tr>
<tr>
<td>IE 356</td>
<td>Statistical Quality Control</td>
</tr>
<tr>
<td>IE 357</td>
<td>Introduction to Information Systems</td>
</tr>
<tr>
<td>IE 358</td>
<td>Manufacturing Methods and Materials</td>
</tr>
<tr>
<td>IE 359</td>
<td>Safety Engineering</td>
</tr>
<tr>
<td>IE 360</td>
<td>Modern Techniques in Safety Engineering</td>
</tr>
</tbody>
</table>

### Senior Projects in Industrial Engineering

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 352</td>
<td>Applied Operations Research I</td>
</tr>
<tr>
<td>IE 353</td>
<td>Applied Operations Research II</td>
</tr>
<tr>
<td>IE 354</td>
<td>Probability and Statistical Methods</td>
</tr>
</tbody>
</table>

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*Out-of-department engineering courses approved by the industrial engineering department

1. At least 9 hours must be taken in at least 3 departments in Division A. At least 3 additional hours must be taken in Division B outside of the Department of Economics. At least 9 hours of general studies courses designated "G" courses must be included within Divisions A and B. At least two courses are required in one department of Division A or B, and the two-course sequence must include at least one course numbered 300 or above.

5. Selected Topics in Industrial Engineering (1-12). Selection and research of a specific industrial engineering topic. Prerequisites or corequisites: IE 452 and 550. E 13 590 3 0913


54. Engineering Probability and Statistics II (3). A study of hypothesis testing, regression analysis, analysis of variance, correlation analysis and non-parametric statistics with emphasis on applications to engineering. Prerequisite: IE 354. E 13 654 0 0913

66. Management Systems Simulation (3). The design of simulation models and techniques for use in managerial decision models, engineering evaluations and other systems too complex to be solved analytically. Emphasis is on general purpose computer simulation languages. Prerequisites: AE 327 and IE 354. E 13 665 1 0913


720. Urban Systems (3). Cross-listed as UA 720. This course develops the principles of systems analysis and the tools by which these principles can be applied. Example applications are taken from urban problems. Emphasis is on the development of realistic models and solutions. Computer techniques are developed in class as necessary. Prerequisite: instructor's consent. E 13 720 0 0913

730. Advanced Linear Programming (3). A continuation of IE 650. Included topics are the mathematical development of the simplex method, revised simplex, decomposition, bounded variables, parametric programming and integer programming. Prerequisite: IE 650. E 13 730 0 0913

732. Queueing and Inventory Systems (3). An analysis of the behavior of queuing and inventory systems and their interrelationships. Poisson, non-Poisson and imbedded Markov chain queuing models are discussed. Techniques include the development of single and multiple item constrained inventory models and periodic and continuous review policies. Prerequisite: 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. Includes regression techniques and error analysis. Prerequisite: IE 654 or Econ 631. E 13 735 0 0913

740. Analysis of Decision Processes (3). A study of time value of money, economics of equipment selection and replacement, engineering estimates, evaluation of proposals, computer analysis and the solution of economic problems. Emphasis is on certainty, risk and uncertainty. Prerequisites: IE 354 and 355. E 13 740 0 0913

745. Production Engineering (2). The organization, design and control of production and associated staff functions. The formulation and analysis of production policies and case studies in production design are included. E 13 745 0 0913

750. Industrial Engineering Workshops.
Courses for Graduate Students Only

854. Stochastic Control Systems. (3). Review of the pertinent aspects of deterministic systems, stochastic processes and linear system models with emphasis on linear systems driven by white Gaussian noise, linear estimation and optimal filtering; design and performance analysis of Kalman filters. Prerequisite: EE 684 and 654. E 12 854 0 0909

876. MS Thesis. (1-3). Repeatable for credit toward the MS thesis option up to 6 hours. Prerequisite: prior consent of MS thesis advisor. E 12 876 4 0909

877. Special Topics in Electrical Engineering. (3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 12 877 0 0909

878. Directed Studies in Electrical Engineering. (1-4). Repeatable toward the MS directed study option for up to 4 hours. The student must write a paper and give an oral presentation on the study made. Prerequisite: departmental consent. E 12 878 4 0909

882. Analog and Digital Filters. (3). A course covering the basic knowledge and tools of filter design. Both analog and digital filters are treated. Topics include filter approximations, passive and active analog filter realizations, sensitivity analysis, and digital filter concepts and design methods. Prerequisite: EE 762 or departmental consent. E 12 882 0 0909

884. Discrete-Time Control Systems. (3). Fundamentals of input-output and state-space analysis, difference equations and state-space representations; pole placement and observer design; dynamic programming and discrete minimum principle; linear state regulator design; inequality-constrained control problems. Prerequisites: EE 684 and 782. E 12 884 0 0909

887. Communication Theory. (3). Theory of information and noise; communication of information in presence of noise; channel capacity; modulation and multiplexing, sampling and coding; detection theory, including effects of noise and nonlinear circuits; and correlation methods. Prerequisite: EE 654 and 684 or departmental consent. E 12 887 0 0909

890. Topics in Control Systems. (3). A study of various concepts such as multi-loop systems, multivariable systems and decoupling; nonlinear systems; and sampled-data systems. Repeatable for credit. Prerequisite: EE 684 or departmental consent. E 12 890 0 0909

893. State-Variable Techniques in Systems II. (3). A continuation of the study of state-space concepts in the areas of nonlinear systems and optimal and suboptimal control systems with wide classes of performance measures. Prerequisite: EE 792 or departmental consent. E 12 893 0 0909

898. Advanced Energy Systems. (3). A continuation of EE 598 with the topics treated in greater depth. Computer applications are stressed. Prerequisite: EE 598 or departmental consent. E 12 898 5 0909


993. Sensitivity Methods in Control Systems Design. (3). Sensitivity analysis of deterministic and stochastic systems; sources of uncertainty in control systems, e.g., plant parameter variation, time delays, small nonlinearities, noise disturbances and model reconstruction; quantitative study of the effects of uncertainties on system performance, sensitivity design strategies, state and output feedback sensitivity function approximation, singular perturbation and model reduction techniques; adaptive systems and near-optimal control. Prerequisites: EE 893. E 12 899 3 0909

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 12 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 drafting and 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 to be awarded for advanced placement credit. Specific requirements and a suggested semester breakdown for the industrial engineering program are given in the accompanying table.

Model Program

| Freshman | Hrs.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
</tbody>
</table>

Chem. 1110, General Chemistry 3
Math. 242Q and 243, Calculus 3 and II 3
Phys. 313O, University Physics I 3
Phys. 315O, University Physics II
Speech 111, Basic Public Speaking or Speech 112, Basic Interpersonal Communication 3
Engr. 125, Introduction to Engineering Concepts 2
IE 110, Engineering Graphics 2

Sophomore

| Course | Hrs.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
</tr>
</tbody>
</table>
AE 373, Engineering Mechanics: Dynamics I 3
EE 382, Electrical Dynamics 4
IE 213, Engineering Graphics II 3
ME 398, Thermodynamics 3
Humanities and fine arts elective 7
Econ. 201Q, Principles of Economics I 3
Econ. 202Q, Principles of Economics II 3

Junior

| Course | Hrs.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>AE 333, Mechanics of Deformable Solids I*</td>
<td>3</td>
</tr>
</tbody>
</table>
IE 354, Engineering Probability and Statistics 3
IE 355, Engineering Economy 3
IE 452, Work Measurement 3
IE 460, Engineering Management 3
IE 549, Human Factor in Engineering Design 3
IE 550, Applied Operations Research I 3
ME 400, Fluid and Heat Flow 4
Natural sciences electives 3
Humanities and fine arts or social and behavioral sciences electives 3

* Out-of-department engineering courses
1 For any calculus-based mathematics course approved by the industrial engineering department.
2 At least 9 hours must be taken in at least 3 departments in Division A. At least 3 additional hours must be taken in Division B outside of the Department of Economics. At least 9 hours of general studies courses designated "C" courses must be included within Divisions A and B. At least two courses are required in one department of Division A or B, and the two-course sequence must include at least one course number 200 or above.
3 Chosen from approved list. A minimum of 6 hours must be taken within the Department of Industrial Engineering, and must include a minimum of 3 hours of engineering science.)
402. Mechanical Engineering Measurements. (3) 2R; 3L. An introduction to modern measurement techniques in mechanical engineering. Prerequisites: ME 339, 400 and EC 345, all with C or better grades. E 14 400 1 0910

439. Mechanical Engineering Design I. (3) Principles of mechanical design, emphasis on press in the application of many mechanical design elements—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 design. Prerequisites: ME 339, AE 333 and Math. 550. E 14 439 0 0910

450. Topics in Mechanical Engineering. (1-3) An investigation of selected phases of mechanical engineering. Prerequisite: departmental consent. E 14 450 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 14 469 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 advisor, the graduate coordinator, and the chairman of the department.

502. Thermodynamics II. (3) Continuation of ME 398, with emphasis on availability, reversibility, Maxwell’s equations and thermodynamic properties, relations. Prerequisites: ME 398. E 14 502 0 0910

503. Mechanical Engineering Laboratory. (2) 6L. Selected experiments designed to illustrate the methodology of experimentation as applied to both mechanical and thermal systems. Experiments include the measurement of performance of typical systems and evaluation of physical properties and parameters of systems. Prerequisites: ME 402, 541, 622. E 14 503 0 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 14 504 1 0910

541. Mechanical Engineering Design II. (3) 2R; 3L. Applications of the engineering design principles to the creative design of mechanical equipment. Problem definition, conceptual design, feasibility studies, design calculations to obtain creative solutions of current real engineering problems. Introduction to human factors, economics and reliability theory. Group and individual design projects. Prerequisites: ME 350 and 439 with a grade of C or above in both. E 14 541 1 0910

544. Environmental Engineering. (3) Theory, analysis and design of heating, ventilating and air-conditioning systems based on psychrometrics, thermodynamics and heat transfer fundamentals. Emphasis is on design for heating, air conditioning and heating and cooling loads in buildings. Prerequisites: ME 400 and 502. E 14 544 0 1910

548. Mechanical Engineering Projects. (1) A design, analysis or research project under faculty supervision. Problems are selected according to student interest. Prerequisites: ME 400 and 502. E 14 548 0 1910

561. Fluid Mechanics. (3) Continuation of fluid mechanics of ME 400. Analysis of steady and unsteady, incompressible and compressible, multi-dimensional flow fields with emphasis on continuity, momentum, and energy equations. Included are potential flow, boundary layer theory, and fluid machinery. Prerequisites: ME 400. E 14 561 0 0910

622. Heat Transfer. (3) A continuation of heat transfer of ME 400; steady and transient multi-dimensional conduction, free and forced convection, radiation, and combined heat transfer. Various analytical methods, analogies, numerical methods, and approximate design procedures are discussed. Prerequisites: ME 400, and 621 (may be taken concurrently). E 14 622 0 0910

630. Biomechanical Engineering. (3) Study of the physiology and biophysics of the living body from the viewpoint of basic mechanical engineering principles. Various artificial organs and life support systems are introduced and discussed. Prerequisites: ME 400 and Math. 550. E 14 630 0 1910

641. Thermal Systems Design. (2) Application of the preliminary design process for thermal systems such as heating, ventilating and air-conditioning systems and stationary and transportation power plants. Design projects include thermal, mechanical and economical aspects. Prerequisites: ME 400 and 502. E 14 641 0 0910

648. Mechanical Engineering Projects. (1) A design, analysis or research project under faculty supervision. Problems are selected according to student interest. Prerequisite: ME 548. E 14 648 0 0910

659. Mechanical Control. (3) Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based upon the laws of physics and linear mathematics. Concern is with classical methods of feedback control systems and design. Prerequisites: ME 402 and 439. E 14 659 0 0910

662. Mechanical Engineering Practice. (2) 4L. An exercise in the practice of mechanical engineering in which students engage in a comprehensive design project requiring the integration of knowledge gained in prerequisite engineering science and design courses. Open only to mechanical engineering students in their last semester of study. Prerequisite: ME 541 and 641. E 14 662 1 0910

670. Senior Thesis I. (1) A design, analysis or research project performed under faculty direction. 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 chairman. Prerequisites: ME 541 and 641, which may be taken concurrently, and departmental consent. E 14 670 3 0910

671. Senior Thesis II. (1) A continuation of ME 670. Prerequisite: ME 670. E 14 671 3 0910

705. Design of Engineering Experiments. (3) Study of theoretical, analytical and statistical aspects of basic engineering experiments. Topics of test planning, data checking, analysis and synthesis, and evaluation are considered. Prerequisite: departmental consent. E 14 705 1 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 control, 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 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. Acceleration, velocity, forces. Prerequisites: 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

758. Computational Heat Transfer and Fluid Dynamics. (3) Numerical solutions of steady and transient heat conduction, convection, potential flow and viscous flow problems. Prerequisites: ME 621 and 622. E 14 758 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

801. Boundary Layer Theory. (3) Development of the Navier-Stokes equation, laminar boundary layers, transition to turbulence, turbulent boundary layers and an introduction to homogeneous turbulence. Prerequisite: 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. Prerequisite: 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. Pr-
associate degree program should be applicable toward the BET degree in the same option area. These programs normally constitute the first two years of the four-year option. However, transfer students may have to take a second-year course that is a prerequisite for a course that is normally scheduled in the third or fourth year.

Transfer of credit earned in a program that is not ABET accredited is determined on an individual basis, with emphasis on: (1) the proportion and rigor of the mathematics, science, and technical specialty courses; (2) the engineering and science backgrounds of the instructors who taught the transfer courses; and (3) the objectives of the program. After evaluation based on these elements, students start in the engineering technology program at the level that is most compatible with their previously studied courses. This level can be determined by identifying through oral or written examination the student's depth of understanding of the basic principles within the specialty option selected.

Specific requirements of the BET options are given in the following descriptions of the options.

Engineering Technology—General

Lower-Division Courses

100. Introduction to Electricity and Electronics. (4). 3R; 3L. An introduction to electrical fundamentals, basic AC and DC circuits, motors and generators, instruments, and diode and transistor fundamentals and applications in linear and digital circuits. Linear approximate models are used in the study of the diode and transistor. Laboratory experiments are utilized to reinforce and to verify concepts discussed in the classroom. Prerequisite: Math. 110 or equivalent. E 16 100 1 0925

200. Statics, Dynamics, and Strength of Materials. (4). 3R; 3L. Introduction to the basic concepts of mechanics emphasizing the action of forces on rigid bodies and the response of those bodies to the applied forces. The first portion is devoted to the study of statics or the equilibrium of bodies followed by a study of forces acting on bodies in motion (dynamics). A study of the principles of applied design. Laboratory experiments are performed to demonstrate and reinforce the basic concepts considered in the classroom. Prerequisites: Math. 110 and Phys. 213 or equivalent. E 16 200 1 0925

Upper-Division Courses

conduction, convection and radiation. The applied principles of fluid flow, viscous flow in pipes and open channels. Prerequisites: Math. 251 and Phys. 213 or equivalent. E 16 300 1 0925

455. Industrial Supervision. (3). A discussion of the techniques utilized in the supervision of employees in the industrial environment. Concepts of communication and control of industrial employees are discussed in detail. Concepts of employee motivation are also discussed. Problems and techniques utilized to meet production requirements through the utilization of human resources are dealt with in detail. Prerequisite: departmental consent. E 16 455 0 0925

Electrical Engineering Technology Option

Sequence of Courses
A total of 124 hours is required for a degree. A total of 40 semester credit hours must be in courses numbered 300 and above. In no case will work done in a two-year college be credited against this 40-hour requirement.

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>
<td>6</td>
</tr>
<tr>
<td>Math. 110, Technical Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 251, Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>Engr. 127, Introduction to Digital Computing</td>
<td>3</td>
</tr>
<tr>
<td>ET 100, Introduction to Electricity and Electronics</td>
<td>4</td>
</tr>
<tr>
<td>IE 110, Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>EET 101, Electrical Drafting</td>
<td>2</td>
</tr>
<tr>
<td>Phys. 213Q, General College Physics I</td>
<td>5</td>
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</table>

Sophomore

<table>
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<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Math. 262, Technical Calculus II</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 214Q, General College Physics II</td>
<td>5</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>EET 210, Electrical Circuit Analysis</td>
<td>4</td>
</tr>
<tr>
<td>EET 211, Linear Electronic Circuits</td>
<td>4</td>
</tr>
<tr>
<td>EET 214, Digital Electronic Circuits</td>
<td>4</td>
</tr>
<tr>
<td>EET 320, Electric Power and Machines</td>
<td>4</td>
</tr>
<tr>
<td>Humanities and fine arts electives</td>
<td>3</td>
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Junior

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<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
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Senior

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<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>EET 455, Industrial Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EET 400 and 450, Senior Design Project I and II</td>
<td>8</td>
</tr>
<tr>
<td>Non-EET technical electives †</td>
<td>6</td>
</tr>
<tr>
<td>Free electives</td>
<td>4</td>
</tr>
<tr>
<td>Humanities and fine arts electives</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral sciences electives *</td>
<td>4</td>
</tr>
</tbody>
</table>

Lower-Division Courses

101. Electrical Drafting, (2), 1R; 3L. The study and application of electrical and electronic symbols, wiring diagrams, block diagrams, electrical power diagrams, component layout, etc., with emphasis on industry standards. Prerequisites: IE 110, or equivalent, and ET 100, or equivalent, or concurrent enrollment. E 16 101 1 0925

210. Electrical Circuit Analysis, (4), 3R; 3L. The study of the various theorems and techniques used to analyze DC and AC electrical circuits. Basic computer analysis techniques are introduced. Laboratory experiments are utilized to verify analysis concepts. Prerequisites: ET 100 and Math. 251 or equivalent. E 16 210 1 0925

211. Linear Electronic Circuits, (4), 3R; 3L. A study of the characteristics and applications of transistors, integrated circuits and other solid-state devices, with emphasis on their linear operating modes. Prerequisites: ET 100 and Math. 251 or equivalent. E 16 211 1 0929

214. Digital Electronic Circuits, (4), 3R; 3L. A study of nonlinear applications, including transistor, wave-shaping, switching and logic circuits utilizing solid-state components and integrated circuits. An introduction to binary arithmetic and logic operators. Prerequisite: ET 100 or equivalent. E 16 214 1 0925

Upper-Division Courses

320. Electric Power and Machines, (4), 3R; 3L. A study of single phase and polyphase power circuits, transformers and machines, and DC machinery. Prerequisite: EET 210 or equivalent. E 16 320 1 0925

330. Advanced Electrical Networks, (3). An advanced course in network analysis that stresses network theorems and the solution of time and frequency domain problems by means of transform methods. Computer analysis techniques also are utilized. Prerequisites: EET 210, or equivalent, and Math. 252, or equivalent. E 16 330 0 0925

400. Senior Design Project I. (1). The first phase of an extensive individual design and/or analytical project performed in consultation with one or more faculty advisors. This phase includes the determination of project objectives, initial research, preliminary design and parts procurement. Prerequisite: senior standing or departmental consent. E 16 400 3 0925

411. Selected Topics in Electrical Engineering Technology, (1-4). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 411 1 0925

412. Communication Systems I. (4), 3R; 3L. Fundamental concepts in electrical communications. Properties of signals and noise are introduced. Topics include amplifiers, oscillators, AM, FM, SSB, PM, transmission lines, cables, waveguides, antennas. Prerequisites: EET 211 or equivalent. E 16 412 1 0925

413. Integrated Circuits Applications, (4), 3R; 3L. Analysis, design and application of linear and digital ICs made with both bipolar and complementary metal-oxide-semiconductor technologies. Topics include operational amplifiers, comparators, D/A, A/D, phase-locked loop circuits. Prerequisites: EET 211 and 214 or equivalents. E 16 413 1 0925

414. Microprocessors, (4), 3R; 3L. A course designed to give an in-depth knowledge of microprocessor software and hardware. Exercises in designing and writing microprocessor programs, entering, executing and debugging programs are assigned. The Intel 8086 microprocessor is the emphasized system. Prerequisite: EET 214 or equivalent. E 16 414 1 0925

415. Industrial Electronics and Controls, (4), 3R; 3L. A study of electronic components and systems found in modern industry. The concepts and components associated with open loop and closed loop control systems are emphasized. Prerequisites: EET 211, EET 214 and EET 320 or equivalents. E 16 415 1 0925

416. Electric Power Generation and Transmission, (4), 3R; 3L. A study of the components of electric power generation and transmission systems with an emphasis on the methods used in modern electric utilities. Field trips are used to enable students to observe actual installations and facilities in the vicinity. Prerequisites: EET 320 or equivalent. E 16 416 1 0925

450. Senior Design Project II. (2). The sec-
second phase of an extensive view design and/or analytical project performed in consultation with one or more faculty advisors. This phase includes the completion and evaluation of the project. The results of the project are described and reported in oral and formal written form. Prerequisites: EET 400. E 16 450 1 0925

452. Data Communications. (3). 2R; 3L. A course designed to cover practical aspects of the electronic transmission of encoded information and data. Topics include components of data communications systems, error detection techniques, network protocols and line procedures, communication carrier facilities. Prerequisites: EET 211 and 214 or equivalents. E 16 452 1 0925

454. Microprocessor Applications. (3). 2R; 3L. A continuation of the study of microprocessors. Advanced topics include interfacing techniques, programmable peripheral chips, controllers, protocols for IEEE-486 bus, serial and parallel I/O. Prerequisites: EET 414 or equivalent. E 16 454 1 0925

Fire Science Technology Option

Sequence of Courses
A total of 124 hours is needed for a degree. A total of 40 semester hour credits must be in courses numbered 300 and above. In no case will work done in a two-year college be credited against this 40-hour requirement.

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>Math. 110, Technical Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 251, Technical Calculus I</td>
<td>3</td>
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<tr>
<td>Phys. 213Q, General College Physics</td>
<td>5</td>
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<tr>
<td>Eng. 127, Introduction to Engineering Concepts</td>
<td>2</td>
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<tr>
<td>Engr. 127, Introduction to Digital Computing</td>
<td>3</td>
</tr>
<tr>
<td>IE 110, Engineering Graphics I</td>
<td>2</td>
</tr>
<tr>
<td>FST 133, Construction Methods and Materials</td>
<td>3</td>
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<tr>
<td>FST 135, Fundamentals of Fire Protection</td>
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**Sophomore**

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<td>Eng. 210, Composition: Business, Professional, and Technical Writing</td>
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<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
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<tr>
<td>Chem. 111, General Chemistry</td>
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<td>Chem. 112, General and Inorganic Chemistry</td>
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<tr>
<td>FST 134, Fire Detection and Suppression Systems</td>
<td>3</td>
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<tr>
<td>FST 301, Fire Hydraulics</td>
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<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>FST 303. Water Supplied Fire Protection Systems</td>
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<tr>
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<td>Social and behavioral sciences electives*</td>
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**Junior**

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<th>Course</th>
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<tbody>
<tr>
<td>ET 100. Introduction to Electricity and Electronics</td>
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<tr>
<td>ET 200. Statics, Dynamics, and Strength of Materials</td>
<td>4</td>
</tr>
<tr>
<td>MFT 257, Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>FST 310, Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>FST electives</td>
<td>6</td>
</tr>
<tr>
<td>Non-FST technical electives</td>
<td>4</td>
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<tr>
<td>Social and behavioral sciences electives*</td>
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<tr>
<td>Humanities and fine arts electives*</td>
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**Senior**

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>ET 455, Industrial Supervision</td>
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<tr>
<td>ET 300, Thermodynamics, Heat Transfer, and Fluid Mechanics</td>
<td>4</td>
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<td>FST electives</td>
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<tr>
<td>Non-FST technical electives</td>
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<td>Fire electives</td>
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<tr>
<td>Humanities and fine arts and or social and behavioral sciences electives*</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>FST 133. Construction Methods and Materials</td>
<td>3</td>
</tr>
<tr>
<td>FST 135, Fundamentals of Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>FST 301, Fire Hydraulics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Low-Division Courses**

**133. Construction Methods and Materials.** (3). 2R; 3L. An analysis of various building materials relative to their physical properties and their reaction to fire. The course includes the study of various building configuration of fires, and their application to specific commercial and industrial operations. Concepts of fire-resistive enclosure, partitions, fire walls or cutoffs are discussed. Prerequisites: departmental consent. E 16 133 1 0925

**134. Fire Detection and Suppression Systems.** (3). 2R; 3L. An introduction to detection and suppression systems used in private and public fire protection. Characteristics, economics, and applications of various systems will be discussed. The student will participate under lab conditions for selected representative systems. E 16 134 1 0925

**135. Fundamentals of Fire Prevention.** (3). 2R; 3L. Application of the laws of physics and engineering to the study of fluid, air, and water systems, and to the design and operation of fire prevention and protection equipment. Prerequisites: EET 111 or EET 213. E 16 135 1 0925

**Upper-Division Courses**

**301. Fire Hydraulics.** (3). 2R; 3L. Application of the laws of mathematics and physical properties of fluid systems to the design and operation of fire protection and related systems. Emphasis is on the selection of fire protection and related equipment and systems. Prerequisites: EET 111Q or Elec. 213Q or departmental consent. E 16 301 0 0925

**302. Fire-Fighting Tactics and Strategy.** (3). Application of fire-fighting techniques and related systems to the design and operation of fire protection and related systems. Emphasis is on the selection of fire protection and related equipment and systems. Prerequisites: EET 301 or departmental consent. E 16 303 1 0925

**310. Hazardous Materials.** (3). 2R; 3L. Application of basic scientific principles, storage, and uses of hazardous materials. Prerequisites: departmental consent. E 16 310 0 0925

**311. Fire Investigation.** (3). 2R; 3L. A discussion of the methods and procedures used to determine the origin and probable cause of fires. Prerequisites: departmental consent. E 16 311 1 0925

**350. Emergency Rescue Problems and Procedures.** (3). A discussion of the rescue procedures required by emergency personnel to perform their job. Also covered are the specific hazards associated with natural and man-made disasters that are the results of man-made and natural disasters. Prerequisites: departmental consent. E 16 350 0 0925

**422. Selected Topics in Fire Science Technology.** (1-4). A survey of fire science technology and the interrelationship of various subjects. The focus is on the specific hazards associated with natural and man-made disasters that are the results of man-made and natural disasters. Prerequisites: departmental consent. E 16 422 1 0925

**482. Urban Fire Protection as Related to City Planning.** (3). A study of urban planning and the fire service role in the fire protection of communities. Prerequisites: departmental consent. E 16 482 1 0925

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*Not less than 6 hours may be taken in each division. No more than 9 hours may be taken in any one department in these divisions. In each division, courses must be taken in at least two departments. At least 9 hours of General Studies courses must be taken in these divisions. Six credit hours must be taken in 300-level courses and above.

**Electives must be selected from the following:**

1. Courses from the other options for which the prerequisite requirements are met and/or
2. Additional mathematics, computer science, or natural sciences courses for which the prerequisite requirements are met and/or
3. Chem. 360 or equivalent

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**Conditions for Selected Representative Systems.**

<table>
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<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>E 16 134 1 0925</td>
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<tr>
<td>E 16 135 1 0925</td>
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<td>E 16 301 0 0925</td>
<td>3</td>
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<td>E 16 303 1 0925</td>
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<td>E 16 310 0 0925</td>
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<td>E 16 311 1 0925</td>
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<tr>
<td>E 16 350 0 0925</td>
<td>3</td>
</tr>
<tr>
<td>E 16 422 1 0925</td>
<td>3</td>
</tr>
<tr>
<td>E 16 482 1 0925</td>
<td>3</td>
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</tbody>
</table>
492. Fire Risk and Loss Management. (3). An analysis of business uncertainty, recognition of risks and their related loss potential; fire risk reduction through management control and protection systems. Assumption of risks through insurance programs. A study of security and liability as associated with condition of uncertainty. E 16 492 0 0925

498. Fire Science Research Projects. (1-3). Selection and research of current topics in the field of fire science. Presentation of results of research in the defending of any hypotheses advanced. Prerequisite: senior standing. E 16 498 3 0925

Manufacturing Engineering Technology Option

Sequence of Courses
A total of 124 hours is required for a degree. A total of 40 semester credit hours must be in courses numbered 300 and above. In no case will work done in a two-year college be credited against this 40-hour requirement.

Model Program

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>Eng. 101 and 102, College English I and II</td>
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<tr>
<td>Math. 110, Technical Algebra and Trigonometry</td>
<td>5</td>
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</tr>
<tr>
<td>Math. 251, Technical Calculus I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MFT 120, Manufacturing Practices</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Phys. 213Q, General College Physics I</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Math. 252Q, Technical Calculus II</td>
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<tr>
<td>Phys. 214Q, General College Physics II</td>
<td>5</td>
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<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
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<tr>
<td>ET 100, Introduction to Electricity and Electronics</td>
<td>4</td>
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<td>ET 200, Statics, Dynamics and Strength of Materials</td>
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<td>MFT 240, Manufacturing Processes and Materials</td>
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<td>MFT 257, Industrial Safety</td>
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<th>Course</th>
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<tr>
<td>Eng. 210, Composition: Business, Professional, and Technical Writing</td>
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<td>ET 300, Thermodynamics, Heat Transfer, and Fluids</td>
<td>4</td>
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</tr>
<tr>
<td>MFT 313, Production and Quality Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MFT 352, Work Measurement and Management</td>
<td>3</td>
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<td>MFT 355, Manufacturing Economics Analysis</td>
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<td>Free electives</td>
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<td>Humanities and fine arts or social and behavioral sciences electives *</td>
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<tr>
<td>Non-MFT technical electives †</td>
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<thead>
<tr>
<th>Course</th>
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<th>Hrs.</th>
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<tbody>
<tr>
<td>ET 455, Industrial Supervision</td>
<td>3</td>
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</tr>
<tr>
<td>MFT 469, Technology Projects</td>
<td>4</td>
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<td>MFT electives</td>
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<tr>
<td>Social and behavioral sciences electives</td>
<td>3</td>
<td></td>
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</tbody>
</table>

Lower-Division Courses

120. Manufacturing Practices. (4). 3R; 3L. A general survey of the manufacturing and fabricating techniques utilized in industry. Special emphasis is placed on the latest manufacturing processes utilized in American industry. Laboratory activities give the student practice in some of the basic fabrication methods. Prerequisite: Math. 110 or equivalent and IE 110 or equivalent. E 16 120 1 0925

223. Special Topics in Manufacturing Engineering Technology. (1-4). Special course offerings are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 223 0 0925

240. Manufacturing Processes and Materials. (4). 3R; 3L. A technical study of the processes and materials used in manufacturing, including metal and nonmetal cutting, casting, forming, welding, testing techniques, etc. Theory, technical aspects, application and cost analysis are stressed, with laboratory work in actual machine work. Prerequisite: MFT 120 or equivalent. E 16 240 1 0925

257. Industrial Safety. (3). A study of safety fundamentals and their relationship to the economics of accident prevention. The requirements of industrial compensation and safety legislation are emphasized. Prerequisite: departmental consent. E 16 257 1 0925

Upper-Division Courses

313. Production and Quality Control. (3). Application of fundamental statistics to the quality control problem emphasizing discussion of acceptance sampling and statistical control charts. Aspects of inventory control and of programmatic production planning are developed. Prerequisite: Math. 110 or equivalent. E 16 313 1 0925

315. Advanced Manufacturing Methods. (3). 2R; 3L. A study of state-of-the-art techniques as applied to manufacturing processes such as chipless machining, advanced welding, ultrasonic processes and other new and exotic methods. Laboratory activity includes field trips to area industrial plants to observe and study actual processes in operation. Prerequisite: departmental consent. E 16 315 1 0925

352. Work Measurement and Management. (3). 2R; 3L. The equipment and techniques of work measurement, time standardization and method simplification are developed. The organization and management of production is presented, working from the individual worker to larger organizational groups. Prerequisites: Math. 110 or equivalent. E 16 352 1 0925

355. Manufacturing Economic Analysis. (3). A study of the effects of economic considerations and principles upon the costs and operations of the basic aspects of industrial operations. The economic leverage of alternative approaches to technical problems is considered. Prerequisite: departmental consent. E 16 355 0 0925

356. Numerical Control Part Programming. (3). 2R; 2L. Study and application of numerical programming methods. Utilizes programing for milling machines and lathes is included. Particular emphasis is placed on part programming for milling machines. Prerequisites: E 127 and MFT 120 or equivalent. E 16 356 1 0925

433. Selected Topics in Manufacturing Engineering Technology. (1-4). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 433 1 0925

463. Production and Operation Management. (3). A study of applied methods of capacity planning, forecasting, inventory management and production scheduling. Computerized methods are covered through project assignments. Prerequisites: MFT 352 and 355 or equivalent. E 16 463 0 0925

469. Technology Projects. (4). 1R; 6L. An individual project performed by a student or group of students in the area of manufacturing and/or industrial technology. On-the-job type project activity under the direction and control of a faculty advisor. Prerequisites: senior standing and departmental consent. E 16 469 1 0925

Mechanical Engineering Technology Option

Sequence of Courses
A total of 124 hours is required for a degree. A total of 40 semester credit hours must be in courses numbered 300 and above. In no case will work done in a...
two-year college be credited against this 40-hour requirement.

Model Program

Freshman

<table>
<thead>
<tr>
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<tbody>
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<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Math. 110, Technical Algebra and Trigonometry</td>
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<tr>
<td>Math. 251, Technical Calculus I</td>
<td>3</td>
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<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>3</td>
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<tr>
<td>Engr. 127, Introduction to Digital Computing</td>
<td>3</td>
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<tr>
<td>IE 110 and 213, Engineering Graphics I and II</td>
<td>3</td>
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<tr>
<td>MFT 120, Manufacturing Practices</td>
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<tr>
<td>Phys. 213Q, General College Physics I</td>
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Sophomore

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<tr>
<td>Eng. 210, Composition Business, Professional, and Technical Writing</td>
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<tr>
<td>Math. 252, Technical Calculus III</td>
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<tr>
<td>Phys. 214Q, General College Physics II</td>
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<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
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<tr>
<td>ET 100, Introduction to Electricity and Electronics</td>
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<tr>
<td>ET 200, Statics, Dynamics, and Strength of Materials</td>
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Junior

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<tr>
<td>Chem. 111Q, General Chemistry</td>
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<tr>
<td>ET 300, Thermodynamics, Heat Transfer, and Fluids</td>
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</tr>
<tr>
<td>MET 340, Machine Design</td>
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<tr>
<td>MET 342, Instrumentation</td>
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<td>MET 344, Mechanical Design I</td>
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<tr>
<td>Social and behavioral sciences electives*</td>
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Senior

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<tbody>
<tr>
<td>ET 455, Industrial Supervision</td>
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<tr>
<td>MET 409 and 410, Mechanical Design II and III</td>
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<tr>
<td>Social and behavioral sciences electives*</td>
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Upper-Division Courses

340. Machine Design, (4). 3R; 3L. The application of the principles of mechanics and strength of materials to the design of shafts, cams, gears, belts, clutches, brakes and their assemblies as used in machines. Prerequisites: ET 200, or equivalent, and IE 110, or equivalent. E 16 340 1 0925

342. Instrumentation, (3). 2R; 3L. A practical course dealing with the selection, care, installation, and calibration of pneumatic, mechanical, and electronic elements and systems used to sense, indicate, control and/or record such things as pressure, temperature and flow in industrial processes. Prerequisites: Phys. 214Q, or equivalent, and ET 100, or equivalent. E 16 342 1 0925

Not fewer than 6 hours may be taken in each division. No more than 9 hours may be taken in any one department in these divisions. In each division, courses must be taken in at least two departments. At least 9 hours of General Studies courses must be taken in these divisions. Six credit hours must be taken in 300-level courses and above.

1. Electives must be selected from the following in consultation with an academic advisor in order to assure that the total group of courses taken is consistent with the goals of the student.
2. Courses from the other options for which the prerequisite requirements are met, and/or
3. Additional mathematics, computer science or natural sciences courses for which the prerequisite requirements are met, and/or

College of Fine Arts

Gordon B. Terwilliger, EdD, 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 the Division of Music offer professional training programs at both the undergraduate and graduate levels. The Division of Dance joined the College of Fine Arts in July, 1978. The long-range objectives for dance parallel those for music and art.

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; 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.

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 2.00, students are eligible to enroll in the Division of Art, Dance, or Music.

Transfer students may enroll in the College of Fine Arts if their transcripts indicate that they have completed a minimum of 24 semester hours with a minimum grade point average of 2.00 (C). Students with a grade average of at least 1.70, but less than 2.00, may petition for admittance. Transfer students who do not meet the minimum requirements of 24 semester hours and a grade point average of 2.00 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 2.00. Students enrolled in either the music education or art education programs must have a cumulative grade point average of 2.50 prior to enrolling in student teaching.

Students who do not achieve or maintain the required 2.00 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 2.00. 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 2.00 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 2.00 on work at Wichita State before probation may be lifted. If a grade point average of 2.00 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
The Division of Art, 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 Henrich Annex. The Center provides intensive space for exhibiting student work. The Clayton Staples Gallery, designed specifically for undergraduate and graduate students and invitational shows, was completed January, 1978.

Under the auspices of the Edwin A. Ulrich Museum of Art, located in the 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 2.00 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 1 credit hour per semester of non-residential studio work (such as extension or correspondence courses from accredited institutions), totaling no more than 6 hours of the last 30 or 10 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
In addition to the University's scholastic and residence requirements for graduation, candidates for the BFA in painting, printmaking, ceramics, sculpture, or graphic design must complete a total of 124 semester hours, with 43 hours from the General Education Program (given in the Academic Information—Requirements for Graduation section in the beginning of the Catalog) and 81 hours from the art curriculum. Students majoring in art history must complete a total of 124 semester hours, with 45 hours from the General Education Program and 79 from art history and elective curriculum hours. Specific programs for each of these areas are described under the appropriate department's heading on the following pages. Students must consult with their adviser before selecting electives.

Bachelor of Art Education
In addition to meeting the University's scholastic and residence requirements for graduation, candidates for the BAE must complete a minimum of 131 semester hours, with 42 hours in the General Education Program, 61 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 adviser.

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

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>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum 121</td>
<td>64</td>
</tr>
<tr>
<td>Two-dimensional, introductory</td>
<td></td>
</tr>
<tr>
<td>Three-dimensional, introductory</td>
<td>15</td>
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<tr>
<td>Art education</td>
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<td>Art specialization</td>
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<tr>
<td>Art history</td>
<td>3</td>
</tr>
<tr>
<td>Education (Instructional Services)</td>
<td>28</td>
</tr>
<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 2.50 and 2.50 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. Students must apply for student teaching by mid term of the spring semester prior to the student teaching year. The first semester prior to the student teaching year must include combined Art Ed. 516 and IS 433.

A survey course about exceptional children, reading for secondary students, and a multicultural course are included in the teacher certification requirements.

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: 5A (Drawing) 145, Art Ed. 110Q, 210, and 313, one elected studio course, and 3 hours of Art Hist. 121G or 122G.

Lower-Division Courses

110Q. Visual Arts. (3). A general orientation to the visual arts including the visual organization of our environment. Lecture and experiential modes of learning will be employed. F 14 110Q 0 0831

115. Human Experience and the Arts. (3). A study of the ways in which people express themselves through their creative acts. 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: student education major, or Art Ed. 210, or instructor's consent. F 14 211 0 0831

212. Jewelry Design/Construction. (3). A course that allows students to participate in the Cooperative Education program. Offered Cr/NCr only. F 14 281 2 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 0 0831

Upper-Division Courses

311. Art Education Curriculum in the Elementary School. (3). A study of developmental characteristics of the elementary-age student and development of the art program relevant to the elementary grades. 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, twisting techniques that result in an awareness of fiber. (1). The objective is to analyze problems encountered in the art classroom during student teaching. 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. Creativity. (3). The development of theories of creativity will be examined with special emphasis given to processes for eliciting creative responses and implications for art education. Various instruments used in evaluating creativity will be examined. Instructional strategies will include role playing, informal lecture, discussion, simulations, and discovery or inquiry techniques. F 14 510Q 0 0831

512. Metal Processes for Jewelry Construction. (3). A study of the jewelry processes that result in metal products of commercial and personal value. F 14 512 0 0831

514D. Aesthetic Inquiry. (3). The course will focus on contemporary trends in aesthetics relative 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 514D 9 0831

515. Developing Visual Materials for Art Education. (3). A production laboratory that concentrates on the use of technical equipment for making multimedia experiences (films, slides, tapes, projector, etc.) for art education students. Students engage in constructing units of visual learning. F 14 515 0 0831

516. Art Education Practicum. (3). The development of art curriculum materials for secondary levels. Students will enroll in this course the semester before student teaching. Prerequisite: concurrent enrollment in IS 433. F 14 516 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 7 hours of student teaching courses is required. Prerequisite: Art Ed. 516 and departmental approval for student teaching. F 14 517 9 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 exceptions considered will be types of retardation, nutritional impairments, emotional, visual, auditory, and physical handicaps. F 14 518 0 0831

711. Seminar in Art Education. (3). Supervised study and research. Weekly consultation and reports are required. Repeatable once for credit. Prerequisite: instructor's consent. F 14 711 9 0831

712. Development of Art Understanding in the Educational Program. (3). Readings, observation and evaluative techniques in the development of 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 structures 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

* The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, ZH 21, 21, means 2 hours of lecture and 2 hours of lab.
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 0 083

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 2 083

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 4 083

816-817. Thesis—Art Education. (1-3; 1-3). F 14 816 4 083; F 14 817 4 083

818-819. Terminal Project—Art Education. (1-3; 1-3). F 14 818 3 083; F 14 819 3 083

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, 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.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>83</td>
</tr>
<tr>
<td>Art history</td>
<td>33</td>
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<tr>
<td>Foreign language</td>
<td>13</td>
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<tr>
<td>Elective</td>
<td>37</td>
</tr>
<tr>
<td>General Education Program</td>
<td>41</td>
</tr>
</tbody>
</table>

Model Program

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
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<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Art Hist. 121G, Survey of Western Art: Paleolithic Through Early Christian</td>
<td>3</td>
</tr>
<tr>
<td>Art Hist. 122G, Survey of Western Art: Renaissance and Baroque</td>
<td>3</td>
</tr>
<tr>
<td>General education</td>
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<tr>
<td>Electives</td>
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Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Hist. 124, Survey of Western Art: Modern</td>
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<tr>
<td>Art history elective</td>
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<tr>
<td>Major foreign language</td>
<td>10</td>
</tr>
<tr>
<td>General education</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

Upper-Division Courses

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. F 15 322 0 1003

323. Medieval Art II. (3). A study of Romanesque and Gothic architecture and sculpture, with special attention being given to the developments in France. F 15 323 0 1003

324. Northern Baroque. (3). A study of the art of Flanders and Holland during the 17th century. While a variety of artistic expression 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. F 15 324 0 1003

325. Art of the Ancient Near East. (3). Survey of the arts of ancient Egypt and Mesopotamia, concluding with a consideration of the interaction between Near Eastern art and classical art. F 15 325 0 1003

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. F 15 327 0 1003

426. 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. F 15 426 9 1003

481. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Offered Cr/NCR only. F 15 481 2 1003

Courses for Graduate/Undergraduate Credit

520. Seminar in Art History. (3). Systematic study in selected areas of art history. Course content varies but individual areas are not repeatable for credit. Prerequisite: 3 hours of art history or departmental consent. F 15 520 9 1003

521Q. Italian Renaissance. (3). A study of the architecture, sculpture and painting from the 13th to the 16th century. Emphasis is given to early developments in Florence and Sienna and late developments in Rome. F 15 5210 9 1003

522. Italian Baroque. (3). A study of Baroque painting, sculpture and architecture in Rome, Venice and Bologna from 1600 to 1760, with emphasis on the Carracci, Bernini and Tiepolo. F 15 522 0 1003

523. 18th and 19th Century European Art. (3). A history of European art from Watteau through post-Impressionism. F 15 523 0 1003

524. 18th and 19th Century American Art. (3). A history of American art from the colonial period through the 19th century. F 15 524 0 1003

525. 20th Century Art Before 1945. (3). A history of American and European art in the first half of the 20th century. F 15 525 0 1003

526. Art Since 1945. (3). A study of the history of art in the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism and artistic practice. F 15 526 0 1003

528. Museum Techniques I. (3). Designed primarily for the graduate student interested in museum work. Included is specialized research related to administrative responsibilities of a museum: collection, exhibition, recording, preservation and financial activities. F 15 528 0 1003
Art electives (100-200 level) 6
Graphic design electives
(300-500 level) 27
or
Graphic design related electives 27

General Education Program 42

The following are the specific requirements for the art curriculum section:
1. Students must fulfill the requirements for the art curriculum core as specified (52 hours):
   - Art Hist. 124, Survey of Western Art: Modern; GD 134, Introduction to Graphic Design; GD 136, Graphic Design Foundation I; GD 137, Graphic Design Foundation II; GD 139, Design II: SA 145, Drawing I; GD 230, Basic Photography (Still); GD 231, Basic Photography (Motion Picture); GD 233, Basic Typography; GD 234, Layout and Production Techniques; GD 236, Drawing for Commercial Art; GD 237, Drawing for Commercial Art II; GD 334, Graphic Design II—Production; Ind. Ed. 390F, Offset Lithography; GD 430, Graphic Design III—Media; GD 435, Graphic Design IV—Design Programs; GD 445, Senior Terminal Project; upper division art history course (Art Hist. 523, 524, 525, 526, or 527); Art Hist. 121G and 122G (counted under General Education requirements).

2. Students must elect 6 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.

3. A program of 27 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.

Graphic design electives: GD 300, Advanced Typography; GD 330, Design Media Studio (repeatable for credit); GD 333, Fashion Illustration (repeatable for credit); GD 335, Graphic Design I—Theory; GD 337, Advertising Illustration (repeatable for credit); GD 339, Exhibition Design (repeatable for credit); GD 434, Graphic Design Intern; GD 437, Advanced Advertising Illustration (repeatable for credit); GD 438, Color and Design; GD 493, Book Design and Production; GD 730, Graphic Design Seminar (repeatable for credit).

Graphic Design Related Electives:
Journ. 325, Introduction to Advertising; Journ. 525, Advertising Copywriting; Journ. 570, Magazine Journalism; Journ. 611, Media Management; Speech 320, Cinematography; Speech 604, Advanced Television Production and Direction; Bus. 300, Marketing; Bus. 405, Consumer Behavior; Eng. 307, Narrative in Literature and Film; SA 340, Life Drawing; SA 345, Intermediate Drawing; SA 545, Advanced Drawing Studio; Art Ed. 510Q, Stimulating Creativity; studio arts elective; discretionary elective.

4. All entering freshmen are enrolled in University College. To enter the graphic design department, the student must have a minimum overall grade point average of 2.00 and have completed the graphic design foundation courses—GD 134, 136, 137, and 139—with an average grade of 3.00.

Transfer students who have earned fewer than 9 semester credit hours in studio courses equivalent to the graphic design foundation courses will be enrolled in GD 137.

5. Students must participate in a Junior Portfolio Review prior to the second semester of their junior year.

6. Students must participate in the Senior Terminal Project during their final two semesters.

Model Program

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Hist. 124, Survey of Western Art: Modern</td>
<td>3</td>
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<tr>
<td>GD 134, Introduction to Graphic Design</td>
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<tr>
<td>GD 136 and 137, Graphic Design Foundation I and II</td>
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</tr>
<tr>
<td>GD 139, Design II</td>
<td>3</td>
</tr>
<tr>
<td>Art Hist. 121G, Survey of Western Art: Paleolithic Through Early Christian</td>
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<td>Art Hist. 122G, Survey of Western Art: Renaissance and Baroque</td>
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<td>SA 145, Drawing I</td>
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Sophomore

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<th>Course</th>
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<td>Eng. 101 and 102, College English</td>
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<td>Speech 111 or 112</td>
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<td>General Education</td>
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<tr>
<td>GD 134, Introduction to Graphic Design</td>
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<tr>
<td>GD 136 and 137, Graphic Design Foundation I and II</td>
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<tr>
<td>GD 139, Design II</td>
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<td>Art Hist. 121G, Survey of Western Art: Paleolithic Through Early Christian</td>
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<td>Art Hist. 122G, Survey of Western Art: Renaissance and Baroque</td>
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<tr>
<td>SA 145, Drawing I</td>
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Junior

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Math. 109, 110, 111, or 211</td>
<td>3</td>
</tr>
<tr>
<td>GD 334, Graphic Design Production</td>
<td>3</td>
</tr>
<tr>
<td>GD 230, Basic Photography (Still)</td>
<td>3</td>
</tr>
<tr>
<td>GD 231, Basic Photography (Motion Picture)</td>
<td>3</td>
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<tr>
<td>GD 233, Typography</td>
<td>3</td>
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<tr>
<td>GD 234, Layout and Production</td>
<td>3</td>
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<tr>
<td>GD 236 and 237, Drawing for Commercial Art I and II</td>
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<tr>
<td>Art Electives</td>
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<td>General Studies course</td>
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Junior Portfolio Review 0
### Course Numbers

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>GD 430</td>
<td>Graphica Design</td>
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<tr>
<td>GD 435</td>
<td>Graphic Design</td>
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<tr>
<td>GD 436</td>
<td>Drawing for Commercial Art</td>
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</tr>
<tr>
<td>GD 437</td>
<td>Advanced Advertising Illustration</td>
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</tr>
<tr>
<td>GD 438</td>
<td>Color and Design</td>
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<tr>
<td>GD 439</td>
<td>Senior Terminal Project</td>
<td>1-3</td>
</tr>
</tbody>
</table>

### Lower-Division Courses

134. Introduction to Graphic Design. (1). An overview of the graphic designer's role in contemporary visual communication. A brief history of visual communication will be followed by a review of the designer's involvement in print, environmental and media graphics. Lecture course with films, slides, and video. Team taught. Graded Cr/NcR only. F 17 134 1 1009

135. Design I. (3). Introduction to the principles of design and practice in various media. A study is made of the two-dimensional surface in relation to the formal elements of space, form, color and consequent structure. F 17 135 1 1009

136. Graphic Design Foundation I. (3). An introduction to design for visual communication. A study of the principles of design as they relate to formal, gestalt, and conceptual organization of the two-dimensional surface and the elements of line, shape, texture, space and value. Instructional process will include lecture, critique, and supervised laboratory practice. Prerequisites: graphic design major, GD 134, or simultaneous enrollment in GD 134. F 11 136 1 1009

137. Graphic Design Foundation II. (3). A continuation of Foundation I. Concerns for form and structure will be applied to information design. A study of color includes vocabulary, pigment mixing, color organization and a review of the psychological effects of color as they are used in communication ends. Instructional process will include lecture, critique, and supervised laboratory practice. Prerequisites: graphic design major, GD 135 or 136. F 17 137 1 1009

139. Design II. (Lab fee). Introduction to the principles of three-dimensional design. A study of relationships of mass and space using diverse media is conducted. Prerequisite: GD 134 and 136. F 17 139 1 1009

230. Basic Photography (Still). (3). Introductory course in still photography. Lab fee. Nonmajors may be required to furnish their own cameras. Prerequisites: GD 135 or 136 and instructor's consent. F 17 230 1 1009

231. Basic Photography (Motion Picture). (3). Introductory course in film production. Lab fee. Nonmajors may be required to furnish their own cameras. Prerequisites: GD 230 and instructor's consent. F 17 231 1 1009

233. Basic Typography. (3). Lettering as related to the study of type and its application in advertising and design. Prerequisites: GD 134, 136, and 137. 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, planning, media in advertising. A study is made of studio practices and art production problems. Prerequisite: GD 134, 136, and 137. 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 the figure for editorial and fashion illustration. Prerequisite: GD 236. F 17 237 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). Design of typographic symbols and logotypes. The application of type, typographic symbols, and logotypes to two- and three-dimensional formats. Prerequisites: GD 233 and 234. F 17 300 1 1009

330. Design Media Studio. (3). Advanced study of typography, cinematography, or television. Lab fee. Repeatable for credit. Prerequisite: GO 237 and 231 and instructor's consent. F 17 330 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 237. F 17 333 1 1009

334. Graphic Design—Production. (3). Introduction to printing processes: letterpress and offset printing. Prerequisite: GD 233, 234. F 17 334 1 1009

335. Graphic Design—Theory. (3). Experiments with visual phenomena and their use in the communication of ideas through visual means. Studio practice is coordinated with the discussion of art theory, philosophy and history of design. F 17 335 1 1009

336. 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 17 336 1 1009

381. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Grade for the course is Cr/NcR. F 17 381 2 1009

434. Graphic Design Intern. (3). On-the-job internship in an art studio or advertising agency. Instruction time is divided between arranged location, observation and/or 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. Prerequisite: GO 334 and 337. F 17 434 2 1009

435. Graphic Design IV—Design Programs. (3). A comprehensive study of the corporate image. The development, coordination and execution of a corporate design program are included. This course emphasizes conceptual aspects of graphic design. Repeatable for credit. Prerequisites: GD 334 and 430. F 17 435 1 1009

437. Advanced Advertising Illustration. (3). Continuation of GD 337. Color media are included. Repeatable for credit. Prerequisite: GD 337. F 17 437 1 1009

438. Color and Design. (3). The psychology and optics of color perception and expression in design. Color theory is applied to film making, exhibition design and advertising. Prerequisites: GO 137 and 334. 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

### Course for Graduate/Undergraduate Credit

730. Seminar in Graphic Design. (3). Supervised study and research. Weekly consultation and reports are required. Repeatable for credit. Prerequisite: departmental consent. F 17 730 9 1009

### Studio Arts

Students from the Fairmount 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. 9 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.

### 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.
### Area
| Art Curriculum | 81 |
| Art history elective | 3 |
| Ceramics | 24 |
| Drawing | 12 |
| Sculpture | 6 |
| Painting | 3 |
| Printmaking | 3 |
| Art electives | 30 |

#### General Education Program
83

### Model Program

#### Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
<td>6</td>
</tr>
<tr>
<td>General education: Art Hist. 121G, 122G, or 124</td>
<td>6</td>
</tr>
<tr>
<td>General education</td>
<td>6</td>
</tr>
<tr>
<td>SA (Drawing) 145, Drawing</td>
<td>3</td>
</tr>
<tr>
<td>SA (Printmaking) 160 or 262, Printmaking I or II</td>
<td>3</td>
</tr>
<tr>
<td>SA (Sculpture) 180, Sculpture I</td>
<td>3</td>
</tr>
<tr>
<td>SA (Ceramics) 170, Ceramics I</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education</td>
<td>17</td>
</tr>
<tr>
<td>SA (Drawing) 240, Life Drawing</td>
<td>6</td>
</tr>
<tr>
<td>SA (Painting) 250 or 251, Oil Painting or Watercolor Painting</td>
<td>3</td>
</tr>
<tr>
<td>SA (Ceramics) 270, Ceramics II</td>
<td>6</td>
</tr>
<tr>
<td>SA (Sculpture) 280, Sculpture II</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education</td>
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</tr>
<tr>
<td>SA (Ceramics) 275 or 575, Study of Ceramic Materials I or II</td>
<td>3</td>
</tr>
<tr>
<td>SA (Ceramics) 276 or 576, Study of Ceramic Glazes I or II</td>
<td>3</td>
</tr>
<tr>
<td>SA (Drawing) 340, Life Drawing Studio</td>
<td>3</td>
</tr>
<tr>
<td>SA (Ceramics) 370, Ceramics Studio</td>
<td>3</td>
</tr>
<tr>
<td>Art history electives</td>
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<tr>
<td>Art electives</td>
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#### Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced ceramics studio</td>
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</tr>
<tr>
<td>Art electives</td>
<td>21</td>
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</tbody>
</table>

### Lower-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>171. Beginning Ceramics, (3)</td>
<td>3</td>
</tr>
<tr>
<td>172. Handbuilding Techniques, (3)</td>
<td>3</td>
</tr>
<tr>
<td>270. Introduction to Ceramics Studio, (3)</td>
<td>3</td>
</tr>
<tr>
<td>275. Study of Ceramic Materials I, (3)</td>
<td>3</td>
</tr>
<tr>
<td>276. Study of Ceramic Glazes I, (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Upper-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>370. Ceramics Studio, (3)</td>
<td>3</td>
</tr>
<tr>
<td>374. Kiln Methods, (3)</td>
<td>3</td>
</tr>
<tr>
<td>570. Advanced Ceramics Studio, (3)</td>
<td>3</td>
</tr>
<tr>
<td>574. Advanced Study of Kiln Methods, (3)</td>
<td>3</td>
</tr>
<tr>
<td>575. Study of Ceramic Materials II, (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Courses for Graduate/Undergraduate Credit

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>572. Advanced Handbuilding Techniques, (3)</td>
<td>3</td>
</tr>
<tr>
<td>576. Study of Ceramic Glazes II, (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Model Program

#### Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
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<tr>
<td>General education: Art Hist. 121G, 122G, or 124</td>
<td>6</td>
</tr>
<tr>
<td>General education</td>
<td>6</td>
</tr>
<tr>
<td>SA (Drawing) 145, Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>SA (Printmaking) 160, Printmaking I</td>
<td>3</td>
</tr>
</tbody>
</table>
Courses for Graduate/Undergraduate Credit

545. Advanced Drawing Studio. (1-3). Drawing with a variety of media. Graphic problems related to individual technical and aesthetic development are used. Critiques are given. Repeatable for credit. Prerequisites: SA (Drawing) 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, free-standing student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent. F 16 549 1 1002

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 are 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 (Drawing) 145. F 16 250 1 1002

251. Watercolor Painting. (3). An introduction to transparent watercolor painting. Sketchbooks and/or portfolio are required. Prerequisites: SA (Drawing) 145. F 16 251 1 1002

252. Acrylic Painting. (3). An introduction to acrylic painting on various supports, such as canvas, Masonite, and paper. Prerequisites: SA (Drawing) 145. F 16 252 1 1002

255. Introduction to Methods and Media of Painting. (3). Survey of painting methods from the 12th century to the 20th. History and nature of materials are examined, including encaustic, tempera, oil, oil-resin, synthetic media, grounds, supports, and surface protection. Prerequisite: instructor's consent. F 16 855 0 1002

855. Methods and Media of Painting. (3). Painting methods from the 12th century to the 20th century. 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 0 1002

858-859. Terminal Project—Painting. (3 or 5, 3 or 5). F 16 858 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, serigraph, 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
Art History Electives 6
Printmaking 24
Drawing 15
Painting 6
Ceramics 3
Sculpture 6
Art electives 21
General Education Program 43

Student. Emphasis is on independent achievement and preparation for graduate study. Repeatable for credit. Prerequisites: two semesters of SA (Painting) 350 and interview with instructor. F 16 550 1 1002
Model Program

Freshman

Course                        Hrs.                      Area
Eng. 101 and 102, College English 6                      Foundation
I and II                       6                      Foundation
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal 3
Communication
General education: Art Hist. 121G, 122G, or 124 6
General education 3
SA (Drawing) 145, Drawing I 3
SA (Printmaking) 160, Printmaking I 3
SA (Ceramics) 170, Ceramics I 3
SA (Printmaking) 262, Printmaking II 3
SA (Sculpture) 185, Basic 3-D Studio 3

Sophomore

Course                        Hrs.                      Area
General education 15
SA (Drawing) 240, Life Drawing 6
SA (Painting) 250, Oil Painting 6
SA (Painting) 251 or 252, Watercolor Painting or Acrylic Painting 3
SA (Printmaking) 265, The Techniques and Materials of Printmaking 3
SA (Printmaking) 364, Printmaking III—Lithography 3
SA (Sculpture) 260, Sculpture 3

Junior

Course                        Hrs.                      Area
General education 10
SA (Drawing) 340, Life Drawing Studio 3
Art history electives 3
Printmaking electives 6
Art electives 6

Senior

Course                        Hrs.                      Area
SA (Drawing) 545, Advanced Drawing Studio 3
SA (Printmaking) 560, Advanced Printmaking Studio 6
Art history electives 3
Art electives 3

Lower-Division Courses

160. Printmaking I. (3) An introduction to printmaking. Exploratory work is done in intaglio, collagraph, woodcut or relief techniques. F 16 1002

262. Printmaking II. (1-3) Basic intaglio methods (etching, engraving, soft ground, aquatint and mixed techniques). Second semester includes color printing in intaglio, collagraph or mixed techniques. Repeatable for credit one semester. Prerequisite: SA (Drawing) 145. F 16 1002

265. The Techniques and Materials of Printmaking. (2-3) Lecture, assigned reading and reports on tools, materials, methods and origins of basic printmaking techniques, including woodcut, relief, intaglio, lithograph, collagraph and color printing. F 16 1002

Upper-Division Course

364. Printmaking III—Lithography. (3) Introduction to lithography, printing from the stone in black and white. The second semester includes color printing in lithography and combined techniques. Repeatable for credit. Prerequisite: SA (Drawing) 145 or SA (Printmaking) 160. F 16 1002

Courses for Graduate/Undergraduate Credit

560. Advanced Printmaking Studio—Intaglio. (1-3) Intaglio, collagraph and mixed techniques. For the students interested in professional printmaking, the course offers specialization in color printing or black and white. Repeatable for credit. Prerequisites: SA (Printmaking) 160, 262 and 364. F 16 1002

561. Advanced Printmaking Studio—Lithography. (1-3) Lithography, black and white or color. For the student interested in professional printmaking, the course offers specialization in color printing. Repeatable for credit. Prerequisites: SA (Printmaking) 160, 262 and 364. F 16 1002

565. Independent Study in Printmaking. (3). A professional emphasis on technical and aesthetic research in the printmaking area. Available only for the advanced printmaking student with consent of instructor. Statement of interest must be submitted for faculty approval before registration. Prerequisite: departmental consent. F 16 1009

765. The Techniques and Materials of Printmaking. (3). Lecture, assigned reading and reports on the tools, materials, methods, and origins of basic printmaking techniques, including woodcut, relief, intaglio, lithograph, collagraph and color printing. Special research project required in addition to assigned reading and reports. Prerequisite: 6 hours of printmaking. F 16 1002

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 1009

860. Special Problems in Printmaking—Intaglio. (1 or 3 or 5). Advanced printmaking on an individual basis. Encouragement is given to investigation combined with a craftsman-like approach. Techniques include all intaglio, relief and combined methods, black and white and color. Repeatable for credit. F 16 1002

862 & 863. Special Problems in Printmaking—Lithography. (1 or 3 or 5). Advanced printmaking on an individual basis. Encouragement is given to investigation, combined with a craftsman-like approach. Include are: lithography and all allied techniques, black and white and color. Repeatable for credit. F 16 1002

868-869. Terminal Project—Printmaking. (3 or 5, 3 or 5). F 16 1002: F 16 1002

Sculpture

The sculpture program provides students with a solid grounding in basic techniques and materials and exposes them to the past and present directions in sculpture. A professional attitude 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                      Hrs.        Course
Art Curriculum            82
  Art history electives    6
  Foundation               6
  SA 145, Drawing          6
  SA 185, Basic 3-D Studio 6
  Sculpture                24
  Drawing                  12
  Ceramics                 6
  Painting                 3
  Printmaking              6
  Art electives            19
  General Education Program 42

Model Program

Freshman

Course                        Hrs.                      Area
Eng. 101 and 102, College English 6                      Foundation
I and II                       6                      Foundation
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal 3
Communication
General education: Art Hist. 121G, 122G, or 124 6
General education 3
SA (Drawing) 240, Life Drawing 6
SA (Painting) 250 or 251, Oil Painting or Watercolor Painting 3
SA (Sculpture) 260, Sculpture II 3
SA (Sculpture) 360, Sculpture Studio 3
Ceramics elective 3

Sophomore

Course                        Hrs.                      Area
General education 15
SA (Drawing) 340, Life Drawing Studio 3
SA (Printmaking) 415, Drawing I 3
SA (Printmaking) 160, Printmaking II 3
SA (Ceramics) 270, Ceramics I, 3
SA (Sculpture) 185, Basic 3-D Studio 3

Junior

Course                        Hrs.                      Area
General education 15
SA (Drawing) 240, Life Drawing Studio 3
SA (Painting) 250 or 251, Oil Painting or Watercolor Painting 3
SA (Sculpture) 260, Sculpture Studio 3
SA (Sculpture) 360, Sculpture Studio 3
Ceramics elective 3

Graduate

Course                        Hrs.                      Area
General education 15
SA (Drawing) 240, Life Drawing Studio 3
SA (Painting) 250 or 251, Oil Painting or Watercolor Painting 3
SA (Sculpture) 260, Sculpture II 3
SA (Sculpture) 360, Sculpture Studio 3
Ceramics elective 3
Art electives 3
Art electives 10
Courses for Graduate Students Only

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

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, dance for music theater, ballet, and modern dance forms.

The Mid-America Dance Theatre presents at least two performances annually and offers lecture demonstrations, master classes, and informal concerts throughout the year. Membership into the company is by audition only.

Graduation Requirements

Dance majors must complete Dance 501, Modern Dance IV, and Dance 410, Ballet II. A minimum of 42 hours is required in modern dance and ballet, 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 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 will 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.

Bachelor of Fine Arts

The general graduation requirements of the University must be met as described in the Academic Information—Requirements for Graduation section of the Catalog. In addition, the following course requirements must be met:

Course: Hrs.
Dance 201, Modern Dance Technique I; Dance 301, Modern

888-889. Terminal Project—Sculpture. (3 or 5, or 3 or 5). F 16 888 4 1002; F 16 889 4 1002

Course for Graduate/Undergraduate Credit.

580. Advanced Sculpture Studio. (1-3). Special emphasis on the main approaches to sculpture. Stress is placed on the form, concept, and construction of sculpture. Carving techniques in wood, stone, and/or plastic are included, as are construction and assembling techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.) and/or combined materials. Repeatable once for credit. Prerequisites: SA (Sculpture) 185 and 280. F 16 380 1 1002

581. Sculpture Studio. (3). Casting techniques for bronze and aluminum sculpture. Plastic investment, CO2 seed sand, foam vaporization and vitrified shell molds are used to develop individual and unique approaches to cast sculpture. Prerequisite: SA (Sculpture) 280 or consent of instructor. F 16 381 1 1002

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

Course.

Dance 201, Modern Dance Technique I; Dance 301, Modern

Dance II; Dance 401, Modern Dance III; Dance 501, Modern Dance IV. (Placement and advancement by audition and/or faculty consent only.)

Dance 210, Ballet I; Dance 310, Ballet II; Dance 410, Ballet III. (Placement and advancement by audition and/or faculty consent only.)

Dance 305, Theater. (1.)


Dance 625, Repertory or Dance 735, Mid-America Dance Theatre.

Dance 545, Methods of Teaching Dance. (1.)

Dance 645, Practice in Teaching Dance. (1.)

Speech 253, Costuming for the Stage. (1.)

Speech 254, Stage Makeup. (1.)

Speech 645, Stage Lighting. (1.)

Total

84

In addition to the above required courses a minimum of 11 hours should be selected from the following speech, music, and art courses outside the dance division to be distributed as shown:

Course.

Speech 143G, The Art of the Theatre or Speech 243, Acting I or Speech 623, Development of the Theater I or Speech 624, Development of the Theater II (select one of the previous courses). (3.)

Mus.-Comp. 160G, The Heritage of Western Music or Mus.-Comp. 161, Music Appreciation or Mus.-Comp. 315, Music of the 20th Century or Mus.-Comp. 436, Styles of Jazz or Mus.-Comp. 493G, American Music or Mus. Perf. 627, Music Theatre Directing (select two of the previous courses). (5.)

Art Hist. 122G, Survey of Western Art: Renaissance and Baroque or Art Hist. 124, Survey of Western Art: Modern or Art Hist. 525, 20th Century Art Before 1945 or Art Hist. 526, Art Since 1945 or GD 135, Design I (select one of the previous courses). (3.)

The remaining hours should be selected to fulfill General Education Program requirements.
Lower-Division Courses

120. Jazz I. (1-2). Introduction to jazz technique, rhythmic patterns and directions, basic steps, 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 basic positions, body alignment, stretches and strengthening exercises; simple movement phrases are emphasized to develop understanding of direction, rhythm and dynamics. Repeatable for credit. F 25 210 5 1008

210. 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

220. Jazz History. (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 varying rhythms, dynamics and designs. Exploration of appropriate accompaniment for dance. Class culminates in a performance of a solo work for an invited audience. Prerequisite: one year of modern dance and equivalent to intermediate technical level. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. F 25 305 5 1008

310. Ballet II. (2-3). Continuation of Dance 210, intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition. F 25 310 5 1008

315. Music for Dance. (3). Study of tempo, meter and quality of sound as applied to movement. Exploration of appropriate music repertoire for dance. Prerequisite or corequisite: Dance 305. F 25 315 5 1008

320. Performance. (1-3). Perform in choreographed calculation by students enrolled in choreography and/or performance and production classes. Prerequisite: instructor's consent or by audition. Credit hours to be determined by instructor. F 25 320 5 1008

325Q. Dance History I. (3). The development of dance up to the 20th century. Study of national origins and period dance movement styles. F 25 325Q 1 1008

401. Modern Dance III. (3). Continuation of Dance 301. Upper intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition. F 25 401 5 1008

405. Choreography II. (4). Further work in composing dances for two, three or more dancers. Apply lighting and costuming ideas to completed dance presented in performance at end of semester. Prerequisite: Dance 305. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. F 25 405 5 1008

410. Ballet III. (3). Continuation of Dance 310. Upper intermediate level. Repeatable for credit. Prerequisite: instructor's consent or by audition. F 25 410 5 1008

425Q. Dance History II. (3). Twentieth century dance emphasizing the emergence of ballet 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. Repeatable for credit. 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-technical techniques. Students are also required to choreograph and perform and be responsible for all technical aspects of the concert to be performed at the end of the semester. Prerequisite: Dance 405. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. 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 classroom 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. Prerequisite: Dance 505. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. F 25 605 5 1008

625. Repertory. (3). Study and performance of new choreography and or repertoire. Cultivation of performance skills in varied dance styles. Repeatable for credit. Prerequisite: instructor's consent or by audition. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. F 25 625 5 1008

645. Practice in Teaching Dance. (3). Actual placement teaching situation with responsibility of teaching ballet, modern and/or jazz in private studios, elementary, high schools, Y's or recreation centers. Prerequisite: Dance 545. F 25 645 5 1008

690. Special Topics in Dance. (1-6). For individual or group instruction. Repeatable for credit with departmental consent. F 25 690 2 1008

735. Mid-America Dance Theatre. (1-6). The student company performs on campus and in the community and tours as the occasion arises. Prerequisite: Members accepted by audition only. Auditions are open to dancers in the community and University. Concurrent enrollment in appropriate-level modern and ballet technique is required. Mid-America Dance Theatre is repeatable for credit. F 25 735 5 1008

750. Dance Workshop. (1-4). Repeatable for credit. F 25 750 2 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.

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. they must perform for a faculty jury each semester to determine their proficiency level and progress. Semester repertoire 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 Regulations

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 1 semester hour of credit, students receive a 1/2 hour lesson each week, with a minimum of 5 hours of practice required per week.

For 2 semester hours of credit, (majors and special music students only), students receive either (1) a 1/2 hour private lesson each week and a 1 hour class each week or (2) a 1 hour lesson per week, or other equivalent arrangements at the option of the instructor. Students are expected to practice a minimum of 10 hours each week.

For 4 semester hours of credit, (majors and special music students only), students receive two 1/2 hour lessons and a 1 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 Recital, Mus. Perf. 050, 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.

No graduating senior may prepare or perform the graduation recital without the guidance of a Division of Music faculty member. In the event the required applied music credit hours have been earned prior to the recital presentation, students are expected to continue to elect the applied major through the preparation for and the performance of the recital.

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 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>Applied Music</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief performing medium (piano, organ)</td>
<td>16</td>
</tr>
<tr>
<td>Other performing media</td>
<td>4</td>
</tr>
<tr>
<td>Chief performing medium (nonkeyboard)</td>
<td>8</td>
</tr>
<tr>
<td>Keyboard performing medium</td>
<td>8</td>
</tr>
<tr>
<td>Other performing media</td>
<td>4</td>
</tr>
<tr>
<td>Theory and Composition</td>
<td>40</td>
</tr>
</tbody>
</table>

| Mus.-Comp. 1270-128, 129-130, 227-228, 229-230, 259-260, 523, 559, 560, 561, 641, 659, 660, 661, 671, and 672 |

| History and Literature of Music | 11 |
| Mus.-Comp. 113Q and 11Q, 8 hours from Mus.-Comp. 331Q, 332Q, 333Q |
| Conducting | 4 |
| Mus. Perf. 217 or 218, 651 or 691 |
| Electives (music or nonmusic courses) | 7 |
| Recital Attendance (four semesters plus senior recital) | 10 |

Theo r y-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

Area

<table>
<thead>
<tr>
<th>Applied Music</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>22</td>
</tr>
<tr>
<td>Mus.-Comp. 1270-129, 128-130, 227-228, 229-230, 523, 561 or 661, and 641 or 645 or 643 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Mus.-Comp. 113Q and Mus.-Comp. 331Q, 332Q, 333Q</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218, 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Electives (6 hours of music electives required—suggested are Mus. Perf. 680 for woodwind majors; Mus. Perf. 681 for brass majors; Mus. Perf. 682 for percussion majors; Mus. Perf. 620 for violin and viola majors)</td>
<td>11</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>
</tbody>
</table>

* See degree checklists for specified ensembles.
Bachelor of Music in Performance—Keyboard Major

**Area** | **Hrs**
--- | ---
Applied Music | 28-32

Chief performing medium | 24

Second performing medium (four semesters) | 4

Mus. Perf. 250 and 251, Applied Piano Concerto: (For piano performance majors) (2 semesters) | 4

Piano Accompanying Majors: Piano | 16

Applied accompanying | 12

(Mus. Perf. 223, 224, 423, and 424)

**Theory** | 22-26

Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 523, 561 or 661, 345 or 641 or 643 or 645, and for piano accompanying majors only, Mus. Perf. 121, 122, 221, 222

History and Literature of Music | 8

Mus.-Comp. 113Q and 6 hours from Mus.-Comp. 331Q, 332Q, 333Q or other approved music literature courses (6 hours must be taken in Mus.-Comp. 331Q, 332Q, or 333Q)

Conducting | 4

Mus. Perf. 217 or 218, and 651 or 691

**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. 567-598 and 4 hours of music electives)

Piano Majors

**Performance Majors:** Mus.-Perf. 107-407, Piano Repertoire | 6

Mus.-Perf. 580, Piano Pedagogy | 2

Mus.-Comp. 582 and 583, Piano Literature | 4

Pedagogy Majors: Mus.-Perf. 107-407, Piano Repertoire | 6

Mus.-Perf. 580, Piano Pedagogy | 2

Mus.-Perf. 581, Piano Teaching Materials | 2

Mus.-Comp. 582 and 583, Piano Literature | 4

**Bachelor of Music in Performance—Vocal Major**

**Area** | **Hrs**
--- | ---
Applied Music | 26

Voice | 24

Piano (two semesters) | 2

Study in another instrument may be substituted if student meets piano proficiency level

**Theory** | 18

Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, and 523 or 661

History and Literature of Music | 8

Mus.-Comp. 113Q and 6 hours from Mus.-Comp. 331Q, 332Q, 333Q

Conducting | 4

Mus. Perf. 218

Voice Pedagogy and Repertoire

Mus. Perf. 121, 122, 221, 222, 625 and Mus.-Comp. 626

Ensembles (see degree check-sheets for specified ensembles) | 10

Electives (in upper-division theory, conducting, or choral materials) | 10

Senior Recital (Mus. Perf. 400) | 1

Reital attendance (specified number of recitals per semester for four semesters) | 2

**Bachelor of Music in Performance with Minor in Business**

**Area** | **Hrs**
--- | ---
Applied Music | 20

Chief performing medium | 16

Second performing medium (four semesters) | 4

**Theory** | 20

Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 645 or 643 or 345

History and Literature of Music | 11

Mus.-Comp. 113Q, 331Q, 332Q, 333Q

Conducting | 4

Mus. Perf. 217 or 218, and 651 or 691

**Ensembles** (see degree sheets for specified ensembles) | 10 or 8

Electives | 5

Vocal majors required Mus. Perf. 121, 221, 222. Piano majors required Mus. Perf. 580

Senior Recital (Mus. Perf. 400) | 1

Reital attendance (specified number of recitals per semester for four semesters, Mus. Perf. 050.)

**Bachelor of Music in Performance with Minor in Theater**

**Area** | **Hrs**
--- | ---
Applied Music | 20

Chief performing medium | 16

Second performing medium (four semesters) | 4

**Theory** | 20

Mus.-Comp. 127Q-129, 128-130, 227-229, 228-230, 561 or 661, 641 or 645 or 643 or 345

History and Literature of Music | 11

Mus.-Comp. 113Q, 331Q, 332Q, 333Q

Conducting | 4

Mus. Perf. 217 or 218, and 651 or 691

**Ensembles** (see degree sheets for specified ensembles) | 10 or 8

Speech/Theater Requirements | 24

Speech 180 (1): Speech 221Q (3), 243Q (3), 244 (3), 253 (3), 254 (1), 259
Bachelor of Music in Performance with Minor in Journalism
(News Editorial Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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<tbody>
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<td>Chief performing medium</td>
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<tr>
<td>Second performing medium</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-129, 128-130, 227-229,</td>
<td></td>
</tr>
<tr>
<td>228-230, 561 or 661, 641 or 645 or</td>
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</tr>
<tr>
<td>643 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Mus.-Comp. 113Q, 331Q, 332Q, 333Q</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>Ensembles (see degree sheets for</td>
<td></td>
</tr>
<tr>
<td>specified ensembles)</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
<tr>
<td>Vocal majors required Mus. Perf. 121,</td>
<td></td>
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<tr>
<td>221, 222. Piano majors required Mus. Perf.</td>
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<tr>
<td>580</td>
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<td>Senior Recital (Mus. Perf. 400)</td>
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<tr>
<td>Recital attendance (specified number of</td>
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<tr>
<td>recitals per semester for</td>
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<tr>
<td>four semesters, Mus. Perf. 050.)</td>
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Journalism Requirements

<table>
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<tr>
<th>Area</th>
<th>Hrs.</th>
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<tbody>
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<td>Journalism 115Q (3); 200 (3); 325 (3);</td>
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<tr>
<td>350 (3); 502 or 525 (3); 550 (3); 560 (3);</td>
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<tr>
<td>690 (3)</td>
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</table>

Bachelor of Music in Performance with Minor in Journalism
(Broadcasting Emphasis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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</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</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 127Q-129, 128-130, 227-229,</td>
<td></td>
</tr>
<tr>
<td>228-230, 561 or 661, 641 or 645 or</td>
<td></td>
</tr>
<tr>
<td>643 or 345</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>11</td>
</tr>
<tr>
<td>Mus.-Comp. 113Q, 331Q, 332Q, 333Q</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>Ensembles (see degree sheets for</td>
<td></td>
</tr>
<tr>
<td>specified ensembles)</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
<tr>
<td>Vocal majors required Mus. Perf. 121,</td>
<td></td>
</tr>
<tr>
<td>221, 222. Piano majors required Mus. Perf.</td>
<td></td>
</tr>
<tr>
<td>580</td>
<td></td>
</tr>
<tr>
<td>Senior Recital (Mus. Perf. 400)</td>
<td>1</td>
</tr>
<tr>
<td>Recital attendance (specified number of</td>
<td></td>
</tr>
<tr>
<td>recitals per semester for</td>
<td></td>
</tr>
<tr>
<td>four semesters, Mus. Perf. 050.)</td>
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Journalism Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journalism 115Q (3)</td>
<td></td>
</tr>
<tr>
<td>200 (3); 325 (3); 350 (3); 502 or 525</td>
<td></td>
</tr>
<tr>
<td>(3); 550 (3); 560 (3); 690 (3)</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 public schools and studio piano teaching in the community.

Student Teaching

Admission into the student teaching semester requires a minimum cumulative grade point average of 2.50; a minimum grade point average of 2.50 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; successful completion of the piano proficiency exam; successful completion of a physical examination; and a recommendation by the music education department.

Transfer students must satisfy education requirements for prerequisites not taken at Wichita State.

All students must have an application 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.

Graduation Requirements

The following program fulfills both the University requirements for graduation and the Kansas certification requirement and must be taken by all Bachelor of Music Education (BME) candidates. In completing the BME program, the student must meet the program requirements of the University given in the Academic Information—Requirements for Graduation section of the Catalog.

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></td>
</tr>
<tr>
<td>Speech 111 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Math. 109 or 111 or 112 or 211</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td>9</td>
</tr>
<tr>
<td>Literature required, 3 hrs.;</td>
<td></td>
</tr>
<tr>
<td>Mus.-Comp. 113Q required, 2 hrs.; 4 hrs.</td>
<td></td>
</tr>
<tr>
<td>from American studies, art education,</td>
<td></td>
</tr>
<tr>
<td>art history, foreign languages (excluding</td>
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</tr>
<tr>
<td>basic language courses), history,</td>
<td></td>
</tr>
<tr>
<td>linguistics, musicology-composition, music</td>
<td></td>
</tr>
<tr>
<td>education, philosophy or religion</td>
<td></td>
</tr>
</tbody>
</table>
Social and Behavioral Sciences 6
Psychology 1110 required, 3 hrs.; 3 hrs. from sociology, anthropology, economics, geography, or political science.
Mathematics and Sciences 6
Courses in 2 of the following departments: biological sciences, chemistry, geology, mathematics, or physics.
Electives (to make a total of 42 hours) 9
6 hours required from Mus.-Comp. 3310, 3320, 3330. 3 hours may be taken in any university division (except the student's major department).

Professional Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Education</td>
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</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>
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<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>(2nd 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>

* These courses must be taken during the student teaching semester.

Recital Attendance (four semesters plus senior recital-Mus. Perf. 050)

Music Education 16
Elementary instrumental emphasis (field-based curriculum) 10
Mus. Ed. 202, 302, 402 * and 611
or
Secondary instrumental emphasis 10
Mus. Ed. 204, 304, 404 * and 611
Mus. Ed. 235, 236, 237, 238, 239, and 240 6

Additional Courses Required for Vocal (Keyboard) Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16</td>
</tr>
<tr>
<td>Vocal Majors (Voice)</td>
<td>14</td>
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<tr>
<td>(Piano)</td>
<td>2</td>
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<tr>
<td>Keyboard Majors</td>
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<tr>
<td>(Piano)</td>
<td>14</td>
</tr>
<tr>
<td>(Mus. Ed. 341 &amp; 342)</td>
<td>2</td>
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</tbody>
</table>

Students must be enrolled in applied music during the semester of their senior recital.

General Music 28
Mus.-Comp. 127Q-128, 129-130, 227-228, 229-230, 561 or 661, 641 or 645 or 643, Mus. Perf. 217 or 218, 651 or 691. Required for vocal majors, 4 hrs. for piano majors. Mus. Perf. 580 or 581 and 580 or 581, 307 and 407.


Ensembles 8-10
Instrumental and vocal majors 10
Piano majors 8
(see degree check sheets for specified ensembles)

Recital Attendance (four semesters plus senior recital-Mus. Perf. 050)

Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
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<tr>
<td>Educational Psychology</td>
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<tr>
<td>IS 333 and 433</td>
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</tr>
<tr>
<td>Foundations of Education</td>
<td>6</td>
</tr>
<tr>
<td>IS 232, 231, 234, 428</td>
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</tr>
<tr>
<td>Additional Education Requirements</td>
<td>6</td>
</tr>
<tr>
<td>IS 401 and 456</td>
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<tr>
<td>Recommended for Spec. Mus. Ed Majors, CDS 214</td>
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</tr>
<tr>
<td>Student Teaching</td>
<td>6</td>
</tr>
<tr>
<td>IS 451 and 469</td>
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<tr>
<td>Music Education Methods</td>
<td></td>
</tr>
<tr>
<td>Elementary Vocal Emphasis</td>
<td></td>
</tr>
<tr>
<td>Mus. Ed. 201, 301, 309, 402, 241, 242</td>
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</tr>
<tr>
<td>Secondary Vocal Emphasis</td>
<td></td>
</tr>
<tr>
<td>Mus. Ed. 203, 303, 309, 404, 241, 242</td>
<td></td>
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<tr>
<td>Elementary Instr. Emphasis</td>
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</tr>
<tr>
<td>Secondary Instr. Emphasis</td>
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<tr>
<td>Mus. Ed. 204, 304, 309, 404, 235, 236, 237, 238, 239, 240</td>
<td></td>
</tr>
</tbody>
</table>
Music Major in Fairmount College of Liberal Arts and Sciences

Students in Fairmount 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.
Group I 8
Music Literature and History
Mus.-Comp. 113Q and 6 hours from Mus.-Comp. 331Q, 332Q, or 333Q
Group II 16
Music Theory
Mus.-Comp. 127Q-128, 129-130, 227-228, 229, and 523
Group III 2
Counterpoint
Mus.-Comp. 561
Group IV 4
Conducting, Orchestration, and Choral Arranging
Mus. Perf. 217 or 218, and Mus.-Comp. 641 or 643 or 645
Group V 3
Applied Music (4 semesters)
Voice, piano, organ, or orchestral instrument
Group VI 4
Ensemble
Select in consultation with advisor
Group VII 4
Electives from the areas of music, literature, music theory, counterpoint, conducting, orchestration, and choral literature

Music Minor in Fairmount College of Liberal Arts and Sciences

A music minor in Fairmount 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, 333Q, 523, a maximum of 4 hours of ensembles; and a maximum of 2 hours (two semesters) in applied music. Students who choose to utilize 2 hours of applied music must satisfy freshman proficiency requirements.

Music Education

Noncredit Course

080. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See semester schedule of courses for current listing. Not applicable to degree. Offered Cr/Ncr only. Repeatable. F 11 060 2 0832

Lower-Division Courses

150. Music Education Workshop. (1-4). Repeatable for credit. F 11 150 2 0832

201. Fundamentals of Vocal Music for Elementary School. (3). The teaching of music in the elementary school; consideration of objectives and examination of materials. Designed for students primarily interested in teaching music in elementary schools; the course includes observation in public schools. Includes classroom turpentine and recorder, choreographing for the choral ensemble, and music theater for the public schools. Prerequisite: music education major or instructor's consent. Grades K-8. F 11 201 0 0832

202. Fundamentals of Instrumental Music for Elementary School. (3). An introductory course with two periods placed on a general examination of the instrumental music program in the elementary school. Coverage includes a study of current trends and changing concepts in music education as well as an investigation of the activities, materials and organizational considerations related to the teaching of elementary instrumental music. The course provides the opportunity to teach elementary instrumental students on a limited basis in a laboratory school setting. Includes teaching techniques for marching band and jazz ensemble. Prerequisite: music education major or instructor's consent. Grades 4-8. F 11 202 0 0832

203. Fundamentals of Vocal Music for Secondary Schools. (3). The teaching of music in the secondary school; consideration of objectives and examination of materials. Designed for students primarily interested in teaching music in secondary schools, the course includes observation in public schools. Includes classroom guitar, choreographing for the choral ensemble, song leading, and music theater for the public schools. Prerequisite: music education major or instructor's consent. Grades 9-12. F 11 203 0 0832

204. Fundamentals of Instrumental Music for Secondary Schools. (3). Techniques and materials focused on teaching instrumental music in junior and senior high schools. Emphasis on instrumental organization and administration, pedagogical practices, laboratory experiences, guiding student behavior, evaluation and professional responsibilities. For students primarily interested in teaching instrumental music in the secondary schools. Includes teaching techniques for marching band and jazz ensemble. Prerequisite: music education major or instructor's consent. Grades 7-12. F 11 204 0 0832

235. Methods of Teaching Orchestral Instruments (Violin and Viola). (1). Procedures and materials for class 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 11 235 0 0832

236. Methods of Teaching Orchestral Instruments (Cello and String Bass). (1). Procedures and materials for class and private teaching. Fundamental techniques are applied. Knowledge of more difficult positions 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 Orchestral Instruments (Clarinet and Saxophone). (1). Designed to prepare the prospective instrumental music instructor to effectively teach clarinet and saxophone in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care and minor repair, instructional materials, reed selection and adjustment, instrument 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 Orchestral Instruments (Flute and Double Reeds). (1). Designed to prepare the prospective instrumental music instructor to effectively teach flute and double reeds in the public school setting. Includes discussions of teaching techniques, identification of problems peculiar to each instrument, care of instrument, instructional materials, instrument brands and the development of sufficient playing skills. 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 Orchestral Instruments (Brass). (1). Procedures and materials for class and private teaching of all brass instruments; emphasizing tone qualities, differences in embouchure and necessary techniques for performance. Grades 4-12. F 11 239 0 0832

240. Methods of Teaching Band and Orchestral Instruments (Percussion). (1). Procedures and materials for class and private instruction. Application of snare drum fundamentals and a study of basic techniques for all percussion instruments are included. Grades 4-12. F 11 240 0 0832


281. Cooperative Education. (1-8). A field placement which integrates course work with a planned and supervised professional experience. Application for enrollment and assignment is made by the students' academic advisor and enhancement of the students' academic program. Information on professional experience placement is made in consultation with the academic advisor and by approved faculty sponsors. Cooperative Education coordinators. Students enrolled in Co-op 281 may follow one of two scheduling patterns: parallel, continuing concurrently in a minimum of six hours of course work in addition to their Co-op assignment; sequential, working full-time one semester in a field study and returning to full-time enrollment the following semester, such students need not be concurrently enrolled in any other course. Prerequisite: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. Offered Cr/Ncr only. F 11 281 2 0832

100
Upper-Division Courses

301. Survey of Vocal Music for Secondary School. (3). An overview of activities in secondary vocal and general music programs. Included are a study of objectives for secondary vocal and general music programs and consideration of appropriate materials and methods. Includes classroom guitar and song leading. The course is for students primarily interested in teaching music in the elementary schools. Prerequisite: Mus. Ed. 201. Grades 6-12. F 11 301 0 0832

302. Survey of Secondary School Music. (1-3). Primarily concerned with the organization, methods, activities, and materials involved in the teaching of instrumental music in the secondary schools. Also included is an examination of classroom vocal teaching techniques and an opportunity for elementary instrumental music education majors to teach junior high school instrumental students in a laboratory setting. Prerequisite: Core requirement. Grades 6-12. F 11 302 0 0832

303. Survey of Vocal Music for Elementary Schools. (3). An overview of activities in the elementary general music program. Included are a study of objectives for elementary vocal and instrumental music, selection of materials and methods. Includes autoharp and recorder techniques. The course is for students primarily interested in teaching music in the elementary schools. Prerequisite: Mus. Ed. 203. Grades K-8. F 11 303 0 0832

304. Survey of Elementary School Music. (3). A survey of activities in the elementary school, including consideration of the general music program and instrumental instruction. The course is for students primarily interested in teaching instrumental music in the secondary schools. Prerequisite: Mus. Ed. 203. Grades K-8. F 11 303 0 0832

309. Survey of Music for Special Education. (3). Consideration of methods and problems in preparation for student teaching of music with special education students at early childhood, elementary and secondary levels in public schools. Included are: musical settings (self-contained and mainstreamed), age-appropriate materials in alternative schools and classes, identification, objectives, appropriate activities, materials, and planning and implementation techniques. Also included are demonstration and participation experiences and/or media presentations. This course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptionality. This provision applies to initial certification and recertification of music teachers only. Prerequisites: Mus. Ed. 201 or 202, 203 or 204, with instructor's consent. Grades K-12. F 11 309 0 0832

341. Survey of Singing Techniques and Literature. (1). Vocal problems and strategies, and the development of sufficient vocal skill to assure effective use of the voice in demonstrating vocal technique. Experience in using the singing voice as a teaching tool. Required for instrumental, keyboard, and special music education majors. Prerequisite: 1 hour of applied voice or Mus. Ed. 341 and Mus. Perf. 217 or 218. Grades 6-12. F 11 342 0 0832

351. 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 musical growth through listening, rhythmic and creative activities. This course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptionality. This provision applies to initial certification and recertification of music teachers only. Grades K-12. F 11 351 0 0832

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. This course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptionality. This provision applies to initial certification and recertification of music teachers only. Grades K-12. F 11 352 0 0832

402. Advanced Techniques of Elementary School Music. (1-2). Emphasis on special problems related to preparation for student teaching; consideration of the instrumental, vocal, and general music programs at the elementary level. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 201 and 301 or 202 and 302. To be taken during student teaching semester. Grades K-8. F 11 402 0 0832

404. Advanced Techniques of Secondary School Music. (1-2). Consideration of special problems related to preparation for student teaching and of instrumental, vocal, and general music programs at the secondary level. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 203 and 303 or 204 and 304. To be taken during student teaching semester. Grades 6-12. F 11 404 0 0832

481. Cooperative Education. (1-4). 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. Course may be applied to Co-op 481 may follow one of two scheduling patterns: parallel, or concurrent, in a minimum of six hours of course work in addition to the classroom work for 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/NC only. F 11 481 2 0832

Courses for Graduate/Undergraduate Credit

606. Music Methods for Early Childhood Education. (3). Methods and materials for teaching music in the preschool and kindergarten. Includes the development of the child's musical growth through singing, listening, rhythmic and creative activities. Prerequisites: Mus. Ed. 240 or equivalent. Grades 6-12. F 11 606 0 0832

610A. Music Theater in the Schools. (2). Designed to teach students how to produce a musical in the secondary schools. Includes the study of literary devices (sets, costumes, lighting) and technical techniques. Prerequisite: successful completion of the freshman year and satisfactory academic standing. F 11 610A 0 0832

611. Music for Special Education. (3). Open to any upper-division or graduate student and designed for the potential practicing music teacher, classroom teacher, or special education teacher. Identification of dysfunctioning children and their problems and current theory and practices in special music education are included. This course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptionality. This provision applies to initial certification and recertification of music teachers only. Grades K-12. F 11 611 0 0832

684. String Teaching Seminar. (2). Historical and developmental study of string instrument teaching. Prerequisites: successful completion of the freshman year and satisfactory academic standing. This course satisfies the requirement, effective September 1, 1981, that applicants for initial certification or renewal of secondary and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptionality. This provision applies to initial certification and recertification of music teachers only. Grades 6-12. F 11 684 9 0832

686. Marching Band Techniques. (2). A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction, and script development. F 11 686 0 0832

690. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent. F 11 690 2 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 six through nine. F 11 832 0 0832

737/A. Advanced Woodwind Techniques. (2). Special problems and techniques in the teaching of woodwind instruments. Prerequisites: Mus. Ed. 237 and 238 or equivalent. F 11 737A 0 0832

739/A. Advanced Brass Techniques. (2). Special problems and techniques in the teaching of brass instruments. Prerequisites: Mus. Ed. 239 or equivalent. F 11 739A 0 0832

740/A. Advanced Percussion Techniques. (2). Special problems and techniques in the teaching of percussion instruments. Current materials are surveyed. Prerequisites: Mus. Ed. 240 or equivalent. F 11 740A 0 0832

750. Music Education Workshop. (1-4). Repeatable for credit. F 11 750 2 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 students' 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, or concurrent, in a minimum of six hours of course work in addition to the classroom work for a 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/NC only.
standing prior to the first job assignment. May be repeated for credit. Offered Gr/NR only. F 11 781 2 0832

784. Instrumental Music in the Elementary and Junior High School. (2). An examination of recent developments in instrumental music education and their implications for methods of teaching. F 11 784 0 0832

785. Instrumental Music Organization and Administration. (2). Problems of developing school instrumental music programs. F 11 785 0 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 0 0832

822. Advanced Techniques in Special Music Education. (3). A course for the music education special emphasis. MME candidates only. Research literature and trends in special music education are studied. An evaluation of materials and techniques and special projects exploring the development of musical understanding in the dyslexic child are included. This course satisfies the requirement effective September 1, 1981, that applicants for initial certification or renewal of special and/or elementary certification shall present a survey course, or equivalent content from other courses, in the subject area of exceptional children. This provision applies to initial certification and recertification of music teachers only. Prerequisite: Mus. Ed. 402 or 403. F 11 822 0 0832

823. Special Music Education Practicum. (3). For the music education special emphasis MME candidate only. Supervised teaching is done in special education classrooms. A second course to Mus. Ed. 822. This course gives the special music education emphasis MME candidate experience in teaching in special education classrooms. Prerequisite: Mus. Ed. 822 or concurrent enrollment. F 11 823 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 403. 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 0 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 0 0832

843. Terminal Conducting Project. (2). Individually supervised project for those electing the conducting option on the instrumental or choral emphases under the degree Master of Music Education. Prerequisite: instructor and departmental consent. F 11 843 0 0832

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 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. Beginning Majors. F 12 117P 3 1004

118P. (1). Piano Class. Music Majors. F 12 118P 3 1004

119P. (1). Piano Class. Piano Majors. F 12 119P 3 1004

120P. (1). Piano Class. Nonmajors. 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

General Performance

Noncredit Courses

050. Recital. (0). F 12 050 1 1004

080. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See semester Schedule of Courses for current listing. Not applicable to degree. Repeatable. F 12 080 2 1004

Lower-Division Courses

107-207. Piano Repertoire. (1-1). 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 3 1004

122. English Diction. (1). Designed for the vocal performers, including a comprehensive study of English consonant and vowel sounds. F 12 122 3 1004

148. 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 12 148 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 Comm. 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 Ensemble; (R) Percussion Ensemble; (S) String Ensemble; (T) Jazz Arts Ensemble I & 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 in conducting laboratory and classroom groups. F 12 217 0 1004

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
B Cello
C Clarinet
D Euphonium
E Flute
F French Horn
G Guitar
K Harp
L Oboe
M Organ
N Percussion
P Piano
R String Bass
S Trombone
T Tuba
V Viola
X Saxophone
Y Voice
Z Electric Bass

The following abbreviations are used in the course descriptions: A stands for lecture and L for laboratory. For example, 2R, 2L means 2 hours of lecture and 2 hours of lab.
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 0 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). Individual private study of standard accompaniment literature. Prerequisite: successful completion of 2 semesters of piano study. F 12 223 0 1004; F 12 224 0 1004

225-251. Applied Piano Concerto. (2-2). Designed to give students concert performance experience. Prerequisites: sophomore standing and admittance to the BM performance program. F 12 225 0 1004

281. Cooperative Education. (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the students' 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, enroll 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/No Cr only. F 12 281 2 1004

Upper-Division Courses

300. Junior Recital. (1). Required for BM piano majors, performance or accompanying emphasis. Prerequisite: departmental consent. F 12 300 3 1004

307-407. Piano Repertoire. (1-1). Designed to give performing and listening experience to piano majors. Repeatable for credit. F 12 307 2 1004; F 12 407 2 1004

400. Recital. (1). Prerequisite: departmental 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; Wichita Community Orchestra; (D) Women's Glee Club; Men's Glee Club; (F) A Cappella Choir; University Singers; Concert Chorale; (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) Chamber Ensembles I & 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 Theatre. (2). Basic repertoire and singing techniques with weekly master class devoted to music theatre techniques and concepts. Restricted to persons other than vocal majors. F 12 417Y 3 1004

423-424. Applied Piano Accompaniment. (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: departmental consent. F 12 450 3 1004; F 12 451 3 1004

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 students' 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, enroll 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/No 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: Mus. Ed. 238 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 classes 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 intermediate levels. F 12 581 0 1004

620. String Pedagogy: Violin and Viola. (2). A study of instructional techniques for violin and viola, including the teaching of mini-lessons for instructor and class critique. Prerequisite: violin or viola performance capability or consent of instructor. F 12 620 0 1004

625. Voice Pedagogy. (2). 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 music-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: Mus. Perf. 217 or 218 or equivalent. F 12 651 0 1004

680. Woodwind Pedagogy. (2). A comprehensive study of woodwind instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a woodwind instrument or consent of instructor. F 12 680 0 1004

681. Brass Pedagogy. (2). A comprehensive study of brass instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on a brass instrument or consent of instructor. F 12 681 0 1004

682. Percussion Pedagogy. (2). A comprehensive study of percussion 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 percussion instrument 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, and types of choral composition for the advanced student. Prerequisite: Mus. Perf. 217 or 218 or equivalent. 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). (O) Orchestra; (B) Concert Band; Marching Band; Symphony Band; Wichita Community Band; Wichita Community Orchestra; (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; (R) Percussion Ensemble; (S) String Ensemble; (T) Jazz Arts Ensembles I & 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 Theatre. (2). Basic repertoire and singing techniques with weekly master class devoted to music theatre 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: Mus. Perf. 580 and 581. F 12 760 2 1004

761. Studio Piano Practicum. (2). Supervised studio teaching for graduate students. Prerequisites: Mus. Perf. 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 curriculums); (2) class piano in early childhood; (3) class piano for leisure-age students. (4)
class piano in public (or private) schools, extending the advanced preparation of piano pedagogy students as needed. Repeatable for credit. Prerequisite: Mus. Perf. 580. F 13 843 0 1004

852. 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 13 873 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 the 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 13 874 4 1004

Musicology-Composition

Noncredit Course

080. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See semester Schedule of Courses for current listing. Not applicable to degree. Repeatable. F 13 080 2 1006

Lower-Division Courses

113G. Introduction to Music. (2). Development of skills and techniques used in critical analysis and a comparison of the contrasting styles of music literature. The course is designed for music majors or students with advanced musical background. Must be taken concurrently with Mus.-Comp. 127 or 128. F 13 113G 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

127G. Theory I. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadences, phrase, period), basic orchestration and simple harmonic structures. Prerequisites: concurrent enrollment in Mus.-Comp. 129 or 130. F 13 127G 0 1004

127H. Theory I Honors. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadence, phrase, period), simple harmonic relationships, and fundamental voice-leading techniques. Prerequisites: concurrent enrollment in Mus.-Comp. 129 and departmental consent. F 13 127H 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 con- current enrollment in Mus.-Comp. 129 or 130. F 13 128 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 129H 0 1004

129. Aural Skills I. (2). Recognition, singing and dictation of melodies from all periods of music interval training emphasized. F 13 129 0 1004

130. Aural Skills II. (2). Continuation of melodic, rhythmic perception. Recognition and dictation of diatonic harmonic structures are included. Prerequisite: Mus.-Comp. 129. F 13 130 0 1004

160. The Heritage of Western Music. (3). Intended to acquaint the nonmajor with the culture traditions of Western music. Emphasis on the development of listening techniques by which the student may perceive and understand fundamental musical processes they exist in the various styles within the Western heritage. F 13 160G 0 1005

161. Music Appreciation. (1-2). Intended to develop a capacity for critical listening and an appreciation for the various musical styles. Special attention is given to works from the standard musical repertoire. The course is designed exclusively for the nonmusic major. 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 on Western music. Includes a repertoire of 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 the techniques of composition related to these textures. Study of appropriate exercises is included. Prerequisite: Mus.-Comp. 128. F 13 227 0 1004

228. Theory IV. (2). Study of the larger homophonic forms (sonata, rondo) using techniques appropriate for this semester. A study of an appropriate score being performed by a University ensemble is included. Prerequisite: Mus.-Comp. 128. F 13 228 0 1004

229. Aural Skills III. (2). Recognition, singing, and dictation of contrapuntal textures, with continued harmonic practice emphasizing elementary chromaticism. Prerequisite: Mus.-Comp. 130. F 13 229 0 1004

230. Aural Skills IV. (2). Summation and development of previous skills, with further emphasis on harmonic chromaticism and atonal contexts. 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. Prerequisites: Mus.-Comp. 128 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 the development and expansion of music materials. May be taken as an elective. May be repeated as an elective by those not majoring in theory-composition. 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 planned professional experience designed to complement and enhance the student's academic program. Individualized programs may 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: Prerequisite: 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-time classroom 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 Gr/NrC 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 style, composers, and historic 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

331Q. History of Music in the Middle Ages and Renaissance. (3). A survey of the evolution of musical styles and practices in the Western world through the 16th century. Lectures, reference readings and the study of representative movements of music are included. Prerequisites: Mus.-Comp. 113Q and 227, or instructor's consent. F 13 331Q 1 1006

332Q. History of Music in the 17th and 18th Centuries. (3). A survey of musical styles and practices of the baroque and classical periods. Lectures, reference readings and representative musical examples are included. Prerequisites: Mus.-Comp. 113Q and 227. F 13 332Q 0 1006

333Q. History of Music in the 19th and 20th Centuries. (3). A survey of the styles and practices of romanticism and of the 20th century. Lectures, reference readings, performances and representative musical examples are included. Prerequisites: Mus.-Comp. 113Q and 227. F 13 333Q 0 1006

345. Jazz Arranging. (2). Arranging for small and large jazz ensembles, with emphasis on current big band styles. Prerequisites: Mus.-Comp. 226 and 230 or instructor's consent. F 13 345 0 1004

346Q. Styles of Jazz. (3). A survey of all eras in the evolution of the many styles in the jazz idiom from the end of the 19th century to the present. Open to majors and nonmajors. F 13 346Q 0 1006

481. Cooperative Education. (1-8). A field placement which integrates course work with a planned professional experience designed to complement and en-
Courses for Graduate/Undergraduate Credit

523. Form and Analysis. (2). Extensive analysis of the forms and formal processes of musical composition. 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 musical composition, with emphasis on writing for small ensembles in the smaller forms. Designed for theory-composition majors. Repeatable. Prerequisites: Mus.-Comp. 203, with 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. 16th Century Counterpoint. (2). Counterpoint developed in the 16th century as found in the works of J. S. Bach. Prerequisite: Mus.-Comp. 228. 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 repertoire. F 13 582 0 1006; F 13 563 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, preludes, fugues and improvisation. Required of all organ majors. Repeatable. Prerequisite: Mus.-Comp. 228 or departmental consent. F 13 597 3 1004; F 13 598 3 1004

623. Opera Literature. (2). A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the 17th century to the present. 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. Prerequisite: Mus.-Comp. 227. F 13 643 3 1004

645. Choral Arranging. (2). Scoring for women's, men's and mixed choruses. Performance and analysis of student's arrangements in class are included. Prerequisites: Mus.-Comp. 228 and 230. F 13 645 0 1004

659-660. Advanced Composition. (2-2). Individual study in musical composition, with emphasis on writing for both small ensembles and large groups in the larger forms. Repeatable. Prerequisites: Mus.-Comp. 560 and instructor's consent. 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. 227. 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 1004

699. 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). Repeatable for credit. Prerequisite: instructor's consent. F 13 750 2 1004

755. Basic Musicanship in the Secondary School Curriculum. (2). An examination of approaches to musicanship training at the secondary school level, including the 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 lower-level courses of study, evaluation of tests and pedagogical techniques. F 13 758 0 1004

871. Cooperative Education. (1-8). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the students' 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, enroll 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 a Co-op combination may 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/NoCr only. F 13 481 2 1006

949G. American Music. (3). A study of music in American society from 1620 to the middle of the 20th century. F 13 493G 0 1005

Courses for Graduate Students Only

830. Seminar in Music Theory. (3). An analytical study of the materials used in musical composition from antiquity to the present, employing analytic approaches such as Schoenberg, Hindemith and serial techniques. The course is designed to develop analytical perspective 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. F 13 840A 9 1004; F 13 840B 9 1004; F 13 840C 9 1004

841-842. Special Project in Music. (1-3, 1-3). Individually supervised study or research, with emphasis on the professional needs of the student. Repeatable for credit. Prerequisite: instructor's consent. F 13 841 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 as 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 of Mus.-Comp. 559-560. Prerequisite: Mus.-Comp. 660 or equivalent. F 13 859A 3 1004; F 13 860A 3 1004

875. Thesis Research. (2). F 13 875 4 1006

876. Thesis. (2). F 13 876 4 1006

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
College of Health Professions

Sidney D. Rodenberg, PhD, 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 with its two major components, Biomedical Communications Production Services and the Independent Study Laboratory, provide opportunities for individualized study and technical and consulting services in graphic art 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 American Physical Therapy Association Committee on Accreditation in Education, National League for Nursing, the Association of University Programs in Health Education, 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)—health care administration, medical record administration, medical technology, nursing, and physical therapy. Four programs lead to a Bachelor of Health Science (BHS)—cytotechnology, dental hygiene, physician assistant, and respiratory therapy. 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 academic credit and a certificate of completion.

Graduate

The College of Health Professions offers a graduate program leading to a Master of Health Science (MHS) with options for emphasis in administration, education or advanced clinical study. Admission to the MHS program of study requires a bachelor's degree and the fulfillment of requirements for each department.

A Master of Nursing program, individualized to meet the needs and professional goals of the student, is offered especially for the part-time (3-6 credits) student, although full-time study is available. The student selects role development in administration, teaching, or in an area of clinical interest.

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 Wichita State University admission requirements (see the Admission to Wichita State section of the Catalog)
2. Have an overall minimum grade point average of 2.00 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 Bachelor of Science 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. (2) Students must maintain a minimum grade point average of 2.00 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 Jardele Hall.

Admission to the college does not guarantee acceptance into any of the professional programs. To be admitted to a professional program, students must be accepted into Wichita State University and the College of Health Professions, apply for admission to a particular program, and be accepted by the admissions committee of that program. See the individual programs for application procedures.

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 advisor in the 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 2.00. Students remain on probation even though they earn a 2.00 grade point average in the term during which they are on probation if their cumulative grade point average is not at least 2.00. 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 5 hours in the Summer Session, excluding 1 hour of military science, physical education, or marching band. Exception to this limitation may be made on the recommendation of a student's advisor with the approval of the dean of the college.

Students on probation are subject to academic dismissal from the College of Health Professions if their grade point average for the semester during which they are on probation falls below 2.00. Dismissal will not occur until students fail to achieve a 2.00 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 depart-
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 NC, D, or F in only one segment of a course that combines theory and clinical practice, they still fail the course. Students who receive an NC, 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 2.0 or above and they desire to continue in the program, they may petition the Committee on Admission and Progress in their department for permission to remain in the program.

Exceptions

Students may petition for exception to any University, college or departmental 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.

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. A listing of the clinical affiliates, including a wide variety of hospitals and community agencies, can be obtained from the college office.

Liability Insurance Requirements

Most students are required to purchase 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 sponsors and the college cooperative education coordinator. 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 a bachelor's degree must meet general University requirements and fulfill the course requirements specified in the curriculum of the department offering the degree.

A minimum of 30 credit hours in course work in residence at WSU is required for all students seeking a bachelor's degree. A minimum of 30 unduplicated credit hours in course work in residence at WSU is required for students seeking a second bachelor's degree. 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.

The College of Health Professions offers the Bachelor of Science (BS) in health care administration, medical record administration, medical technology, nursing, and physical therapy.

A Bachelor of Health Science (BHS) is offered with majors in cytotechnology, dental hygiene, physician assistant, and respiratory therapy. Students in the BHS program must fulfill the general University requirements and may select one of the following emphasis options (all options are not available in each program): (1) education, (2) administration and supervision, or (3) natural or clinical sciences, with specific preparation available in the majors just listed. Courses in these options may be offered in the College of Health Professions, College of Business Administration, College of Education, College of Engineering, and/or Fairmount College of Liberal Arts and Sciences. Each student's curriculum is structured individually, and a contract for the program is developed that must be approved by the dean and the department chairman and signed by the student before it may be implemented.

Degree Requirements and Course Listings

Baccalaureate

Cytotechnologist

The cytotechnologist program in cytotechnology no longer will be offered at Wichita State University, effective following the summer semester of 1985. Persons already enrolled in the clinical program at St. Francis Medical Center will be allowed to complete their studies, but no additional students will be admitted. For more information, contact the Department of Medical Technology, College of Health Professions.

Upper-Division Courses

401. Introduction to Histology and Pathology. (3). Lectures and demonstrations in basic histology and pathology of anatomical systems and studies in diagnostic cytology. Offered only in the fall semester. H 16 401 2 1299

405. Diagnostic Cytology of Female Reproductive System. (3). Microscopic study and diagnosis of benign and malignant cells found in smears and aspirations from female genital tract. Offered only in the fall semester. H 16 405 2 1299

411. Diagnostic Cytology of Respiratory System. (5). Microscopic study and diagnosis of benign and malignant cells in sputum and bronchial washings. Offered only in the fall semester. H 16 411 2 1299
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 a baccalaureate degree should contact the dental hygiene department for individual advising. Students who are registered dental hygienists must:
1. Submit an application by January 31 of the year in which they plan to enroll.
2. Meet the admissions requirements of Wichita State University and the College of Health Professions.
3. Submit the results of the National Board Examination for Dental Hygienists 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 motive, industry, and behavior indicating 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) administration and supervision.

Under this program, each student's curriculum is individually structured. A contract thus developed is approved by the Degree Program Committee and is signed by the student and the department chairperson before implementation.

Lower-Division Courses

101. Preclinical Dental Hygiene. (5). 3R; 3L. 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 12 101 9 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 9 1213

202. Clinical Dental Hygiene I. (3). 3L. This course emphasizes providing patient care in a clinical setting. Basic instrumentation techniques and the prevention of dental diseases will be stressed. Patient evaluation and treatment planning skills will be 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 pathology of the teeth, dental pulp and oral tissues. Examination of tissues and manifestations of oral lesions is accomplished through lecture 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 and approved by appropriate faculty sponsors and cooperating education coordinators. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 12 281 2 1213

Upper-Division Courses

301. Dental Materials and Expanded Functions. (5R; 5L). Fundamentals instruction in practical laboratory phases of modern techniques and the manipulation of materials and equipment used in dental practice and expanded auxiliary practice. Prerequisite: departmental consent. H 12 301 1 1213

302. Clinical Dental Hygiene II. (2). Continual development of proficiency of clinical techniques emphasizing preventive treatment and complete patient evaluation. Class meets during Summer Session. Prerequisite: departmental consent. H 12 302 0 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 fall semester. Prerequisite: DH 201 and departmental consent. H 12 303 9 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 9 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 periodontally involved patient with further demonstration of advanced scaling and root planning 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 the laws of governing the practice of dentistry and related health professions. Emphasis is placed on the responsibilities of health professionals to work for which students may qualify. The economic and ethics of the profession: the essentials of banking, 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. (2). An introduction to the foundations of dental health in the community, epidemiology, health care delivery, and organization of community services with fieldwork in applying the learned concepts. This course will also cover the professional philosophy of dental health education. Students develop dental health education materials and present them to children, adult and minority groups in
the community. Prerequisite: departmental consent. H 12 309 0 1213

323. 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 12 323 1 1213

324. Clinical Dental Hygiene IV. (4). 12L. During the final semester of clinical dental hygiene, students are expected to utilize information and skills acquired in previous courses and to continue discussion to demonstrate 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 organization, management, planning, and execution of research projects. Prerequisite: departmental consent. H 17 409 0 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 the ability to be a critical consumer of professional literature and the formulation of research projects. Prerequisite: departmental consent. H 12 400 2 1213

420. Course Development and Methods of Teaching in Dental Hygiene Education. (3). Seminar dealing with the implementation of teaching and learning theory and its application in the formation of a course of instruction. 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 placed on the development of an educational curriculum for a dental hygiene program, and additional opportunities will be available for instruction in the clinical/laboratory setting. Prerequisite: departmental consent. H 12 430 2 1213

455. Personnel Management in Dental Hygiene. (3). Analysis of personnel management and completion of a personnel simulation including job analysis, recruitment, interviewing, testing, job evaluation, wage determination, training, employee evaluation and career development. Prerequisite: departmental consent. H 12 450 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 is the study and identification of research problems, review of related literature, development of research hypotheses and research methodology. H 12 460 0 1213

465. Research in Dental Hygiene. (3). A continuation of DH 462. The research proposal which is developed in this prerequisite course will be the subject for a major research project. This will be the subject for a major research project. This project will be submitted concerning a special problem in dental hygiene, data analysis will be undertaken, and conclusions will be written in an essay format. 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. Students enrolled in co-op 481 may follow one of two scheduling patterns: parallel, enroll 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. Offered Cr/Ncr only. 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 the selected 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 Wichita State University.
2. Have completed 45 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 any of the specified required lower-division courses.
4. 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, Ahlberg 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.

Course | Hrs. | Description
--- | --- | ---
Basic Skills courses (12 hours) | 3 | Communications (9 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
Division A, Humanities and Fine Arts (at least 9 hours in 3 different departments and at least 2 hours in General Studies courses) | 3 | Econ. 201Q, Principles of Economics I | 3 | Econ. 202, Principles of Economics II | 3 | Psych. 111Q, General Psychology | 3 | Psych. 514, Psychology of Illness | 3 | Soc. 211Q, Introduction to Sociology | 3
Division B, Social & Behavioral Sciences (at least 6 hours in 2 different departments) | 3 | Math. 109, 110, 111, 112, or 211 | 3 | or completion of another math course for which one of these courses is a prerequisite | 3 | Biol. 105G, The Human Organism | 3 | any higher level biology course | 4
HAE 505, Politics of Health .... 3
HAE 507, Health Planning .... 3
HAE 509, Health Care Operations Analysis .... 3
HAE 510, Health Finance .... 3
HAE 590, Legal Aspects of Health Care Administration .... 3
HAE 605, Health Services Research .... 3
Approved electives to complete the 124-hour graduation requirements
* For math requirement, see Division C

Lower-Division Courses
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 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 21 281 2 1201

Upper-Division Courses
410. Community Health Concepts. (3). An introduction to the foundations of public health, biostatistics, epidemiology, ecology, community organizations, and organization of health services. Prerequisite: departmental consent. H 22 410 0 1214
440. Health Care Administration Practice. (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 the instructor, a specific internship in one of the following special areas; health care administration, nursing homes, rehabilitation, government health agency administration, voluntary health agency administration or hospital department administration. A written report is required. Prerequisite: senior standing or departmental consent. H 21 440 2 1202
490. 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 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 21 490 3 1202
490. Independent Study in Health Care Administration. (1-4). Supervised intensive study of special topics and problems relating to health care delivery. Repeatable up to 6 hours. Prerequisite: departmental consent. H 21 490 3 1202

Courses for Graduate/Undergraduate Credit
503. Organization and Administration of the Health Care System. (3). Cross-listed as Geron. 503. Analysis of the nature of health and the inputs to health and health care delivery. The course discusses general systems theory and systems analysis in relation to health care. It emphasizes the interrelatedness of economic, political and social aspects of the health services system. Current trends and planning are considered, and students are exposed to guest lecturers with professional expertise in related areas. Prerequisite: departmental consent. H 15 503 0 1201

504. Health Economics. (3). Cross-listed as Econ 504. An analysis of health care systems in the United States, including the demand for and supply of health care services, the quantity, quality and pricing of health services; the need for insurance; and the role of the government in the health sector. Prerequisites: HAE 503 or Econ. 202. H 15 504 0 1202

505. The Politics of Health. (3). Cross-listed as Pol. Sci. 505. Designed to show how government in the United States makes decisions in the health field, to describe the political forces affecting policy in health, and to analyze the arguments for and against an increased governmental role in health. Prerequisite: HAE 503, Pol. Sci. 121 or departmental consent. H 15 505 0 1202

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 will provide the organization with protection against competition in and participation in traditional entrepreneurial organizations. Prerequisite: junior standing and instructor's consent. H 24 507 3 1202

509. Health Care Operations Analysis. (3). An examination of methods for measuring the operational efficiency and effectiveness of health care organizations and medical care programs. Includes methods to analyze and evaluate current operations and approaches to plan better manpower, facility, technical and administrative control systems in a health setting. Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360, and junior standing. H 21 509 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 setting. Financial organization, sources of operating revenues, management of working capital, and budgeting are considered utilizing examples for hospitals and other health organizations. Prerequisite: HAE 503 and Accgt. 210 or equivalent. H 15 510 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, settling of malpractice suits, doctor-patient, nursing home relationship and legal consent, and other topics are considered. Prerequisite: junior standing or departmental consent. H 21 590 3 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 in the health care field and to 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 15 605 4 1201

684. Seminar in Health Care Administration. (3). In-depth discussion and analysis of selected topics in health care administration. Topics vary from semester to semester and include examination of specific financial, managerial, and operational problems and characteristics of health service organizations and agencies. Prerequisites: HAE 503 and at least one other HAE course. H 21 684 0 1202

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 administration. After completing a three-year preprofessional sequence at 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 Wichita State University and are eligible to become registered by successfully completing the registration examination given by the American Medical Record Association.

Preprofessional Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Comm. 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, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 210, Technical Writing Composition</td>
<td>3</td>
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</tbody>
</table>

Distribution Courses (30 hours)

<table>
<thead>
<tr>
<th>Division A, Humanities and Fine Arts (at least 9 hours in 3 different departments and at least 2 hours in General Studies courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 201Q, Principles of Economics</td>
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<tr>
<td>Psych. 111Q, General Psychology</td>
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<tr>
<td>Psych. 510, Psychology of Illness</td>
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</tbody>
</table>
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 138 hours, includes 77 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 Hospital. 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

**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, Interpersonal Communication | 3
Math. 111, College Algebra | 3
**Division A, Humanities and Fine Arts (9 hours)** | 
Nine hours in at least three different departments | 9
**Division B, Social and Behavioral Sciences (6 hours)** | 
Psych. 110, General Psychology | 3
Electives | 3
**Division C, Natural Sciences and Mathematics (50 hours)** | 
Biol. 2030, Introductory Biology I | 5
Biol. 2040, Introductory Biology II | 5
Biol. 226, Elementary Human Physiology | 5
Biol. 330, General Microbiology | 5
Chem. 1110, General Chemistry I | 5
Chem. 1120, General and Inorganic Chemistry | 5
Course coverage in organic chemistry (Chem. 531 and 532, 10 hours, or Chem. 533 and 534, 5 hours) | 5-10
Chem. 561, Introduction to Biological Chemistry | 3
MT 405Q, Medical Immunology | 2
Electives from areas of biological sciences, chemistry, physics, mathematics, or others as approved by Department of Medical Technology (including 4 hours of "G" and/or "Q" courses) | 12

* 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 advisor.

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 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 2.00
6. Complete professional goal statement

Acceptance into the professional phase of the program is determined by the Medical Technology Admissions Committee.

Professional Curriculum

**Course** | **Hrs.**
--- | ---
MT 400, Special Topics | 2
MT 406, Foundations of Laboratory Practice | 2
MT 450, Clinical Chemistry I | 3
MT 451, Clinical Chemistry I Laboratory | 2
MT 452, Analysis of Body Fluids | 3
MT 456, Clinical Chemistry II | 3
MT 457, Clinical Chemistry II Laboratory | 2
MT 459, Applied Clinical Chemistry | 2
MT 460, Hematology I | 2
MT 461, Hematology I Laboratory | 1
MT 462, Hemostasis | 3
MT 466, Hematology II | 2
MT 467, Hematology II Laboratory | 2
MT 469, Applied Hematology | 2
MT 470, Immunohematology I | 3
MT 471, Immunohematology I Laboratory | 1
MT 476, Immunohematology II | 2
MT 477, Immunohematology II Laboratory | 1
MT 479, Applied Immunology and Immunohematology | 2
MT 480, Clinical Immunology I | 1
405Q. Medical Immunology. (3). An introduction to the study of immunological concepts as they apply to study, prevention, and causation of the various hematologic disorders. Prerequisites: Biol. 226, MT 460, and departmental consent. H 14 462 1 1223

406. Foundation of Laboratory Practices. (2). An introduction to laboratory skills and instrumentation. Topics included are laboratory safety, specimen collection and processing, medical terminology, quality control, and care of the microscope. Prerequisite: departmental consent. H 14 406 0 1223

450. Clinical Chemistry I. (3). This course is the study of basic clinical chemistry. It encompasses the study of clinical chemistry, calculations, and quality control, and the study of colorimetric, spectrophotometric, and titrimetric principles and techniques in serum, plasma, and other body fluids. Prerequisites: Chem 361 and Biol. 226. H 14 450 0 1223

451. Clinical Chemistry I Laboratory. (2). 6L. Application of the theory of 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. Analysis of Body Fluids. (3). 2R; 3L. Critical analysis of laboratory techniques in the analysis of urine, body fluids, sera, plasma, and other body fluids. Prerequisites: MT 405Q or equivalent or consent of instructor. H 14 452 1 1223

456. Clinical Chemistry II. (3). Included in this course are advanced instrumentation principles, principles of basic laboratory techniques, advanced enzyme analysis, endocrinology, and toxicology. Emphasis is placed on relationships existing between substances of the body and the procedural development and evaluation of procedures used in the hematology laboratory. H 14 456 0 1223

457. Clinical Chemistry II Laboratory. (2). 6L. A laboratory course encompassing the application of the principles to techniques appropriate to the evaluation of methodology, acid-base balance, advanced enzyme techniques, and toxicology. Prerequisite: MT 456, concurrent enrollment, or departmental approval. H 14 457 1 1223

459. Applied Clinical Chemistry. (2). Application of clinical chemistry principles and techniques in the analysis of body fluids in a clinical laboratory setting. Prerequisites: MT 457 and departmental consent. H 14 459 2 1223

460. Hematology I. (2). The course emphasizes the general principles applied in the hematology laboratory and the interpretation of these procedures and the diagnosis of disease. Prerequisites: Bio. 225-226 and departmental consent. H 14 460 0 1223

461. Hematology I Laboratory. (2). 3L. The course emphasizes the performance of the basic procedures used in the hematology laboratory, including complete blood counts, normal and abnormal differentials, and miscellaneous hematology tests. Prerequisites: MT 460 or concurrent enrollment and/or departmental consent. H 14 461 1 1223

462. Hemostasis. (2). 2R; 3L. Examination of the function and dysfunction of the hemostatic mechanisms and associated diagnostic laboratory procedures utilized in evaluation of
480. Clinical Immunology I. (1). An introduction to serological diagnosis in the clinical laboratory, including rationale of testing, methods of detection of different methods, interpretation of test results, and clinical correlations. Prerequisite: MT 405 or equivalent or consent of instructor. H 14 480 0 1223

481. Cooperative Education. (1). 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. Individual students are placed in consultation with and approved by appropriate faculty sponsors and cooperative education coordinators. Prerequisites: the basic requirement of a placement program, successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. Repeatable for credit. H 14 481 2 1223

483. Clinical Immunology Laboratory. (1). 3L. A laboratory course in techniques relevant to serological diagnosis of the following conditions: syphilis, acute bacterial infections, streptococcal infections, febrile diseases, mycoplasma infections, infectious mononucleosis, rheumatoid arthritis, and pregnancy. Prerequisite: MT 405 or concurrent enrollment or consent of instructor. H 14 481 1 1223


490. Clinical Microbiology I. (3). A laboratory course in techniques relevant to serological diagnosis of the following conditions: differentiation of non-fermenters, the anaerobic and unusual aerobic organisms. Techniques for cultures and identification of non-fermenters. Prerequisites: MT 490 and 491 and concurrent enrollment in MT 496. H 14 497 1 1223

490. Clinical Microbiology II. Laboratory. (3). Advanced laboratory techniques in the isolation and identification of non-fermenters, the anaerobic and unusual aerobic organisms. Techniques for cultures and identification of acid-fast bacteria. Advanced antimicrobial susceptibility testing techniques. Prerequisites: MT 490 and 491 and concurrent enrollment in MT 496. H 14 497 1 1223

499. 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 493, or equivalent, HS 705, or instructor's consent. H 14 752 0 1223

760. Hematologic Neoplasms. (3). 3R. This course deals with the etiology, pathophysiology, and morphology of hematologic neoplasms, and the health care practitioners' interactions with persons of these disorders. H 14 760 1223

765. Advanced Clinical Hemostasis. (3). Advanced studies in the mechanisms of hemostasis, pathologic changes that can occur in the laboratory evaluation of these disorders. Prerequisites: MT 462 or instructor's consent. H 14 765 0 1223

770. Therapeutic Dimensions of Clinical Laboratory Science. (1). A study of the expanding role of the clinical laboratory in the monitoring of therapy and the patients' response to therapy. Areas to be addressed include hemoenginering and hematotherapy, imaging and radiology, and hemotherapy 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 pathologic 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

790. Epidemiology and Infection Control. (3). 3R. A study of the expanding role of hospitals, personnel in the performance of hospital epidemiology and infection control. Areas to be addressed include basic epidemiologic 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. H 14 790 0 1223

800. Seminar in Laboratory Sciences. (1). Recent issues and advances in the field of clinical laboratory science including the areas of microbiology, chemistry, hematology, clinical immunology, and clinical microbiology will be discussed. The students will be responsible for assigned topics, using current journal articles as resource material. Prerequisite: departmental consent. H 14 800 0 1223

890. Thesis. (1-3). Repeatable to a maximum of 6 hours. Prerequisite: consent of thesis advisor. H 14 890 2 1223

Nursing

The Bachelor of Science in Nursing program is designed to provide both university education and preparation for the practice of professional nursing. The student 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 agreement between 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, Wichita State University, Wichita, KS 67208.

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 3
- Speech 112, Basic Interpersonal Communication 3

**Division A—Humanities and Fine Arts (9 hours)**
- Phil. 121, Introduction to Philosophy 3
- 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. 604Q, Developmental Psychology 3
- Soc. 211Q, Introduction to Sociology 3

* Students who wish to minor in philosophy should take Phil. 100G.

* Students should select some General Studies courses to meet the University graduation requirement of 9 hours of General Studies courses, and 2 courses to meet the 30-hour requirement. See Academic Information—General Education section of the Catalog.
Admission To Department of Nursing
Students who have satisfactorily completed two semesters of lower-division courses may request an intent to enroll from the Department of Nursing. Intent to enroll forms for fall admission must be received by January 1, for spring semester admission, no later than August. To qualify as a candidate for admission to the Department of Nursing, students must:

1. Be enrolled in, or admitted to, 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 2.50 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 expected semester of enrollment.

Registered nurse students, in addition to the above requirements, must:

1. Submit a copy 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

- **Prerequisite:** Philosophy 121.

#### 3-hour upper-division course in philosophy/ethics to be selected with Department of Nursing approval.

### Division C—Mathematics and Natural Sciences

- **Nurs. 327** (3 hrs) Nursing as a Practice Discipline
- **Nurs. 330** (3 hrs) Technologies I
- **Nurs. 332Q** (3 hrs) Dimensions of Self-Care
- **Nurs. 334** (3 hrs) Dimensions of Professional Nursing
- **Nurs. 336** (3 hrs) Design of Nursing Systems
- **Nurs. 340** (3 hrs) Technologies II
- **Nurs. 347** (3 hrs) Nursing Systems: Organic Disorders
- **Nurs. 351** (3 hrs) Nursing Systems: Behavioral Disorders
- **Nurs. 352** (3 hrs) Nursing Practice I
- **Nurs. 354** (3 hrs) Nursing Practice II
- **Nurs. 400** (3 hrs) Introduction to Pathophysiology
- **Nurs. 460** (3 hrs) Technologies III
- **Nurs. 464** (3 hrs) Nursing Systems: Aging Families
- **Nurs. 465** (3 hrs) Nursing Systems: Young Families
- **Nurs. 466** (3 hrs) Nursing Practice III
- **Nurs. 468** (3 hrs) Scholarship Dimensions of Nursing
- **Nurs. 472** (3 hrs) Nursing Practice IV
- **Nurs. 473** (3 hrs) Senior Seminar
- **Nurs. 478** (3 hrs) Nursing Systems: Large Groups

**Total Upper-Division Electives** | **9 hrs.**

**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 not less than $1,000,000/$3,000,000; 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 of communication concepts to self-actualization, interpersonal relationships, health care delivery systems, and client-professional interactions. Open to nonnursing majors. H 11 325 0 1203

327. Nursing as a Practice Discipline. (2). An introductory course in the study of nursing within the self-care framework and its use in problem identification and research. The student examines perceptions of nurse, nursing as a practice discipline and as a student of nursing. Prerequisites: admission to the department of nursing or departmental consent. H 11 327 0 1203

330. 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 and groups. Emphasis is placed on the scientific and humanistic basis for the various technologies. Prerequisite: NURS 327, 332, 346, 400 or departmental consent. H 11 330 0 1203

332Q. Dimensions of Self-Care. (2). Self-care (health) practices and health status of individuals within ranges of wellness are studied. Emphasis is on the determinants which influence how universal self-care is practiced. Open to non-nursing majors. H 11 332Q 0 1203

334. Dimensions of Professional Nursing. (3). A course designed to provide for registered nurse students an introduction to the study of nursing as a practice discipline and professional nursing roles. Emphasis is placed on the self-care concept of nursing and its use in professional practice, education and scholarship. Prerequisite: admission to department or departmental consent. H 11 334 1 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 assistance and types of nursing systems will be studied. Prerequisite: admission to department. Prerequisites or corequisites: enrollment in NURS. 327 and 332Q. H 11 336 1 1203

340. Technologies II. (1). 3L. A continuation of NURS 330 which builds on content presented in the first course. Prerequisite: NURS. 330. H 11 340 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, paralytic and wholly-compensatory nursing systems. The course is appropriate to adults demonstrating major health problems in contemporary society. Prerequisites: NURS. 327, 330, 332, 336, 400, or Phase I courses. H 11 347 0 1203

350. Basic Concepts of Nursing Process.
351. Nursing Systems: Behavioral Disorders. (2) Study of design and control of nursing systems for individuals with behavioral disorders focusing on educative-supportive, partly, and wholly-compensatory nursing systems. Prerequisites: Phase I nursing courses. 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, partly, and wholly-compensatory nursing systems appropriate for adult client(s)/patient(s) demonstrating major health problems in contemporary society. Prerequisites: Phase I courses. 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. Departmental consent required. 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. H 11 354 1 1203

400. Introduction to Pathophysiology. (3) Cross-listed as HS 400. A course for professional upper division level students enrolled in the College of Health Professions. The course focuses on the essential mechanisms of the body's responses to disease and injury. Prerequisites: Admission to professional upper division level in College of Health Professions or instructor's consent. H 18 400 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. Prerequisite: departmental consent. H 11 425 2 1203

430. Concepts of Loss. (3) Elective. Strategies for helping clients and families cope with various losses, such as illness and the death of a loved one. Includes grief and mourning, open to nonnursing majors. H 11 430 0 1203

432. Educational-Supportive Nursing Systems. (3) 2R; 3L. (Elective) This lecture and clinical course focuses on the design and control of nursing systems for families experiencing loss. 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 of the student to educate and assist the family as a client in the clinical setting. Prerequisites: Nrs 340, 347, 352, or instructor's consent. H 11 432 1 1203

434. Perioperative Clinical Management for the Nurse Agent. (5) 21L. This is an elective lecture/clinical course. It will examine 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 comfort of others in an environment preoperatively and postoperatively. Prerequisites: Nrs 340, 347, 352, or completion of 30 hours of a professional nursing program. H 11 434 1 1203

460. Technologies III. (1). 3L. A continuation of Nrs 330 and 340 which builds on content presented in Nrs 330. Prerequisites: Nrs 330 and 340. H 11 460 1 1203

464. Nursing Systems: Aging Families. (3) 2R; 9L. This course is designed to provide information and experience in the design of nursing systems for clients/patients experiencing specific developmental stages in conjunction with normal and pathological changes associated with aging. Prerequisites: Nrs 340, 347, 352, 364, or permission of the instructor. Open to 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 young families in ranges of health and illness. Prerequisites: Nursing systems for large groups. 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: Nrs 340, 347, 351, 352, and 364. 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 design and control of nursing systems for families experiencing illness. Prerequisites: Nursing Systems for Large Groups. 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 will identify researchable problems and develop a research proposal. The use of research will be discussed. Relations among the roles of practitioner, teacher, leader, and scholar will be examined. Prerequisites: Nrs. 340, 347, 351, 352, and 364. H 11 468 1 1203

472. Nursing Practice IV. (1). 18L. This course emphasizes the complexity of the design and control of nursing systems for individuals with specified health problems. Nursing as a part of the larger health care delivery system is examined with emphasis on organization, administration, change, and control technologies. The student will concentrate on the study of clinical nursing in a selected health care setting. Prerequisites: Phase I and II courses. H 11 472 1 1203

473. Senior Seminar. (3) A course for examination of issues and problems from clinical learning experiences in the clinical courses of the last semester. The student is assisted with the transition to student to role of professional nurse practitioner. Prerequisites: Phase II courses and concurrent enrollment in Nrs. H 11 473 1 1203

478. Nursing Systems: Large Groups. (5) 2R; 9L. The study of large groups of people with multiple, complex health problems. Community health problems will be assessed and design and control of nursing systems for large groups of people will be 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 major emphasis of the course is the expanded development of nursing agency in clinical nursing situations. Prerequisites: Phase II courses and departmental consent. Corequisites: Nrs. 476. H 11 476H 1 1203

481. Cooperative Education Field Study. (1-5) A supervised on-the-job experience designed to provide an opportunity for working full time one semester in a field study and returning to full school enrollment the following semester; the student must be concurrently enrolled in another 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

350. Assessment of Pediatric and Adolescent Nursing. (3). 2R; 3L. A corequisite course with lecture, demonstration, simulated laboratory and practical experience in developing expertise in the assessment of pediatric and adolescent clients. Prerequisites: Nrs. 340, 347, 351, 352, and 364. H 11 500 1 1203
501. Health Maintenance of the School Age Child, (3), 2R, 3L. This course will use lecture, class discussion, clinical laboratory, and problem presentation to enable the student to synthesize and apply theoretical concepts pertinent to health of school age children. Prerequisites: Nurs. 500 or its equivalent as determined by the Department of Nursing. H 11 501 1 1203

502. Organization and Management in the School Nurse Setting, (3), 2R, 3L. This course will use lecture, demonstration, and practical experience to enable the student to gain expertise in the organization and management of the school nurse setting. Prerequisite: Nurs. 501. H 11 501 1 1203

503. School Nurse Practicum, (2), 6L. This course will use a school setting in order to provide a practicum experience for the student in health assessment, organization and management, and health maintenance as they relate to the school age child. Prerequisite: Nurs. 502. H 11 503 1 1203

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 0 1203

543. Women and Health Care, (3). This course will provide a more in depth understanding 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 to cope with sexual problems and disorders. Emphasis on relating varying interpretations of biological, psychological and cultural aspects of sexuality to the helping professions. Open to non-nursing majors. H 11 570 0 1203

701. Orientation to Graduate Nursing Education, (1). Graded S/U only. Designed to facilitate adjustment and socialization to graduate nursing education. Prerequisites: admission to graduate program in nursing and departmental consent. H 11 701 0 1203

703. Foundations of Nursing, (4). Study of the evolution of nursing through analysis of historical, theoretical, philosophical and ethical-legal foundations of nursing. Selected major theories pertinent to health care are examined. Parameters of nursing are appraised in relation to political, economic, cultural and organizational factors affecting health care in order that they may be considered as the future are explored. Prerequisites: admission to graduate program in nursing and departmental consent. H 11 703 0 1203

705. Nursing Research, (3). Building on an initial research experience, this course is designed to assist student in understanding premises which govern research design, implementation and evaluation. Consideration is given to current issues in nursing research. This may include roles in nursing education or service, mid-level nursing administration, staff development or community health. Prerequisite: departmental consent. H 11 711 0 1203

707. Research Seminar, (1). Designed to assist the student to complete a thesis proposal. Prerequisite: Nurs. 701, 703, 705 and departmental consent. H 11 707 0 1203

791. Special Studies in Nursing, (1-6). A course allowing opportunity for students to engage in extensive study of particular content and skills directly or indirectly related to nursing practice. Repeatable. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 791 0 1203

796. Nursing Practicum in Special Settings, (1-6). Opportunity for directed practice in various settings, including clinical specialties, nursing administration, nursing education and consultation. The student plans, in collaboration with major adviser and preceptor, objectives and evaluative criteria for the experience. Prerequisites: admission to Graduate School, Nurs. 701, and departmental consent prior to registration. H 11 796 0 1203

799. Directed Readings in Nursing, (1-2). An opportunity for the student to engage in critical search of the literature in areas related to the profession and practice of nursing. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 799 0 1203

Courses for Graduate Students Only

802. Design and Management of Nursing Systems, (3). Analysis of nursing systems based on current theories and management strategies. Prerequisites: departmental consent and Phase I courses. H 11 802 0 1203

804. Nursing Practicum, (2-6). A clinical experience in selected settings that enables the student to implement a plan for nursing practice based on current theory, test a clinical study question, and conduct a professional development program. Prerequisite: departmental consent or corequisite: Nurs. 802. H 11 804 0 1203

811. Foundations of Nursing Administration, (3). This course is designed to assist the student in acquiring theoretical knowledge of organizations. Consideration is given to current issues and research in nursing administration and impact on nursing practice. Prerequisites: departmental consent prior to registration. Prerequisites or corequisites: Phase II courses. H 11 802, 804

812. Nursing Administration Practicum, (3 or 6). A practicum in an administrative setting in which the student, under professional guidance, can become directly involved. A seminar accompanies the field experience. The seminar may include roles in nursing education or service, mid-level nursing administration, staff development or community health. Prerequisite: departmental consent or corequisites: Nurs. 811. H 11 812 0 1203

813. Foundations of Nursing Education, (3). Designed to assist the student to explore theoretical and practical aspects to curriculum development and teaching of nursing in higher education and continuing education. Prerequisites: departmental consent or corequisites: Phase II courses. H 11 802 and 804. H 11 813 0 1203

814. Nursing Education Practicum, (3 or 6). An experience of nursing education in which the student, under professional guidance, becomes directly involved in clinical and classroom teaching, curriculum development and participation in other faculty functions in higher education and continuing education. A seminar accompanies the field experience. Prerequisites: departmental consent. Prerequisite or corequisites: Nurs. 813. H 11 814 2 1203

817. Foundations of Clinical Concentration, (3). Seminars in various areas of graduate education enable the student to explore current clinical theory and research and to identify appropriate nursing systems for individuals or groups in a selected client population. Prerequisites: admission to graduate program in nursing, departmental consent, and Phase I courses. Corequisites: Phase II courses. H 11 817, 804

818. Clinical Concentration Practicum in Diabetes Mellitus, (3 or 6). An intensive clinical experience in which the student is expected to study, design and implement nursing systems for select individuals or groups in the area of diabetes mellitus nursing management. A seminar will accompany the practicum. Prerequisite: Nurs. 817. H 11 818 1 1203

819. Foundations of Clinical Concentration, (3). Seminars in various areas of graduate education enable the student to explore current clinical theory and research and to identify appropriate nursing systems for individuals or groups in a selected client population. Prerequisites: departmental and instructor’s consent. Phase II courses. H 11 819 0 1203

821. Thesis, (1-6). Graded S/U only. An opportunity for the student, in conjunction with the advisory committee and a thesis member, to design and conduct a formal research project. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 821 3 1203

822. Clinical Concentration Practicum in Mental Health Nursing, (3 or 6). An intensive clinical experience in which the student is expected to study, design and implement nursing systems for select individuals or groups in a specific area of mental health nursing. A seminar accompanies the practicum. Prerequisites: completion of Phase II courses (Nurs. 802 and 804) and Nurs. 819. H 11 822 1 1203

823. Graduate Project: Alternative to
Thesis. (1-3). Graded S/U only. An opportunity to develop and pursue a scholarly project other than a thesis. 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 adviser. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 823 4 1201

825. 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 prior to registration. H 11 825 3 1201

829. Foundations of Nursing Children and Their Families. (3). Seminar will enable students to investigate current clinical theory and research and identify appropriate nursing systems for children and their families. Major influences on the children within the family system will have special emphasis. Prerequisite: completion of Phase II courses. H 11 829 0 1203

832. Practicum in Nursing of Children. (3 or 6). An intensive clinical experience in which the student is expected to study, design, and implement nursing systems for children and their families. A seminar will accompany the practicum. Prerequisite: Nurs. 829. H 11 832 1 1203

833. Foundations of Clinical Concentrations in Adult Nursing. (3). Examination of current clinical theories and research relevant to healthy and ill adults in this culture. Emphasis is placed on designing appropriate nursing care systems for adults by nurses with advanced preparation. Prerequisites: Phases I and II of graduate program; consent of instructor. H 11 833 0 1203

834. Clinical Concentration in Adult Nursing. (3 or 6). An intensive clinical experience in which the student is expected to study, design and implement nursing care systems or approaches for individuals or groups in specific areas of adult nursing. Areas may involve health maintenance or illness care of acutely or chronically ill adults, in advanced sciences, professional study, and clinical education. The Bachelor of Science in physical therapy is awarded to those who satisfactorily complete the program, including those who enter the program with a degree in another field. This program is fully accredited and graduates are eligible to take the examinations required for state licensure.

Preprofessional Curriculum

Students who intend to apply for admission into the physical therapy professional curriculum must complete the following courses. Satisfactory completion of the prephysical therapy curriculum and the professional curriculum also satisfies Wichita State’s general education and graduation requirements for the Bachelor of Science in physical therapy.

Course | Hrs.
--- | ---
Communications (9 hours) | Eng. 101, College English I | 3<br>Eng. 102, College English II | 3<br>Speech 111, Basic Public Speaking, or Speech 112, Interpersonal Communication | 3

Division A—Humansities and Fine Arts (9 hours)*
Nine hours in at least three different departments

Division B—Social and Behavioral Sciences (9 hours)
Psych. 111Q, General Psychology | 3<br>Soc. 211Q, Introductory Sociology | 3

Psych. 314, Child Psychology | 3<br>Psych. 365, Psychology of Aging; Psych. 514, Psychology of Illness; or Soc. 537, Social Consequences of Disability | 3

Division C—Natural Sciences and Mathematics (36-37 hours)
Biol. 203Q, Introductory Biology I | 5<br>Biol. 225, Human Anatomy; Biol. 524, Vertebrate Zoology; or Biol. 527, Comparative Anatomy | 3-5<br>Biol. 226, Elementary Human Physiology; or Biol. 534, Mammalian Physiology | 3<br>Chem. 111Q, General Chemistry I | 5

Chem. 112Q, General and Inorganic Chemistry | 5<br>Math. 111, College Algebra, and Math. 112, Pre-calculus Mathematics | 5-6<br>Physics 2130, General College Physics I | 5<br>Physics 214Q, General College Physics II | 5

* Students may wish to select General Studies courses in the humanities and fine arts in order to satisfy the University’s graduation requirement of 9 hours of General Studies courses. See the Academic Information—General Studies section of the Catalog.

Admission to Professional Curriculum

In order to enter the physical therapy professional program, students must:
1. Be admitted to Wichita State.
2. Have a minimum cumulative grade point average of 2.75 in all college courses, including a minimum 2.75 grade point average in required 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 before 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:

Course | Hrs.
--- | ---
Division D—Professional Studies | PT 300, Basic Patient Care Skills | 2<br>PT 302, Clinical Education I | 1<br>PT 312, Clinical Education II | 1<br>PT 320, Applied Biomechanics | 3<br>PT 350, Physical Therapy Evaluation Procedures | 2<br>PT 355, Physical Agents | 4
**Upper-Division Courses**

1. **300. Basic Patient Care Skills.** (2). 1R; 2L. Theory and practice of fundamentals of patient care in physical therapy, including medical terminology, communica
tions, physical management of the patient and ambula
tion. Prerequisite: departmental consent. H 17 300 1 1212

2. **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

3. **312. Clinical Education II.** (1). 4P. 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

4. **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

5. **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

6. **355. Physical Agents.** (4). 2R; 4L. The focus of this course is the study of physical agents—thermal, mechanical, and electrical. Skills in performance of therapeutic applications of the physical agents will be developed. Prerequisite: departmental consent. H 17 355 1 1212

7. **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

8. **411. Special Projects.** (1-2). Arr. An introduction to the performance of investigatory study through the completion of a project in, or related to, the field of physical therapy. Students must complete 2 credit hours as a requirement for the major. Prerequisite: PT 409. H 17 411 3 1212

9. **422. Clinical Education III.** (2). 8P. Continuation of PT 312. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 422 2 1212

10. **432. Clinical Education IV.** (3). 12P. Continuation of PT 422. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 432 2 1212

11. **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

12. **442. Clinical Education V.** (6). 40P. Supervised full-time assignments to physical therapy settings where the student is responsible for initial patient evaluations, program planning, monitoring, and completion of patient progress. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 442 2 1212

13. **445. Physical Therapy Procedures.** (4). 2R; 4L. The study of evaluation and treatment procedures used by physical therapists in dealing with patients with orthopedic needs as cardiac rehabilitation, pulmonary rehabilitation, child birth education, sports medicine, and burn care. Prerequisite: departmental consent. H 17 445 1 1212

14. **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

15. **450. Therapeutic Exercise II.** (5). 2R; 6L. The major approaches to therapeutic exercise will be based on development of the use of therapeutic exercise equipment will also be studied. Activities of daily living will be analyzed and related to the various forms of therapeutic exercise treatment and the patient's functional ability. Prerequisite: departmental consent. H 17 450 1 1212

16. **452. Clinical Education VI.** (6). 40P. Continuation of PT 442 at a different physical therapy setting. Offered Cr/NCr only. Prerequisite: PT 442. H 17 452 2 1212

17. **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 0 1212

18. **485. Topics in Physical Therapy.** (1). Weekly discussion topics will include those of current interest and activity within the profession. Among the topics will be education and accreditation, the role of practitioners, and the changing roles and interactions of diverse health professionals. Prerequisite: departmental consent. H 17 485 0 1212

19. **489. Basic Joint Mobilization.** (2). This course is intended to provide the student with basic knowledge and skills necessary to select and perform appropriate techniques of joint mobilization for the evaluation and treatment of joint dysfunction. Prerequisite: departmental consent. H 17 489 1 1212

**Courses for Graduate/Undergraduate Credit**

1. **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 developmental disabilities. Residing assignments and laboratory experiences will be directed toward student's interests or particular needs. Prerequisite: PT 380. H 17 500 0 1212

2. **505. Pathophysiology.** (4). The body's defenses and responses to disorders, disease, and injury will be studied. The common disorders, diseases, and injuries to the body systems will be analyzed as to cause, effect, and treatment. Prerequisite: departmental consent. H 17 505 0 1301
605. Pathophysiology II. (4). The in-depth analysis of diseases, disorders, and injuries to the musculoskeletal system and to the nervous system will be presented. Pathology, assessment, and treatment will be discussed. Prerequisite: departmental consent. H 17 605 0 1201

890. Thesis. (1-6). Repeatable to a maximum of 6 hours. Prerequisite: enrollment in graduate studies and consent of thesis advisor. H 17 890 4 1212

Physician Assistant

All students completing the 24-month physician assistant program receive a certificate of completion. In addition, students who meet all University degree requirements have the option of receiving the Bachelor of Health Science. Nearly all past graduates of the program have met BHS requirements at the end of the professional program.

As defined by the National Academy of Sciences, 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 by the National Commission on the Certification of Physician Assistants, and to be registered in states that have made provisions for the registration of physician assistants, including Kansas. Students enrolled in the program are awarded Wichita State credit for all completed work. This program has been accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association.

Admission Requirements

Minimum requirements for students accepted for the program are a baccalaureate degree or three years of direct patient contact medical experience, or an equivalent combination of academic achievement and medical experience. Students are required to have taken mathematics, chemistry, and human anatomy and physiology before admission. Applicants should have a broad background and knowledge of the medical environment and of medical practices and procedures in such areas as nursing, medical technology, and physical therapy or have three years of responsible and progressive health care experience as a medical corpsman, nursing assistant, or medical technician. The program staff will consider individual waivers to these requirements upon request.

Applicants must be accepted by the Admissions Committee of the Physician Assistant Program. The committee's decision is based on the student's previous education and medical experience and on personal interviews. Applications must be completed by February 1 for the fall class. Applications completed after February 1 will be considered as alternate applications in the event that positions become available after the initial selection process. Historically, several alternates are offered class positions.

Curriculum

The Physician Assistant Program curriculum consists of both classroom and clinical courses. Clinical courses are taught by physicians in affiliated hospitals 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>HS 388, Clinical Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HS 389, Clinical Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HS 390, Clinical Physiology</td>
<td>2</td>
</tr>
<tr>
<td>HS 400, Clinical Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>HS 421, Applied Clinical Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>HS 422, Applied Clinical Pharmacology II</td>
<td>3</td>
</tr>
<tr>
<td>PA 211, Assessment and Management of the Integument</td>
<td>2</td>
</tr>
<tr>
<td>PA 212, Assessment and Management of the Cardiovascular System</td>
<td>2</td>
</tr>
<tr>
<td>PA 213, Assessment and Management of the Pulmonary System</td>
<td>2</td>
</tr>
<tr>
<td>PA 214, Assessment and Management of the Gastro-Intestinal System</td>
<td>2</td>
</tr>
<tr>
<td>PA 218, Assessment and Management of Obstetrics and Gynecology</td>
<td>2</td>
</tr>
<tr>
<td>PA 221, Assessment and Management of the Nervous System</td>
<td>2</td>
</tr>
<tr>
<td>PA 222, Assessment and Management of the Musculo-Skeletal System</td>
<td>2</td>
</tr>
<tr>
<td>PA 223, Assessment and Management of the Endocrine System</td>
<td>2</td>
</tr>
<tr>
<td>PA 224, The Medical History and Counseling Techniques</td>
<td>2</td>
</tr>
<tr>
<td>PA 225, Introduction to the Profession</td>
<td>1</td>
</tr>
<tr>
<td>PA 226, Assessment and Management of the Renal and Genito-Urinary Systems</td>
<td>2</td>
</tr>
<tr>
<td>PA 227, Assessment and Management of Ophthalmic and Otorhinolaryngological Problems</td>
<td>2</td>
</tr>
<tr>
<td>PA 228, Clinical Skills I</td>
<td>2</td>
</tr>
<tr>
<td>PA 410, Clinical Rotation in Medical-Inpatient Service</td>
<td>5</td>
</tr>
<tr>
<td>PA 414, Clinical Rotation in Emergency Room</td>
<td>5</td>
</tr>
<tr>
<td>PA 418, Clinical Rotation in Family Practice I</td>
<td>5</td>
</tr>
<tr>
<td>PA 419, Clinical Rotation in Primary Care I</td>
<td>5</td>
</tr>
<tr>
<td>PA 422, Clinical Rotation in Internal Medicine</td>
<td>5</td>
</tr>
<tr>
<td>PA 412, Clinical Rotation in Surgery I</td>
<td>5</td>
</tr>
<tr>
<td>PA 430, Clinical Conference I</td>
<td>2</td>
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<tr>
<td>PA 432, Clinical Conference II</td>
<td>3</td>
</tr>
<tr>
<td>PA 440, Clinical Preceptorship</td>
<td>6</td>
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</tbody>
</table>

Recommended Electives (20 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td>PA 311, Clinical Rotation in Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>PA 312, Clinical Rotation in Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PA 313, Clinical Rotation in Dermatology</td>
<td>3</td>
</tr>
<tr>
<td>PA 314, Clinical Rotation in Otorhinolaryngology</td>
<td>3</td>
</tr>
<tr>
<td>PA 413, Clinical Rotation in Obstetrics and Gynecology</td>
<td>3</td>
</tr>
<tr>
<td>PA 415, Clinical Rotation in Mental Health</td>
<td>5</td>
</tr>
<tr>
<td>PA 417, Clinical Rotation in Administering and Personnel Health Care</td>
<td>5</td>
</tr>
<tr>
<td>PA 423, Clinical Rotation in Pediatrics</td>
<td>5</td>
</tr>
<tr>
<td>PA 424, Clinical Rotation in Radiology</td>
<td>1-5</td>
</tr>
<tr>
<td>PA 425, Clinical Rotation in Surgery II</td>
<td>5</td>
</tr>
<tr>
<td>PA 426, Clinical Rotation in Family Practice II</td>
<td>5</td>
</tr>
<tr>
<td>PA 427, Clinical Rotation in Primary Care II</td>
<td>5</td>
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Graduation Requirements

Students who meet the course requirements specified in the physician assistant curriculum will receive a certificate of completion. In addition, students may qualify for the Bachelor of Health Science with emphasis in physician assistant by completing the physician assistant curriculum and meeting all University graduation requirements with a minimum of 125 hours and a 2.00 grade point average.

Lower-Division Courses

211. Assessment and Management of the Integument. (2). A combined theory, laboratory and clinical course dealing with the skin as a 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 0 129

212. Assessment and Management of the Cardiovascular System. (2). A combined theory, laboratory and clinical course dealing with the cardiovascular system. Special con-
225. Introduction to the Profession. (1). An introductory course for the physician assistant student that details the history, philosophy, concepts, and current practice of the profession. Special consideration is placed on the interdisciplinary aspect of patient care, and the team approach is emphasized. Guest lecturers from other disciplines describe their role in the health field to integrate the entire concept for the student. Prerequisite: instructor's consent. H 19 226 0 1299

226. Assessment and Management of the Renal and Genito-Urinary Systems. (2). A theory course dealing with the kidneys and ureters, bladder, and prostate. Special consideration is given to the renal failure, mechanisms, manifestations of renal disease, management, convalescence, and special problems of thoracic surgery; re-orientation of the chest; and resources of the American Lung Association. 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 special diagnostic instruments, the common arthritis, and special problems of the nervous system; re-orientation of the chest; and resources of the American Lung Association. H 19 214 0 1299

218. Assessment and Management of Obstetrics and Gynecology. (2). A theory, laboratory and clinical course dealing with obstetrics and gynecology. Special considerations include the menstrual cycle, pregnancy, gynecologic diseases, techniques of normal delivery, obstetrical emergencies, family planning and infertility. H 19 218 0 1299

221. Assessment and Management of the Nervous System. (2). A theory, laboratory and clinical course dealing with both the central and peripheral nervous systems. Special considerations include special diagnostic procedures, neurological emergencies, head trauma, cerebrovascular diseases and stroke management. H 19 221 0 1299

222. Assessment and Management of the Musculo-Skeletal System. (2). A theory, laboratory and clinical course dealing with the musculoskeletal system. Special considerations include congenital anomalies; orthopedic emergencies; fracture, splinting and casting; the common arthritides, and rehabilitation. H 19 222 0 1299

223. Assessment and Management of the Endocrine System. (2). A theory, laboratory and clinical course dealing with the endocrine system. Special considerations include diseases of the pituitary gland and hypothyroid, hypotension of the thyroid, parathyroid and adrenal gland, diabetes mellitus; diagnostic procedures; special diets; endocrine emergencies; and the treatment of endocrine diseases. H 19 223 0 1299

224. The Medical History and Counseling Techniques. (2). 2R; 1L. The theory and techniques of the medical history and counseling are considered. The basic concepts of the character of historical data and interviewing techniques are considered. Philosophies of counseling are presented with special emphasis on cultural differences, family counseling, interviewing children, and the sexual history. Lecture, role playing, and simulation are employed in the course. H 19 224 0 1299

225. Introduction to the Profession. (1). An introductory course for the physician assistant student that details the history, philosophy, concepts, and current practice of the profession. Special consideration is placed on the interdisciplinary aspect of patient care, and the team approach is emphasized. Guest lecturers from other disciplines describe their role in the health field to integrate the entire concept for the student. Prerequisite: instructor's consent. H 19 226 0 1299

226. Assessment and Management of the Renal and Genito-Urinary Systems. (2). A theory course dealing with the kidneys and ureters, bladder, and prostate. Special consideration is given to the renal failure, mechanisms, manifestations of renal disease, management, convalescence, and special problems of thoracic surgery; re-orientation of the chest; and resources of the American Lung Association. 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 special diagnostic instruments, the common arthritis, and special problems of the nervous system; re-orientation of the chest; and resources of the American Lung Association. H 19 214 0 1299

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223. Assessment and Management of the Endocrine System. (2). A theory, laboratory and clinical course dealing with the endocrine system. Special considerations include diseases of the pituitary gland and hypothyroid, hypotension of the thyroid, parathyroid and adrenal gland, diabetes mellitus; diagnostic procedures; special diets; endocrine emergencies; and the treatment of endocrine diseases. H 19 223 0 1299

224. The Medical History and Counseling Techniques. (2). 2R; 1L. The theory and techniques of the medical history and counseling are considered. The basic concepts of the character of historical data and interviewing techniques are considered. Philosophies of counseling are presented with special emphasis on cultural differences, family counseling, interviewing children, and the sexual history. Lecture, role playing, and simulation are employed in the course. H 19 224 0 1299

Upper-Division Courses

311. Clinical Rotation in Rehabilitation. (3). A four-week clinical experience in which students participate in the care of hospitalized patients. During this rotation, students are involved in admitting, taking histories and performing physical examinations, making ward rounds, participating in staff conferences, recording patients’ progress notes, performing special procedures, diagnostic tests and preparing discharge summaries. H 19 311 0 1299

312. Clinical Rotation in Public Health. (3). A four-week clinical experience in which students are introduced to resources available within a metropolitan public health department. Special emphasis is placed on communicable disease control. Other services, such as community health education, and visiting nurses are also encountered. H 19 312 1 1214

313. Clinical Rotation in Dermatology. (3). A four-week clinical experience in which students participate in the care of dermatologic patients in a variety of settings. Students are allowed to participate in specialized diagnostic testing, such as KOH prep, tissue scrapings and skin biopsies. The students become familiar with therapeutic regimens, their indications, availability, reliability and limitations in the treatment of dermatologic disease. H 19 313 1 1299

314. Clinical Rotation in Otorhinolaryngology. (3). A three-week clinical experience in which students participate in the care of the patient with ear, nose and throat problems. Clinical problems examined include obtaining a detailed database, performing diagnostic and therapeutic procedures, and the medical and surgical treatment of the ear, nose and throat problems. Students also observe and participate in the daily practice experienced by a physician with a specialization in otolaryngology. H 19 314 1 1299

315. Clinical Rotation in Outpatient Mental Health (3). A three-week clinical experience in which the student participates in the care of patients in an outpatient mental health clinic. Students will be involved in data collection, diagnosis, treatment and follow up of patients with a variety of psychiatric and behavioral problems. Special emphasis will be placed upon the decisional processes involved in treating patients on an outpatient basis. Prerequisite: departmental consent. H 19 315 1 1299

410. Clinical Rotation in Medical In-Patient Service. (5). A six-week clinical experience in which students participate in the care of the hospitalized patient. During the rotation, students are involved in admitting, taking histories and performing physical examinations, making ward rounds, participating in staff conferences, recording patients’ progress notes, performing special procedures, diagnostic tests and preparing discharge summaries. H 19 410 1 1299

412. Clinical Rotation in Surgery I. (5). A six-week clinical experience in which students participate in the care of the surgical patient. During this rotation, students are involved in admitting, taking histories and performing physical examinations, making ward rounds, participating in staff conferences, recording patients’ progress notes, performing special procedures, diagnostic tests and preparing discharge summaries. 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 gynecologic patients. During this rotation, students are involved in patient assessment, diagnostic procedures and treatment of the gynecologic patient. Students follow obstetric patients through all stages of pregnancy, labor, delivery and postpartum care. Students are involved in family planning and contraception. H 19 413 1 1299

414. Clinical Rotation in Emergency Room. (5). A six-week clinical experience in which students participate in the care of the surgical patient. During this rotation, students are involved in admitting, taking histories and performing physical examinations, making ward rounds, participating in staff conferences, recording patients’ progress notes, performing special procedures, diagnostic tests and preparing discharge summaries. H 19 414 1 1299
which students participate in the care of emergency patients as encountered in the emergency room of a metropolitan hospital. Students are involved in patient history and physical examination, assessment of patient condition, triage, diagnostic testing and emergency procedures. H 19 424 1 1299

415. Clinical Rotation in Mental Health. (5). A six-week clinical experience in which students participate in the care of a wide variety of patients such as encountered in a mental health clinic. Students are involved in data collection, assessment and the formulation of treatment plans for a variety of psychiatric or emotional disturbances. Special emphasis is placed on suicide prevention. H 19 415 1 1299

417. Clinical Rotation in Admitting and Discharging. A six-week clinical experience in which students participate in the care of patients as encountered in a family practitioner program. Students have the opportunity to do annual examinations of employees as well as participating in employee sick call situations. H 19 417 1 1299

419. Clinical Rotation in Primary Care I. (5). A six-week clinical experience in which students participate in the care of a wide variety of patients, such as those encountered in a primary care residency program. Students have the opportunity to improve their skills in physical examination, diagnostic procedures and treatment of these patients. Students also observe the complexity of the role of the family practitioner. H 19 419 1 1299

421. Clinical Rotation in Pediatric I. (5). A six-week clinical experience in which students participate in the care of medical adult patient in both an inpatient and outpatient environment. During this rotation the student is involved in obtaining a detailed data base for the admission and therapeutic procedures, counseling the acute and chronically ill patient in the disease process and treatments of these patients. Students also observe the diversity and complexity of the role of the primary-care physician. H 19 421 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 physical assessment, performing 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 child care. Special emphasis is placed upon immunization, preventive medicine and developmental milestones. H 19 423 1 1299

424. Clinical Rotation in Radiology. (1-5). A six-week clinical rotation in which the student participates in all aspects of radiological procedures such as chest, skull, and extremity. During this rotation the student is involved in taking routine x-rays, fluoroscopy and interpretation. 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

425. Clinical Rotation in Surgery I. (5). A six-week advanced clinical experience in which students participate in the care of the surgical patient. Students have the opportunity to improve their skills in admitting, taking history, and performing physical examinations, and diagnostic procedures. Students assist in the operating room and participate in the surgical subspecialties. Students also assist in pre-operative and postoperative care of the patient. Prerequisite: department chairperson's consent. H 19 425 1 1299

426. Clinical Rotation in Family Practice II. (5). A six-week advanced clinical experience in which students participate in the care of a wide variety of patients in a primary-care physician's practice in a rural area. 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 complexity of the role of the primary-care physician. Prerequisite: department chairperson's consent. H 19 426 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 a primary-care physician's practice in a rural area. Students are involved in physical evaluation, assessment, diagnostic procedures and treatment of these patients. Students also observe the diversity and complexity of the role of the primary-care physician in rural areas. Prerequisite: department chairperson's consent. H 19 427 1 1299

430. Clinical Conference I. (2). 1R; 2L. The focus of this course is clinical research. Students will integrate research activities with clinical assignments and report to faculty. Involvements include the writing of clinical papers during the semester and an analysis of clinical problems encountered in the clinical rotation. This requires competent utilization of the knowledge, strengths and weaknesses in clinical skills. Prerequisites: concurrent enrollment in PA 430 and instructor's consent. H 19 430 1 1299

432. Clinical Conference II. (3). 1R; 3L. The course is to be offered in the spring semester to clinical Physician Assistant students. The primary focus of this course is on issues affecting the graduate Physician Assistant, which include legislative issues, professional associations, scope of practice, limitations, malpractice issues, etc. This course will include review sessions for the National Board Examination utilizing lecture, discussion, and computer-assisted instruction. Prerequisites: concurrent enrollment in PA 430 and instructor's consent. H 19 432 1 1299

440. Clinical Preceptorship. (6). An eight-week introduction to 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 cooperation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in co-op 481 may follow one of the following scheduling patterns: parallel, enroll concomitantly 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. Prerequisite: successful completion of the freshman-year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 19 481 2 1299

Respiratory Therapy

The baccalaureate program in respiratory therapy through a Bachelor of Health Science is designed for the individual currently enrolled in the Wichita State respiratory therapy associate degree program or graduates of offers accredited respiratory therapy programs. This degree provides opportunities for respiratory therapists to expand their role in education, administration, or in the clinical sciences.

Curriculum

The Bachelor of Health Science program requires completion of a basic program in respiratory therapy plus the general requirements of the University. (The basic program is given later in the section under the heading Associate of Science—Respiratory Therapy) It is a three-track program providing three interrelated courses of study. Students may select one of the following options: (1) respiratory therapy education, (2) management, or (3) advanced clinical study. Courses taken in these options are offered by the College of Health Professions, the College of Business Administration, the College of Education, and Fairmount College of Liberal Arts and Sciences. A contract for graduation must be completed one semester prior to the expected graduation date.

Students pursuing the Bachelor of Health Science in respiratory therapy must complete the associate degree in respiratory therapy, a minimum of 21 hours of additional general education credit past the associate of science degree requirements (see requirements for graduation in the Academic Information section of the Catalog), and a minimum of 24 hours of course work in one of the following options. The plan of study will be fashioned from the recommended courses listed under each option and must be made in consultation with and approved by the respiratory therapy department advisor.

Education Option

Course Hrs.
CS 200, Introduction to Programming 2
Management Option

Course          Hrs

Acctg. 210, Financial Accounting          3
Acctg. 220, Managerial Accounting I          3
CS 200, Introduction to Programming          2
Econ. 210, Principles of Economics          3
Mgmt. 360, Concepts of Administration          3
Phil. 327, Philosophy of Health Care          2
HAE 503, Organization and Administration of Health Care          3
HAE 507, Health Planning          2
HAE 510, Health Finance          2
HAE 590, Legal Aspects of Health Care Administration          3
HS 230, Clinical Anatomy of the Thorax          1
HS 331Q, Principles of Dietetics and Nutrition          3
HS 430, Introduction to Fluids and Electrolytes          2
HS 531, Applied Principles of Nutrition          2
RT 301, Seminar I          2
RT 320, Clinical Projects          2
RT 360, Pulmonary Rehabilitation          2
RT 465, Cardiopulmonary Diagnostic, Preventive, and Rehabilitative Methods          5

Lower-Division Courses

Course          Hrs

101. Overview of Respiratory Therapy. (3). An overview of the profession, the cardiopulmonary 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 therapy in noncritical areas, as well as other departmental operations. Prerequisite: RT 222. H 13 202 1 299
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 12 203 2 1299
212. Respiratory Therapy Procedures. (1-5). This course will present the basic therapeutic and diagnostic skills and techniques used by the respiratory therapy practitioner which can be developed in a skills laboratory. Included are medical gas therapy, humidification 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

Upper-Division Courses

Course          Hrs

301. Seminar I. (2). Discussion of departmental operations. Prerequisite: RT 122 H 13 301 9 1299
302. Seminar II. (2). Discussion of advanced skills in involving patient and preparation of case studies. Prerequisite: departmental consent. H 13 302 9 1299
310. Respiratory Therapy Practicum III. (1-6). Students practice advanced therapeutic techniques in the hospital environment. H 13 310 2 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 6 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, within 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 Quality Control. (1-3). May be repeated to 6 hours. Blood gases, acid-base theory, clinical application, blood gas analysis, and quality control will be presented. Modern monitoring trends and equipment usage will be emphasized and demonstrated. Prerequisites: college chemistry and human physiology, or departmental consent. H 13 330 0 1299
360. Pulmonary Rehabilitation. (1-5). Objectives, methods, and expected results will be presented and discussed. Patient testing methods including clinical exercise testing, patient and family education, bronchial hygiene, breathing retraining, biofeedback, physical reconditioning, and home care will be described and discussed. Prerequisite: departmental consent. 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 case study approaches are used. Prerequisite: RT 222. H 13 425 0 1299

435. Ventilators and Applied Critical Care. (1-6). A study of mechanical ventilators and applied critical care, including monitoring techniques, criteria for ventilatory support, and aspects of critical care. Prerequisite: departmental consent. H 13 435 1 1299

465. Cardiopulmonary Diagnostic, Preventive and Rehabilitative 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 clinical practicum. 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, enroll 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 of Health Professions does not guarantee admission into the dental hygiene program. Persons interested in the dental hygiene program should direct their inquiries to the Chairperson of the Department of Dental Hygiene, Wichita State University, Wichita, KS 67208.

To qualify for admission to the dental hygiene program, applicants must have completed the General Education Development (GED) test and have a minimum of one semester of college or a total of 14 semester hours. Recommended high school courses are mathematics, biology, chemistry, and physical science.

Students must meet the following admission criteria. They must:
1. Have taken or been 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 2.00 in all high school and college work
3. Have satisfactory results on the American College Test (ACT)
4. Complete Wichita State and College of Health Professions general admission requirements.

Students must also be interviewed in person and their admission approved by the department's committee on admissions. The interview is used to determine a student's motivation and interest, neatness and cleanliness, 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 83 hours, must be taken by dental hygiene students. For course descriptions see the dental hygiene baccalaureate program section of the Catalog.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Prerequisite courses for admission to the dental hygiene program:</td>
<td></td>
</tr>
<tr>
<td>Biol. 225, Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 103Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
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<tr>
<td>Psych. 111Q, General Psychology</td>
<td>3</td>
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<tr>
<td>Plus the following:</td>
<td></td>
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<tr>
<td>Speech 111, Basic Public Speaking</td>
<td>3</td>
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<tr>
<td>or Speech 112, Basic Interpersonal Communication</td>
<td></td>
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<tr>
<td>Soc. 211Q, Introduction to Sociology</td>
<td>3</td>
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</tbody>
</table>

Biol. 120Q, Introduction to Microbiology
Biol. 226, Human Physiology
DH 101, Preclinical Dental Hygiene
DH 104, Clinical Radiography
DH 201, Dental Hygiene Concepts I
DH 202, Clinical Dental Hygiene I
DH 206, General and Oral Pathology
DH 290, Embryology, Histology, and Oral Anatomy
DH 301, Dental Materials and Expanded Functions
DH 302, Clinical Dental Hygiene II
DH 303, Dental Hygiene Concepts II
DH 304, Dental Hygiene Concepts III
DH 305, Periodontics
DH 307, Ethics and Jurisprudence
DH 309, Community Dental Hygiene
DH 311, Dental Health Education
DH 329, Clinical Dental Hygiene III
DH 324, Clinical Dental Hygiene IV
DH 409, Introduction to Research for the Health Professions
HS 301, Pharmacology
HS 315, Head and Neck Anatomy
HS 331Q, Nutrition
RT 102, Cardiopulmonary Resuscitation

Special Requirements
Students are required to purchase uniforms and instruments needed during clinical learning experiences. Students are also 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, Wichita State University, Wichita, KS 67208.

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 rehabili-
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 Wichita State 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 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>Recommended Semester Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications (6 hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Speech 111, Basic Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Division A—Humanities and Fine Arts (3 hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum of any 3 hours</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Division B—Social and Behavioral Sciences (3 hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psych. 111Q, General Psychology</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Division C—Natural Sciences and Mathematics (42-44 hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biol. 105G, The Human Organism</td>
<td>4</td>
<td>1</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>
</tr>
<tr>
<td>RT 102, Cardiopulmonary Resuscitation (recommended)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>HS 301, Clinical Pharmacology</td>
<td>3</td>
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</table>

Admission to the Professional Curriculum

Students submitting application to the professional program are eligible for consideration after they have met the 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>Courses</th>
<th>Hrs.</th>
<th>Recommended Semester Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division C—Natural Sciences and Mathematics (42-44 hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT 111, Introduction to Respiratory Therapy</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>RT 112, Respiratory Therapy Procedures</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>RT 222, Introductory Clinical Practicum</td>
<td>3</td>
<td>4 or 5</td>
</tr>
<tr>
<td>RT 202, Respiratory Therapy Practicum I</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>RT 203, Respiratory Therapy Practicum II</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>RT 310, Respiratory Therapy Practicum III</td>
<td>4</td>
<td>5 or 6</td>
</tr>
<tr>
<td>RT 320, Clinical Projects</td>
<td>1-3</td>
<td>4 or 5 or 6</td>
</tr>
<tr>
<td>RT 325, Cardiopulmonary and Renal Physiology</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>RT 426, Cardiopulmonary Disorders and Man­agement</td>
<td>6</td>
<td>5 or 6</td>
</tr>
<tr>
<td>HS 230, Clinical Anatomy of Thorax</td>
<td>1</td>
<td>5 or 6</td>
</tr>
<tr>
<td>RT 435, Ventilators and Applied Critical Care</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

*Admission to 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, Wichita State University, Wichita, KS 67208.

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 certification 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 is 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 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 encompasses anatomy and physiology, pathophysiology, emergency recognition, and care of medical emergencies and trauma-related injuries. In addition, students spend 10 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 5-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 certification but who do not wish to pursue a degree. Persons most likely to take these courses are registered nurses who have a bachelor’s degree in a field other than nursing, those who have no bachelor's degree, or those who already have a master's degree.

In the College of Education, students must take three courses: ISEE 428, Social and Cultural Foundations of Education (2 hours) or ISEE 701, Foundations of Education (3 hours); ISEE 601, Introduction to Exceptional Child (3 hours); and ISEE 490 or 790, Independent Study (1 hour).

In addition, students must take courses in the College of Health Professions: Nurs. 500, Assessment of Pediatric and Adolescent Clients (3 hours) or an equivalent course determined by the Department of Nursing; Nurs. 501, Health Maintenance of the School Age Child (3 hours); Nurs. 502, Organization and Management in School Nursing Settings (3 hours); and Nurs. 503, School Nurse Practicum (2 hours), optional.

The total program requires 15-18 credit hours.

Physician Assistant

The Physician Assistant Program is a 24-month program designed to train primary care physician assistants. As defined by the National Academy of Sciences, 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. Students who have completed all University requirement in addition to physician assistant requirements receive the Bachelor of Science degree. 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's 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. In addition, the department conducts consumer health education programs and coordinates continuing education for health professionals. These programs are usually held in cooperation with other departments within the College of Health Professions and community agencies.

Lower-Division Courses

1110. 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 related to contemporary health issues. H 22 1110 0 1201

Upper-Division Courses

410. Community Health Concepts. (3). An introduction to the foundations of public health, biostatistics, epidemiology, ecology, community organizations and organization of health services. Prerequisite: departmental consent. H 22 410 0 1214

440. Health Care Administration Practice. (6). 40P. Prerequisite: senior standing or departmental consent. H 21 440 2 1202

490. Independent Study in Health Care Administration. (1-4). Prerequisite: departmental consent. H 21 490 3 1202

Courses for Graduate/Undergraduate Credit

503. Organization and Administration of the Health Care System. (3). Prerequisite: departmental consent. H 15 503 0 1202

504. Health Economics. (3). Cross-listed as Econ. 665. Prerequisite: HAE 503 or Econ. 202. H 15 504 0 1202


507. Health Planning. (3). Prerequisite: departmental consent. H 21 507 3 1202

509. Health Care Operations Analysis. (3). Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360, and junior standing. H 21 509 0 1202

510. Health Finance. (3). Prerequisites: HAE 503 and Accg. 210 or equivalent. H 15 510 0 1202


590. Legal Aspects of Health Care Administration. (3). Cross-listed as Geron. 590. Prerequisite: junior standing or departmental consent. H 21 590 0 1202

605. Health Services Research. (3). Prerequisite: departmental consent. H 15 605 4 1201

684. Seminar in Health Care Administration. (3). May be repeated for credit. Prerequisites: HAE 503 and at least one other HAE course. H 21 684 0 1201

720. Community Health Organization and Administration. (3). Introduction to the organization and activities in the health system outside the hospital—roles and problems. Introduction to administrative problem-solving as a structured process. Prerequisite: instructor's consent. H 21 720 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 applied/c clinical 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

110. Basic Emergency Medical Care Training. (5). 4R; 2L. Principles of basic emergency medical care are identified. Classroom instruction includes anatomy, physiology, and emergency recognition and care of medical emergencies and trauma-related injuries. Practicum and discussion provide the opportunity to apply these principles. Students also spend 10 hours of in-hospital observation. Prerequisite: departmental or instructor's consent. H 18 110 1 1201

150. Workshop in Health Sciences. (1-4). H 18 150 2 1201

201. Orientation to Health Professions. (2). An examination of the health team concept, the role and relationship of the various providers of health care and the criteria for the selection of a health career. Emphasis is placed on the health team concept. H 18 201 0 1201

230. Clinical Anatomy of the Thorax. (1). 1R; 2L. Fall semester. Presents the structure and mechanisms of the thorax, including neuromuscular, skeletal, cardiovascular and respiratory systems. Laboratory includes use of human cadavers and models. Prerequisites: respiratory therapy major and instructor's consent. H 18 230 1 0412

231G. Current Issues in Food and Nutrition. (3). A survey course that will examine the various controversies, fads, and misconceptions surrounding nutrition and health; the cultural and historical aspects of food in America, the political aspects of food and farm policy. The course will include the basic nutrition principles that are needed to fully understand the issues discussed. H 18 231 0 0424

Upper-Division Courses

301. Clinical Pharmacology. (3). A survey of therapeutic terms, drug actions, dosage, toxicity and application of drugs in the clinical setting. H 18 301 0 1201

310. Gross Anatomy. Section A: (3). Section B: (6). 3R; 9L. A study of the structure of the human body, with major emphasis on the skeletal and muscular systems. Laboratory (Section B) includes dissection of the human cadaver. Open to nonphysical therapy majors. Prerequisite: departmental consent. H 18 310 1 0412

315. Head and Neck Anatomy. (2). An in-depth study of the skull, muscles, nerves, vascular supply, etc., of the head and neck region. H 18 315 0 1201
331Q. Principles of Dietetics and Nutrition. (3). A study of human dietary and nutritional needs in the clinical setting. Composition and classification of foods, vitamins and their functions. Nutrition and public health. The study of nutrition under special conditions is covered. A detailed application of dietetic and nutritional knowledge applied to various clinical conditions is given. H 18 331Q 0 0424

385. Health Care Team Concepts. (1-6). A seminar course designed to provide opportunity for health professionals to share experiences as members of the health care team. Departments will select the number of credit hours needed for students within their 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 skeletal, muscular, tendinous, thoracic, abdominal, pelvic, head and neck. Prerequisites: Biol. 225 or equivalent, instructor's consent, and enrollment in one of the professional programs. H 18 388 0 0412

389. Clinical Anatomy. (3). Spring semester. An introduction to the anatomy of the human genital-urinary, neuromusculoskeletal system and neuroanatomy. Prerequisites: HS 388, instructor's consent and enrollment in one of the professional programs. H 18 389 0 0412

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 18 390 0 0410

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 will focus on the essential mechanisms of healthy and diseased states and the impact of these conditions on the health care professional. Prerequisites: HS 310 or instructor's consent. H 18 400 0 1201

401. Advanced Clinical Pharmacology. (3). An advanced study of clinical pharmacology, pharmacodynamics and pharmacokinetics that includes drugs synergisms and side effects. Prerequisites: HS 301 and instructor's consent. H 18 401 0 1201

411. Special Projects. (1-6). Supervised intensive study of special topics and problems related to the health professions by arrangement. Prerequisite: department chairperson's consent. H 18 411 3 1201

421. Applied Clinical Pharmacology I. (3). A course designed to provide the student with a practical knowledge of pharmacotherapeutics. 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 390 and instructor's consent. H 18 421 0 1201

422. Applied Clinical Pharmacology II. (3). A continuation of HS 421, with emphasis on drugs affecting the excretory, endocrine and central nervous systems. Prerequisites: H 18 421 and instructor's 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. 105Q, Biol. 226 or equivalent and departmental consent. H 23 430 0 1201

450. Workshop in Health Sciences. (1-4). H 18 450 2 1201

Courses for Graduate/Undergraduate Credit

501. Health Education Curriculum Development. (3). A course designed to assist health professionals in constructing health education 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 development of new programs. Prerequisites: junior, senior or graduate standing in one of the professional programs or instructor's consent. H 18 501 0 1201

506. Teaching and Learning Strategies in Health Science. (3). A course examining the various means of presenting health knowledge and coupling these teaching strategies with the audiences and types of student bodies that will receive this knowledge. The nature of health care curriculum is examined in depth as are procedures for designing and implementing health education curricula. Prerequisite: instructor's consent. H 18 506 0 1202

511. Neuroanatomy and Neurophysiology. (3). 2R; 2L. Study of the structure, physiology, and functions of the central and peripheral nervous systems. Prerequisites: HS 310 or CDS 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. Prerequisite: upper division or graduate standing, or department chairperson's consent. H 18 521 3 1201

531. Applied Principles of Nutritional Support and Therapy. (3). A study of the principles of nutritional support and diet therapy. The dietary concerns of a variety of clinical disorders will be investigated. These include: gastrointestinal disorders, diabetes melitus, cancer, burns, obesity and weight loss, kidney and cardiovascular disease, parenteral and enteral nutrition, and surgical conditions. Nutritional assessment, data interpretation, case study presentation, data interpretation, case study presentation, and client communications will be discussed. Prerequisites: HS 331 or instructor consent. H 18 531 0 0424

570. Interpretations of Sexuality for Health Professionals. (3). Cross-listed as Nurs. 570.

Effective 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

701. Issues in Health Care. (3). An in-depth look at current issues facing health professionals. Topics may be presented in lecture, small group discussion, simulation and with guest speakers. Trends in health care, ethics, consumerism and current research findings will be presented and will include disease prevention and health promotion as well as the role of the health care professional in disease management and current research findings as they relate to current trends in the health professions. Prerequisite: graduate standing. H 18 701 0 1201

703. Evaluation in the Health Professions. (3). This course presents the background and methods for evaluating performance in the health professions. The planning, development, and use of evaluation tools in the clinical setting as well as the planning and use of evaluation tools in educational and professional settings. H 18 703 0 1201

704. Continuing Education in the Health Professions. (3). Planning, implementation, and evaluation of continuing education programs for health professions. Review of existing continuing education models and consideration of alternative systems. H 18 704 0 1201

705. Health Services Research. (3). An examination of statistical research methods used by health care professionals and organizations. Topics include presentation of information, measures of location and variation, probability, expectation, sampling distributions, hypothesis testing, analysis of variance, and simple research designs. Prerequisite: upper division statistics course or consent of MHS graduate coordinator. H 18 705 0 1201

710. Research Methods in Health Professions. (3). Examination of research methodology as it relates to the health professions. Included in the course will be identification of significant health care research problems, development of relevant hypotheses, review and critical evaluation of literature, and identification of methodology pertinent to the hypotheses developed. This methodology will address the selection of sample, measurement instrument, and research design. H 18 710 0 1201

712. Administration of Hospital-Based Education. (3). 2R; 2L. Historical perspective of the professional education programs and current requirements for providing institution-wide educational services. Identification and analysis of educational programs and their role in community health planning, and program evaluation. H 18 712 1 1202

714. Quality Assurance and Assessment for Health Care Institutions. (3). Introduction to the organization and activities relevant to quality assurance and outcomes from both inside and outside the institution—roles and problems. Introduction to quality assurance problems and evaluation as a structured program. Prerequisite: instructor's consent. H 18 714 0 1201

750. Workshop in Health Related Professions. (1-4). Examination of relevant topics in health related professions and/or health related problems. 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.
Fairmount College of Liberal Arts and Sciences

Phillip D. Thomas, PhD, Dean

Fairmount College of Liberal Arts and Sciences offers a variety of programs designed to serve the general objectives of Wichita State University and to enhance its urban mission. The college's programs seek to preserve the cumulative learning of the past, interpret the research of the present, and enlarge the educational opportunities for the future by offering courses and curricula representing the newest developments in the world of learning.

For some time, the college has recognized four main areas of study: (1) preparation for professional and technical careers, (2) specialization through departmental majors, (3) cross-cultural education, and (4) preparation for teaching. In recent years, however, the college faculty has expanded these traditional views to encompass nontraditional forms of education and the intensive use of field majors. Substantial flexibility exists within all these areas, for the college serves both those who come directly from high school and those who return after many years away from school.

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 2.00 including transfer work, a grade point average of 2.00 in the major field of study, and a 2.00 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, linguistics, communicative disorders and sciences, mathematics, minority studies, music, philosophy, physics, political science, psychology, religion, social work, sociology, Spanish, speech communication, studio arts, and women's studies.

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 (MALS) 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 2.00.

Probation and Dismissal Standards

Students are placed on probation whenever their overall grade point average falls below 2.00. Probation is removed when the overall grade point average reaches the required 2.00 level. Students are continued on probation when they earn a 2.00 or better semester average and their overall grade point average remains below 2.00. If students on probation fail to earn at least a 2.00 semester average, and if their overall grade point average remains below 2.00, they will be dismissed. Students on probation will not be academically dismissed unless they have attempted at least 6 hours after being placed on probation. When dismissed, students may re-enroll only with the permission of the college's Committee on Admissions and Exceptions.

Application for Graduation

Every student seeking a degree from the college must file an application for graduation and complete a degree card at the end of the semester in which 90
credit hours have been earned. Although actual graduation may be several semesters away, both the application and the 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 Building.

Field Trips
Attendance on field trips is mandatory in any course that includes a field trip description. Field trips may be essential for learning. 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 the instructor in the appropriate field of study. The associate dean in charge of external credit will 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 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, 109 Morrison 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) 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—6 hours of composition and 3 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 “P” courses including a minimum of 9 “Q” 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 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.
6. Humanities. Candidates for the BA degree must take 12 to 15 hours of courses in at least three of the following subdivisions. Three to 6 hours from the major may apply in this distribution toward the BA. Candidates for the BS degree must take 9 hours in at least three of the following subdivisions. Nine hours must be “G” or “Q” courses in either degree.

- American Studies
- Language (see Item II) English Language and Literature
- Foreign Language Literature
- History
- Humanities
- Linguistics—Ling. 150G, 315, 577
- Philosophy
- Religion
- Speech Communication
- Women’s Studies
- Art History (any course) and Music—Mus.— Comp. 113Q, 114, 160G, 161, 182

II. Literature. Students must complete at least 3 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, 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. Candidates for the BS degree must take 9 hours in at least two of the following subdivisions. Only 3 hours from the major department may apply. In either degree, 6 hours must be in “G” or “Q” courses.

1. Administration of Justice
2. Anthropology
3. Economics—Econ. 200G, 201Q, 222, 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

V. Natural Sciences. Each student must take 12 semester hours (three courses), including 4 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 2 units of high school science (exclusive of general science) must take at least 9 hours, including 4 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. 101G, 3 hours; 103Q, 5 hours; 111Q, 5 hours; 112Q, 5 hours: 123Q, 5 hours; 124Q, 5 hours; and all other courses except Chem. 201, Geog. 201, 3 hours; and 235, 3 hours. (No other geography courses count toward the physical science division.) Geol. 101Q, 3 hours; 111Q, 4 hours; 300G, 3 hours; 302Q, 3

† A total of 127 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.
hours; 312, 3 hours. Phys. 111Q, 4 hours; 195G, 3 hours, or with 196, 4 hours; 213Q, 5 hours; 214Q, 5 hours; 313Q, 4 hours; 314Q, 4 hours; 315Q, 1 hour; 316Q, 1 hour.

2. Biological Sciences. 105G, 4 hours; 120Q, 4 hours; 203Q, 5 hours; 204, 5 hours; 370Q, 3 hours; 509G, 4 hours; 5180, 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 5 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, 112, plus 5 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 1 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.

VIII. Major. All specific department 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 2.00 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.
7. Combined majors, 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 the Fairmount College of Liberal Arts and Sciences.

IX. 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 coursework. Field majors must adhere to the following rules:

1. At least 18 hours must be taken in one department and 9 hours in each of two allied departments (36 hours total) with at least 12 of these hours upper division.
2. A plan must be approved by an adviser in the major areas in Fairmount College of Liberal Arts and Sciences.

X. 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.

XI. 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 sometimes allows pre-professional or nontraditional students greater flexibility in planning for their unique future.

The requirements of the degree include the following:

1. Communications—6 hours of composition and 3 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 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.

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 coursework must occur in the following three divisions:

A. Humanities (minimum of 12 hours within three departments with 9 "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)
5. Humanities
6. Linguistics
7. Philosophy
8. Religion
9. Speech Communication
10. Women's Studies
11. Art History and Musicology—Composition 113Q, 114, 160G, 161, 162, and 493G (count as out-of-college hours)

* The division of natural sciences and mathematics includes the departments of biological sciences, chemistry, geology, mathematics, physics, and computer science.
Associate Degrees
Two-year associate degree programs offered by Wichita State are part of the regular academic programs, and credits earned in them are transferable to four-year, baccalaureate degree programs. 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:

I. General Education (30 semester hours)
1. English composition—6 hours
2. Oral communication—3 hours
3. Social sciences—6 hours
4. Natural sciences and mathematics—6 hours
5. Humanities—6 hours
6. Electives—3 hours
II. 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

B. Social and Behavioral Sciences
(minimum of 12 hours within two departments with 6 "G" or "Q" hours):
1. Administration of Justice
2. Anthropology
3. Economics (do not count as out-of-college hours)
4. Geography (all courses except 201 and 235)
5. Gerontology
6. Journalism
7. Minority Studies
8. Political Science (no specific requirement)
9. Psychology
10. Sociology/Social Work
C. Natural Sciences and Mathematics
(minimum of 12 hours in two departments with 6 hours "G" or "Q" courses):
1. Biology
2. Chemistry
3. Computer Science
4. Geology
5. Mathematics (Math. 109, 111, 112, or 211 required)
6. Physics

Associate of Arts in Social Sciences
The associate degree in social sciences requires 60 semester hours, including the following requirements:

I. General Education (30 semester hours)
1. English composition—6 hours
2. Oral communication—3 hours
3. Social sciences—6 hours
4. Natural sciences and mathematics—6 hours
5. Humanities—6 hours
6. Electives—3 hours
II. 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:

Administration of Justice
Anthropology
Broadcasting
Economics
Geography
Journalism
Minority Studies
Political Science
Psychology
Sociology/Social Work

III. General Electives (10-15 semester hours)

Associate of Arts in Gerontology
The associate degree in gerontology is offered through Gerontology, as described in the Gerontology section of the Catalog.

Associate of Science in Administration of Justice
The Associate of Science is offered through the Department of Administration of Justice, as described in the Administration of Justice section of 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 advisor 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 9 in each of the two allied departments. Examples of possible field majors are 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 Bio. 203Q, 204, 416, and 584; Chem. 123Q, 124Q, 531, 532, 662, 663, 664, and 665; Phys. 213Q and 214C; 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 6 hours selected from Greek or Roman history (Hist. 5590, 560, 562, 563, 734) and 5 hours selected from art history (Art Hist. 2210, 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. 121G or 322, Greek 350, Hist. 101G, 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 done 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 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 Dreifurth (history); those interested in Option B should contact Professor Dr. Silva (management) or Professor Dreifurth.

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 the 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 the 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 the 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 the 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 the 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. They can supply students information about entrance requirements for law school so that undergraduate programs may be appropriately arranged.

Prenmedical, Predental, Preveterinary, Prepharmacy, Preoptometry

Medical schools encourage students to obtain a broad education in addition to the prescribed 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 other majors in preparation for the study of medicine.

While the four-year degree program is preferred, it is possible in some medical schools to gain 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. Biological sciences majors are required to complete 94 hours plus either the organismal biology and ecology or microbiology option listed under the Department of Biological Sciences section of the Catalog.

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 premedical studies in the Fairmount College of Lib-
eral 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 broad education and an emphasis on science, especially biological sciences. The counselor for pre-veterinary medicine in the 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, mortuary science, and related professional fields. The office of the premedical professions counselor is located in Room 200 of the Liberal Arts and Sciences building.

Pretheological

Students interested in pursuing graduate theological work should consult with the religion department chairperson for specific requirements set forth by specific seminaries.

Teaching

Students in the 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 degree programs at Emporia State University and at Bethany College in Lindsborg.

The Department of Administration of Justice offers three degree programs: (1) Associate of Science, (2) Bachelor of Science, and (3) Master of Administration of Justice. 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 has an opportunity to 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) including AJ 100Q, 201, 220Q, 403, 512, 521, and 12 hours in one of the following areas of specialization, plus a minimum of 3 additional elective hours and 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 casework and supervision of convicted 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, 656, 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 320, 340, 343, 344, 345, 643, 646, and 422 (or 481).

V. Investigation (12 hours). This area encompasses scientific and traditional criminal investigation services provided by law enforcement agencies. Course work in this area to be selected from the following courses: AJ 320, 340, 343, 344, 345, 643, 646, and 422 (or 481).

VI. Security Services (12 hours). This area concerns the management procedures, technological systems, and operational research functions of contract, industrial, and institutional security agencies. Course work in this area to be selected from the following courses: AJ 340, 343, 370, 570, 572, 670, and 422 (or 481).

VII. General Administration of Justice (15 hours). This area offers an overview of administration of justice and an exposure to a variety of specializations. Students must choose 15 elective hours from any combination of courses listed in the channels above and/or from the following non-classified courses: AJ 202, 303Q, 382Q, 399, 421, 445, and 600.

Students seeking the Bachelor of Science (BS) with a major in the Department of Administration of Justice must complete at least 21 semester hours of upper-division course work in administration of justice. Upper-division course work is defined as junior- and senior-level course work offered by an accredited four-year college or university and considered by Wichita State and the Department of Administration of Justice to be of upper-division academic quality.

To satisfy the requirements for the BS in administration of justice, students must satisfy the college foreign language requirement.

Students majoring in administration of justice are also directed to select a 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 Wichita State University general education requirements as well as the administration of justice requirements.)

Certificate of Emphasis in Cross-Cultural Communications for 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 334. Also, stu-
of justice. Majors must take 12 additional hours in minority studies course work, 9 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. The requirements for the degree are summarized in the table.

I. General Education Course Requirements (30 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<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</td>
<td>3</td>
</tr>
<tr>
<td>Speech 112, Basic Interpersonal Communications</td>
<td>3</td>
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<tr>
<td>Humanities, 6-9 hours</td>
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<tr>
<td>Social sciences, 6-9 hours</td>
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<tr>
<td>Science or mathematics</td>
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<tr>
<td>one laboratory course, 6-9 hours</td>
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</table>

II. Professional Curriculum (12 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AJ 100, introduction to Administra­tion of Justice</td>
<td>3</td>
</tr>
<tr>
<td>AJ 143, Police in the Community</td>
<td>3</td>
</tr>
<tr>
<td>AJ 201, Agency Administration I</td>
<td>3</td>
</tr>
<tr>
<td>AJ 220, Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>Elective Hours (22 hours)</td>
<td></td>
</tr>
</tbody>
</table>

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 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 100Q 0 2105

433. 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 administration of justice 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 the fire service agency. A 29 202 0 2102

200Q. Criminal Law (3). History, scope and nature of law; parties to crime; classification of offenses, act and intent, capacity to commit crime, defenses, elements of major criminal statutes and an overview of criminal processes and rules of evidence are examined. A 29 220 G 0 2105

Upper-Division Courses

303Q. Contemporary Issues in Criminal Justice (3). An analysis of crime and justice in a changing society. Topics are explored that are most relevant to contemporary issues and trends in law enforcement, courts and corrections. Prerequisite: none A 29 303Q 9 2105

320. Criminal Procedure (3). Criminal procedures and the operation of the criminal justice system, including rights of accused, initiation of prosecution, rules of evidence, search and seizure and the exclusionary rule. A 29 320 0 2105

340. Investigative Technology (3). An analysis of technology and systems utilized in both criminal and traffic investigations using crime scene and investigative procedures, various methods of personal identification, investigative photography, traffic and forensic accident and safety investigative systems. Emphasis is placed on field research and evidentiary aspects of investigative technology. A 29 340 0 2105

343. Special Investigation (3). Case, 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 0 2105

345. Investigative Photography (3). Departmental fee. Basic photography theory and practice as applied to criminal investigations and forensic science. Students take, develop, and prepare documents for evidentiary purposes. A prerequisite: AJ 343 or instructor's consent. A 29 345 0 2105

370. Analysis of Security Administration (3). A course of study for interested students and practitioners of security management. The history, philosophy of security, personnel security measures and security goals of business, security firms, military services and government bureaus are discussed. These classes are open to all interested students in any major field of study. A 29 370 0 2105

382Q. Women in the Administration of Justice (3). Cross-listed as WS 382. A course designed to examine the roles women within the criminal justice system. It is approached from two perspectives: (1) those women employed by the criminal justice system and (2) those women sought after and incarcerated by the criminal justice system. Emphasis is placed on those facets unique to women in the history of law enforcement and corrections. A 29 382Q 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. Prerequisites: senior standing and departmental consent. A 29 403 0 2105

421. Individual Directed Study (1-3). A 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 6 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, correction, 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 theory derived from the administration of justice curriculum. Interns are required to work 96 hours for 3 hours credit. A 29 422 3 2105

445. Special Topics (3-5). Group project and inquiry through 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 6 hours. A 29 445 3 2105

481. Cooperative Education (1-6). This course provides the student with a field placement which integrates theory with a planned and supervised professional experience and applies knowledge and theory derived from the administration of justice curriculum. The history, philosophy of security, personnel security measures and security goals of business, security firms, military services and government bureaus are discussed. These classes are open to all interested students in any major field of study. 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. The processes related to the determination and implementation of management philosophy for the administration of justice agencies and its individual practitioners are explored. Prerequisites: AJ 201 or departmental consent. A 29 501 0 2105

510. ADP in Administration of Justice (3). A course of study and research in administration of justice agencies and its individual practitioners. A 29 510 3 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 0 2105

520. Criminal Evidence. (3). Concepts of criminal evidence rules as they pertain to kinds and degrees of evidence—procedure for admitting or excluding evidence; witnesses and privileged communications; the hearsay rule and its exceptions; and judicial notice, burdens of proof, and presumptions. Emphasis is placed on the rules of evidence that govern the administration of justice process. A 29 520 0 2105

521. Law and the Administration of Justice Process. (3). Examination of recent judicial interpretations affecting legal process, rules or 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 administration of justice personnel. A 29 521 0 2105

533. Juvenile Justice. (3). An analysis of decision-making processes in juvenile justice, the content of juvenile law, Supreme Court decisions affecting juvenile justice, as well as specific select problems in the administration of juvenile justice. A 29 533 0 2105

560. Community Prevention Programs. (3). An analysis of typologies, philosophies and operations of existing and projected community-based crime prevention programs. Emphasis is also placed on a variety of governmental and nongovernmental community support and action programs, which, although not traditionally identified as such, appreciably affect the operation of justice process. Program categories to be analyzed include citizen involvement (voluntary and civilian advisory groups) and educational, religious and family welfare and youth services. A 29 560 0 2105

570. Security Staff Supervision. (3). Assesment 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 0 2105

572. Security Technology. (3). Physical security hazards, threats, sabotage, theft and plagiarizing problems as they affect the governmental and private agencies as well as 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 0 2105

600. Forensic Anthropology. (3). Cross-listed as Anthro 600. This course encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. It covers collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification, with an emphasis in anthropological interpretation. A 28 600 0 2202

606. Conflict Resolution in the Administration of Justice. (3). An analysis of community and individual reaction to agency policy and services. Emphasis is placed on the agency’s role as mediator between offenders and victims of crime and between other groups and individuals in conflict. A 29 606 0 2105

610C. The Victim and the Administration of Justice. (3). An examination of the relationship of criminal victims to the criminal justice system. Consideration is given to the role of the victim in crime occurrences, as well as the trends and developments in the field. A 29 610C 0 2105

633. Planning in the Administration of Justice. (3). Analysis of planning techniques related to the procedures, personnel, physical and specialized equipment, budget and extra-agency activities. Prerequisite: AJ 201 or departmental consent. A 29 633 0 2105

636. Public and Community Relations. (3). Analysis of techniques utilized by administration of justice agencies in both public and community relations programs that are designed to optimize the agency’s communication capability. Special emphasis is placed on the unique characteristics of both public and community relations. A 29 636 0 2105

639. Techniques of Agency Staff Supervision. (3). Analysis of the 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 0 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 problems of forensic psychiatry. A 29 641 0 2105

643. Forensic Science. (3). Analysis of the medical role of prevention, detection and treatment as related to the administration of justice. Emphasis is placed on medical specialty areas, such as pathology and psychiatry, which have significant effect on segments of the administration of justice process. A 29 643 1 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 0 2105

653. Field Corrections Techniques. (3). An analysis of the techniques of probation, parole, after-care supervision and related services. Special emphasis is placed on field correction techniques as they relate to other segments of the administration of justice system. A 29 653 0 2105

656. Institutional Corrections Techniques. (3). An analysis of the techniques of institutional correctional practice, including diagnostic centers, halfway houses and other related treatment models. Special emphasis is placed on institutional corrections techniques and their effect on other segments of the administration of justice system. A 29 656 0 2105

660. Techniques of Prevention Program Development. (3). An analysis of the techniques utilized to organize and develop traditional and projected crime prevention and related government and nongovernmental sponsored programs. Special emphasis is placed on the techniques of identifying existing community services, resources and sub­ subsequent to detecting and selecting the level of intervention in the administration of justice process. Prerequisite: AJ 560 or departmental consent. A 29 660 0 2105

670. Seminar—Security, Theory and Practice. (3). An advanced seminar that examines the interrelationships between theories underlying contemporary security practice. Special emphasis is placed on the application of instructor’s theory that supports innovation. Prerequisites: AJ 100Q or departmental consent. A 29 670 0 2105

680Q. Administration of Justice: Transnational and Comparative Perspectives. (3). Primarily designed to acquaint students with structural and functional aspects of law enforcement agencies, court systems, correctional facilities, objectives of crime prevention and crime prevention strategies employed by different societies throughout the world. The role of the United Nations Treatment of Offenders and Crime Prevention is incorporated. A 29 680Q 0 2105

750. Workshops in Administration of Justice. (3). Prerequisite: AJ 100Q or instructor’s consent. A 29 750 2 2105

781. Cooperative Education. (1-5). This course provides the student with a paid field placement that integrates theory with a planned and supervised professional experience designed to complement and enhance the student’s academic work. 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 departmental cooperative education 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

801. Judicial Process and the Administration of Justice. (3). The review and discussion of local, state and federal criminal justice systems and the judicial, legislative 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 administration of corrections institutions. Along with the more traditional corrections institutions, the seminar reviews methods utilized in diagnostic centers, halfway houses and other treatment models. A 29 803 0 2105

804. Seminar on the Techniques of Criminal Investigation. (3). A description, analysis and demonstration of historical, contemporary and projected future techniques and procedures utilized in the apprehension of the criminal. A 29 804 0 2105

805. Seminar on Principles of Evidence
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 region, and its prototypes, e.g., day 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 mold American culture. "Americanists" deal with the complex and often contradictory patterns of civilization, and are thus prepared for a variety of careers in the arts, business, education, and government, as well as for graduate school education.

The student should plan an individualized program of study with a departmental adviser after completing 9 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, Eng. 232G, HAE 231G, Hist. 330G, and Mus. 493G.

Major. The American Studies major consists of 36 hours distributed as follows:

I. 24 hours of American Studies courses from these areas—AS 106 (3 hours); 3 hours from AS 110, 160Q, 210, 213, or 275Q; 3 hours from AS 315, 350, 400, 450; 3 hours from AS 499A, 499B, 499C, or 499D; 3 hours from AS 512, 521, 522, or 540; and 9 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—


Others. Art Hist. 524, 526; Econ. 234; 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 6 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 qualitative 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 0 0313
315. Workshop in American Studies. (1-3). A course designed to provide specialized instruction using a variable format in American studies' relevant subject. A 11 150 2 0 313

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 0 313

201G. The American Hero. (3). Defines historical, cultural and environmental conditions that fostered the rise of many genres of American folk heroes. Representative heroes from colonial times to the present are examined to see how they symbolize the American character. A 11 201G 0 313

210Q. Crime in America. (3). A study of crime in America, from colonial times to the present. Topics explored are the evolution of crime as depicted in literature, crime as depicted in popular entertainment, and popular attitudes toward crime and criminals. A 11 210Q 0 313

213. American Popular Culture. (3). Cross-listed as Hist. 213. A 11 213 0 313

275Q. Studies in Popular Literature. (3). Cross-listed as Eng. 275Q. 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 this work and the way it reflects popular attitudes and values in American studies. Repeatable for credit with change of content. A 11 275Q 0 313

281. Cooperative Education in American Studies. (1-3). The course will permit American studies students to participate in the Cooperative Education program. Offered Cr/NC only. A 11 281 U 0 313

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 0 313

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 effects of the latter on the development of the democratic process, and the functions of sports in society are introduced. A 11 350Q 0 313

400. Success in America. (3). The examination of the concept of success in America as it evolves through the process of societal redefinition 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 cinematic sources. A 11 400 0 313

450. The 1950s in America. (3). The basic objective of this course is to promote greater understanding of the diverse developments affecting the experience of Americans in the period 1945-1960. This period, referred to as "the Fifties," is often regarded today with fond nostalgia. The course examines major cultural currents of the time. A 11 450 0 313

481. Cooperative Education in American Studies. (1-3). The course will permit American studies students to participate in the Cooperative Education program. Offered Cr/NC only. A 11 481 0 313

499A. American Film Culture. (3). Using films as sources and resources of attitudes, values and beliefs, we will study a variety of these "visual texts" in chronological order to examine such topics as attitudes towards blacks and women at various periods, crime and prohibition, patriotism during WWI and WWII, the Cold War mentality, the rebellious youth culture of the Viet Nam Years. The collective American mentality during the distribution of these films will be evaluated. A 11 499A 0 313

499B. Women in American Film. (3). The changing role of women in twentieth century America is understood in the context of the historical and social changes that have taken place during this period. Films are examined thematically and historically to demonstrate the effects of these changes on the role of women in society. A 11 499B 0 313

499C. Western. (3). The western novel and western film serve both as popular forms of entertainment and as critical literary and cinematic genres with recognizable elements: plots, formulas, characters, settings, and situations. This distinctively American art form reveals much about American values, character and beliefs during the last two centuries. A 11 499C 0 313

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 cliches can be created by feature length movies. A 11 499D 0 313

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 0 313

520. American Studies Through the Media. (1-3). Courses created or coordinated by the Department of American Studies which are offered through various media—radio, television, newspapers, and telenet. Areas of American Studies emphasis vary from course to course. A 11 520 0 313

521. The American Great Plains. (3). Both an environmental and cultural consideration of this area from an interdisciplinary approach concerning the history 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 0 313

522. The American Southwest. (3). The background of the settlement of the American Southwest, the impact of the mingling of three different cultures and the evolving of a fourth culture. A 11 522 0 313

540. American Folklore. (3). Cross-listed as Anth. 540. A survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folksong, customs, and crafts, including some ethnic varieties. The unwritten materials that form the uniqueness of American culture. A 11 540 0 313

601. Directed Readings in American Studies. (1-3). Prerequisite: 6 hours of American Studies course work or its equivalent and instructor's consent. A 11 601 3 0 313

602. Directed Readings in American Studies. (1-3). Prerequisite: 6 hours of American Studies course work or its equivalent and instructor's consent. A 11 602 3 0 313

698. Introduction to Research. (3). Bibliography, methodology and the philosophy of research. Repeatable for a total of six hours of credit. Prerequisite: 6 hours of American Studies course work or its equivalent and instructor's consent. A 11 698 9 0 313

699. Seminar in American Studies. (1-3). Seminar in individual conferences organized around a problem or problems presented by a representative figure, theme or period, i.e., the Industrial Revolution. Reconstruction, westward migration or Mark Twain and the Mississippi. Repeatable for a total of 6 hours of credit. Prerequisite: 6 hours of American Studies course work or its equivalent and instructor's consent. A 11 699 9 0 313

750. Workshop in American Studies. (1). 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 0 313

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 archeology: Anthro. 305Q, 335, 501, 508Q, 513, or 538. Students who expect to pursue graduate work in anthropology should also take Anthro. 526. (Anthro. 100G, 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 advisers. No more than 6 hours from another department may be counted.

Minor. A minor consists of 15 hours of anthropology (including at least 6 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 behavioral and institutional complex of contemporary man, with particular emphasis on the mass culture of the United States. A 20 100G 0 2202

101Q. Biological Anthropology and Archaeology. (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 developments of humans and primates in the last 6 million years. Present day variations in biological and behavioral traits are also discussed.  

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 101Q 0 2202

124Q. General Anthropology. (3). An introduction to the fields of physical anthropology, archaeology, and the 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, tourist, historian and professional will be compared. Emphasis on archaeological techniques and mind. A 28 126G 0 2203

150. Workshop in Anthropology. (1-3). A course designed to provide specialized instruction in the use of a format in, an anthropologically relevant subject. Repeatable for credit. A 28 150 0 2202

204. Biological Anthropology and Archaeology Lab. (1). Lab fee. Prerequisite: previous or concurrent enrollment in Anthro, 101 or equivalent. A 28 204 0 2202

281. 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 Cr/NC only. A 28 281 0 2202

Upper-Division Courses

303. Peoples and Cultures of the World. (3). A survey of the cultural configurations of nonliterate peoples of primitive 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 the human and material 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, ethnographic and ethnic 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

318. Culture and Personality. (3). The relationship of individual personality, both normal and abnormal, to group membership and cultural configuration. 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

327. Primitive Religion. (3). Cross-listed as Rel. 327. An examination of various concepts concerning the realm of the supernatural as held by primitive peoples. This course relates to the folk, magical and magical beliefs—and the resultant practices—to the larger patterns of cultural context. A 28 327 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 the etiology of disease, the techniques of healing, the use of curative drugs and other agents, the roles of healers and therapists, and the attitudes of the community toward ill among the areas covered. A 28 328 0 2202

335. Archaeology of North America. (3). A survey of the prehistoric cultures of North America. The prehistoric peopling of the continent to the time of European colonization. A 28 335 0 2203

361. Law, Politics and Society. (3). The study of legal and political systems in non-Western societies. Topics include the origin of the state, precolonial law and politics, and the problems in state building. A 28 361 0 2202

481. 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 Cr/NC only. A 28 481 0 2202

498. Readings in Anthropology. (2-3). Repeatable up to 6 hours. Special problems in anthropology. A 28 498 0 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 used by anthropologists and archaeologists and the theoretical rationale leading to sound interpretations of the structure of extinct cultures. Prerequisite: Anthro. 121Q or 124Q or equivalent. A 28 501 0 2203

502. Introduction to Archaeological Laboratory Techniques. (1-3). Maximum of three hours. An introduction to the laboratory processing of archaeological materials. Students will 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. Prerequisites: Anthro. 101Q, 121Q, or 305Q. A 28 502 1 2203

506. Peoples of the Pacific. (3). A survey of the races, languages and cultures of nonliterate peoples of Polynesia, Micronesia, and Indonesia. A 28 506 0 2202

508Q. Ancient Civilizations of the Americas. (3). A cultural survey of the Aztec, Mayan and Inca. Prerequisite: Anthro. 102Q or 124Q or equivalent. A 28 508Q 0 2202

511. The Indians of North America. (3). A survey of tribal societies and native confederations of North America from the prehistoric through the historic period. Prerequisite: Anthro. 101Q or 124Q. A 28 511 0 2202

513. Archaeology of East Asia. (3). A broad survey of archaeology throughout eastern Asia from the early hominid fossils at Peking and Java to the development of Chinese and Southeast Asian civilizations. Special attention will focus on China (through the Han Dynasty), Southeast Asia and Australia/New Guinea. Recent archaeological finds of the Peoples’ Republic of China will be included. Prerequisite: one 3 hour course in archaeology or consent. A 28 513 0 2203

514. Anthropological Perspectives in Geology. (3). Cross-listed as Geron. 514. An anthropological analysis of the latter stages of the Ice Age and the cultural perspectives. Prerequisite. Anthro. 100G, or 102Q or 124Q or Soc. 211Q. A 28 514 0 2202

519. Applying Anthropology. (3). The application of anthropological knowledge in the solution of social problems in industry, public health, and public administration. Prerequisite: Anthro. 102Q or 124Q. A 28 519 0 2202

521. Performing Arts in Other Cultures. (3). The performing arts are highly developed in many cultures around the world in dance, music, theater and other media. Prerequisites: Anthro. 100G, or 124Q or instructor’s consent. A 28 521 0 2202

522Q. Primitive Art. (3). A survey of the arts of preliterate peoples, with special attention to their function in the cultural setting. Prerequisite: Anthro. 102Q or 124Q. A 28 522Q 0 2202

525. Culture Change and Modernization. (3). An examination of the dynamics of socio-cultural change in the past and present with emphasis on processes of modernization in nonindustrial societies. Prerequisite: 6 hours of anthropology. A 28 525 0 2202

526. Social Organization. (3). A survey of the varieties of social organization among nonindustrial peoples throughout the world. This course will cover family systems, kinship, residence patterns and lineages, and tribal organizations. Prerequisite: 6 hours of anthropology. A 28 526 0 2202

531. Culture and Physical Man. (3). An exploration of the intimate relationship between cultural practices and biological attributes of human populations. The course will interrelate human biological and cultural evolution to the present and probable future. Prerequisite: Anthro. 101Q or equivalent. A 28 531 0 2202

538. Early Man in the New World. (3). A critical examination of facts and theories concerning early man in the New World, from the peopling of the continent to the beginning of the Socialist tradition, and of the role of cultural contacts between North and South America. Prerequisite: Anthro. 101Q or 124Q, or equivalent. A 28 538 0 2203

540. The Indians of the United States: Conquest and Survival. (3). An anthropological inquiry into four centuries of cultural contact, conflict, resistance and assimilation. Prerequisite: Anthro. 101Q or 124Q, or equivalent. A 28 540 0 2202

542. Women in Other Cultures. (3). Cross-listed as WS 542. A course dealing with the place of women in primitive and other non-Western societies, in various aspects of culture, politics, economy, social, domestic, intellectual, psychological, and aesthetic. Societies are compared and contrasted in order to see how different kinds of
roles for which are related to different kinds of societies. A 28 542 0 2202

545. Economic Anthropology. (3). The study of methods of production, division of labor, organization of markets, concepts of money and property allocation in tribal societies. An emphasis is placed on kinship units as a context of consumption and production. Prerequisite: 6 hours of anthropology. A 28 545 0 2202

555. Fossil Evidence for Human Evolution. (3). A detailed examination of man's evolutionary history as evidenced by fossil remains and other aspects of human adaptation. Topics in lecture and extensive laboratory sessions include bone and tooth identifications, measurement and analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: Anthro. 1010 or Biol. 233 or equivalent. A 28 555 1 2202

556. Human Variability. (3). A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. Prerequisites: Anthro. 101Q and Biol. 100. A 28 556 1 2202

557. Human Osteology. (3). A course dealing with human skeletal and dental materials, with applications to both physical anthropology and physical anthropology. Topics in lecture and laboratory sessions include bone and tooth identifications, measurement and analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisites: Anthro. 1010 or equivalent. A 28 557 0 2202


580. Human Paleoeology. (3). A thorough review of the ecological approach to culture history through the practice of archaeological and multidisciplinary studies. Problems formulation, specialized techniques, and interpretation will be emphasized. Prerequisite: Anthro. 501 or equivalent or instructor's consent. A 28 580 0 2203

597. Topics in Anthropology. (3). Detailed study of topics in anthropology, with particular emphasis on problems established according to the expertise of the various instructors. A 28 597 3 2202

600. Forensic Anthropology. (3). Cross-listed as AJ 600. The course encompasses the area of criminal investigation involving biological evidence, blood, hair, fingerprint, dentition and skeletal system. It covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification and identification, with emphasis on anthropological interpretation. A 28 600 0 2202

602. Archaeological Laboratory Analysis. (1-3). Small groups of students analyze archaeological materials, including ceramic, lithic, faunal and vegetal remains. Emphasis is placed on standard methods of identification and modes of interpretation to the materials to produce an accurate archaeological report. Prerequisite: Anthro. 502 and instructor's consent. A 28 602 1 2203

606. Museum Methods. (3). An introduction to museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation and storage. Emphasis is to current trends in museology and the function and relevance of museums, as well as career opportunities. Prerequisite: instructor's consent. A 28 606 5 2202

607. Museum Exhibition. (3). Contemporary philosophy of exhibition design and the planning and installation of an exhibit. Prerequisite: Anthro. 606 or instructor's consent. A 28 607 5 2202

611. Southwestern Archaeology. (3). A comprehensive survey of the prehistoric, historical and living cultures of the American Southwest, with particular emphasis on the cultural continuities and changes covering 12,000 years. Prerequisites: 6 hours of anthropology and departmental consent. A 28 611 0 2203

612. Indians of the Great Plains. (3). An investigation of the cultural dynamics of the Great Plains area, from the prehistoric to the present. Prerequisites: 6 hours of anthropology and departmental consent. A 28 612 0 2202

613. Archaeology of the Great Plains. (3). The archaeological study of the Great Plains area is the earliest evidence into the historic period. Prerequisite: 6 hours of anthropology and departmental consent. A 28 613 0 2203

635. Advanced Studies in Archaeology and Ethnohistory. (3). Special area and theory problems in a historical approach to culture. Prerequisites: 6 hours of anthropology and departmental consent. A 28 635 0 2202

647. Theories of Culture. (3). A survey of the main theoretical movements in cultural anthropology, including both general and contemporary schools of thought. Prerequisite: 6 hours of anthropology, A 28 647 0 2202

648. Contemporary Theories in Anthropology. (3). This course deals with developments in anthropological theory since World War II: neoevolution, cultural ecology, socio-science (componential analysis, cognitive anthropology), structuralism, ethnology, radical anthropology and others. Prerequisite: 6 hours of anthropology. A 28 648 0 2202

651. Language and Culture. (3). Cross-listed as Ling. 651. An introduction to historical and descriptive linguistics. The course deals with the ethnography of communication, lexicostatistics and linguistic determinism. Prerequisite: 6 hours of anthropology, A 28 651 0 2202

656. Advanced Physical Anthropology. (3). An in-depth coverage of selected topics in physical anthropology, including primate and human evolution, race, and current research methods. Prerequisite: Anthro. 101Q or instructor's consent. A 28 656 0 2202

667. English Syntax. (3). Cross-listed as Eng. 667. An examination of the structure of English and their relation to linguistic theory. Prerequisite: Eng. 315 or Ling. 577, or Anthro. 577 or instructor's consent. A 28 667 0 1 1505

690. Field Methods in Anthropology. (3-6). A maximum of 6 hours can be counted as anthropology hours toward either degree. A course that instructs the student in archaeological and ethnological field methods through participation in a research program. The project depends upon the specific interests of the student. Contact the Department of Anthropology for information. A 28 690 2 2202

749. Educational Anthropology. (3). A course dealing with the basic concepts of anthropology and their application to social science units in the classroom and secondarily in the workshop. The course explores the nature of subcultures in American society and the problems they pose for the classroom teacher in a course for educational majors and graduate students. Cannot be used to meet requirements of the General Education Program in anthropology. A 28 749 0 2202

750. Workshop. (1-4). Short-term courses with special focus on anthropological problems. Prerequisite: instructor's consent. A 28 750 3 2202

760. Urban Anthropology. (3). Comparative study of urbanization in non-Western societies (emphasis on sub-Saharan Africa). Prerequisite: 6 hours of anthropology or urban affairs, or instructor's consent. A 28 760 0 2202

Courses for Graduate Students Only

801. Seminar in Anthropology. (3). Comprehensive analysis of anthropological data with emphasis on theoretical problems of interpretation and reconstruction. Repeatable up to 6 hours. Prerequisite: Anthro. 501 or departmental consent. A 28 801 9 2203

802. Methods in Anthropology. (2-3). Designed to develop abilities in the conception and investigation of anthropological problems, interview and observation techniques, as well as more specialized methods such as photography, mapping and tape recording. Repeatable up to 6 hours. Prerequisite: departmental consent. A 28 802 9 2202

820. Seminar in Physical Anthropology. (3). Analysis of fossil, skeletal and modern biological material. Emphasis is placed on methods and techniques of analysis with a consideration of current interpretive models. Prerequisite: Anthro. 556 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 6 hours. Prerequisite: 5 hours of anthropology. A 28 837 9 2202

847. Colloquium in Anthropology. (1-2). S/U grade only. Repeatable for a maximum of 3 hours. To provide graduate students with seminar-style experience in recent research in all of the subfields of anthropology. Course will also allow those students preparing their first papers for presentation at professional conferences to present them before a critical but friendly audience. Students presenting colloquium papers will receive credit for the course in 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 6 hours. Prerequisite: 5 hours of anthropology. A 28 848 9 2202

870. Independent Reading. (2-3). Repeatable up to 6 hours. Prerequisite: departmental consent. A 28 870 3 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, and 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 either Biol. 203Q, 204, and 584; (2) select either a microbiology or an organismal biology and ecology emphasis and fulfill the requirements for the chosen emphasis; and (3) maintain an overall grade point average of 2.00 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) Biol. 330; (2) a minimum of 16 semester hours for the BS or 11 semester hours for the BA, a minimum of 5 semester hours selected from among interdivisional courses and/or those listed under the division of microbiology below; and (3) for the BS (but not for the BA), a minimum of 20 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 Chem. 123Q and 124Q; and (2) two any two from among Chem. 523 (unless Chem. 123Q and 124Q are taken), 531, and 532.

Organismal Biology and Ecology Emphasis.—Students selecting this emphasis must complete the following, in addition to the major core courses: (1) either Biol. 320, or Biol. 505 and 506, or Biol. 534 and 535; (2) either Biol. 502, or 520, or 524, or 527, or 528, or 532, or 540, or 544, or 650; (3) Biol. 418 and either Biol. 560, or 575, or 577, or 578; and, (4) for the BS (but not for the BA), a minimum of 7 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 (Biol. 203Q, 204, and 584); (2) complete a minimum of 6 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 2.00 in all biological sciences course work.

Biochemistry Field Major. The departments of biological sciences and chemistry participate jointly in this program. Required courses are: Biol. 203Q, 204, 416, and 584; Chem. 111Q, 112Q, 523, 531, 532, 622, 663, 664, and 665; Phys. 213 and 214; Math. 112 or 111 and 123. Also required are Biol. 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 advisor 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

102G. Biological Science. (5). Man in the living world: an introduction to the basic concepts of the biological sciences, with emphasis upon man himself. A 12 102G 0 0401

105G. The Human Organism. (4) 3R; 2L Lab fee. (Day sections offered fall and spring semesters, day section offered 8-week summer session.) A course designed to introduce the nonscience major to the major 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 the biological sciences minor. Credit cannot be given for both Biol. 102G and Biol. 105G. Students repeating Biol. 100G (no longer offered) should enroll in this course. A 12 105G 1 0401

1200. Introduction to Microbiology. (4). 3R; 2L Lab fee. (Day sections offered fall and spring semesters, and 8-week summer session; evening section offered spring semester.) Fundamentals of microbiology, with emphasis on microorganisms important in the environment and in disease. A 12 1200 1 0411

225. Human Anatomy. (3). 2R; 2L Lab fee. (Day sections offered fall and spring semesters; 8-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 semesters, and 8-week summer session; evening section offered spring semester.) Basic human physiology. Enrollment in Biol. 227 is optional under the prerequisite of Biol. 225. Chem. 103 is recommended as a prerequisite. A 12 226 0 0410

227. Elementary Human Physiology Laboratory. (1). 3L Lab fee. (Day sections offered fall and spring semesters; evening section offered spring semester.) A laboratory in which some of the principles of human physiology are demonstrated in an experimental setting. Prerequisite or corequisite: Biol. 226. A 12 227 1 0410

Upper-Division Courses

310. The Biology of Human Reproduction and Fetal Development. (4). The major goal of this course is to provide the student with a broad overview of the biological information from the fields of anatomy, embryology, physiology, and endocrinology as they relate to human reproduction. Each topic will be presented initially at an introductory level and will be developed subsequently to include the results of recent findings in each of these fields. Lectures and readings cover such subjects as: (1) the development and maturation of the reproductive tract; (2) reproductive endocrinology; (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 artificial control of reproduction. In addition, there are offered courses in the chemistry department. A 12 310 0 0410

3700. Ecology and Man. (3). (Day section offered fall semester in even-numbered years and spring semester; evening section offered fall semester in even-numbered years.) 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 resource use practices, and pollution. The course seeks to
Courses for Graduate/Undergraduate Credit

509G. Foundations of Human Heredity. (4). Offered spring semester only. An introduction to the mechanisms and societal significances of development, transmission, and population genetics of humans. Requirements: laboratory. Course is intended for students majoring outside of the natural sciences and does not carry credit toward a biological sciences major or minor. Offered as Bioi 204A and Chem 1110. A 2 509G 0 0417

518Q. Introduction to Organismal Biology. (3). (Offered fall semester only.) An introduction to the fundamental concepts of biology as they apply to multicellular organisms. Topics include the advantages and problems of a multicellular habit, genetic control of form and function in plants, animals, and communities; and reproduction and the role of microorganisms in their environments. A 1 518Q 2 0401

204. Introduction to Cellular Biology. (5). 4R; 3L. Lab fee. (Day sections offered fall and spring semesters; evening sections offered spring semester only.) A continuation of Biol 203 in which the principles of cellular biology are presented and the cellular and molecular biological techniques are developed in Biol 203 are studied in more detail. Course is intended for students majoring outside the natural sciences and does not carry credit toward a biological sciences major or minor. Offered as Bioi 204A and Chem 1110. A 2 204 0 0417

Upper-Division Courses

416. The Biology of Cells. (3). Fundamentals of cellular biology, including basic mechanisms, structure, metabolism, reproduction and interactions of intra- and inter-cellular and inter-organismal components. For information contact the coordinator of undergraduate studies or the Cooperative Education Program office. A 2 416 0 0417

481. Cooperative Education. (2-4). This course is designed to complement and enhance the student’s academic program by providing an opportunity to apply the knowledge gained in college studies to work in college studies. Prerequisites: EN 204 and Chem 1110. A 2 481 2 0499

Courses for Graduate/Undergraduate Credit

573. Statistical Applications in Biology. (3). (Offered spring semester only.) A course designed to supplement Stat 370 by providing practical training in the application of statistical techniques to biological data. The course will include case studies or the application of the results of research projects. Offered as Bioi 204A and Chem 1110. A 2 573 2 0417

Microbiology

Upper-Division Courses

330. General Microbiology. (5). 3R; 6L. Lab fee. (Offered fall and spring semesters.) An introduction to the structure, function, and methods of identification of microorganisms in the environment. A 1 330 2 0411

Courses for Graduate/Undergraduate Credit

531. Food Microbiology. (5). 4R; 4L. Lab fee. (Offered spring semester only.) A course designed to introduce students to the role and significance of microorganisms in foods. Prerequisites: Offered as Bioi 204A and Chem 1110. A 2 531 2 0411

Courses for Graduate/Undergraduate Credit

531. Food Microbiology. (5). 4R; 4L. Lab fee. (Offered spring semester only.) A course designed to introduce students to the role and significance of microorganisms in foods. Prerequisites: Offered as Bioi 204A and Chem 1110. A 2 531 2 0411
temperature, drying, and fermentation; foodborne microbial infections and intoxications; and the microbial basis of food sanitation, control, and inspection. Students earning graduate credit will be expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. In addition, graduate student responses on essay examinations will be read with greater expectations with respect to clarity, quantity and quality of information presented. Prerequisite: Biol. 330. A 12 531 1 0411

552. Mycology. (4). 2R; 4L. (Offered spring semester only.) Lab fee. 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 will be expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 652 1 0411

590. Immunobiology. (3). (Offered fall semester only.) The nature of antigens and antibodies in normal and pathological responses. Cellular and humoral aspects of immunologic phenomena are included. Students earning graduate credit will be expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol 204 and Chem 531. A 12 690 0 0416

591. Immunobiology Laboratory. (3). 6L. Lab fee. (Offered spring semester in odd-numbered years.) Methods of immuniza-
tion and techniques for qualitative and quantita
tive determinations of antibody production and antigen-antibody reactions. Students earning graduate credit will be expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: or coreq-
sities: Biol. 590 and instructor's consent. A 12 591 1 0416

654. Pathogenic Microbiology. (4). 2R; 4L. Lab fee. (Offered spring semester only.) An introduction to the important pathogenic microorganisms and their relationships to health and disease in man. Students earning graduate credit will be 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 metabolism of microorganisms. All students are expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor, and those earning graduate credit are expected to make an oral presentation on this topic to the class. Prerequisites: Biol. 330 and Chem. 531. A 12 658 0 0411

659. Microbial Physiology Laboratory. (3). 6L. Lab fee. (Offered fall semester in odd-numbered years.) An introduction to the basic techniques involved in the study of microbial physiology. Students earning graduate credit will be expected to design and perform an additional experiment under the direction of 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 6 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. 330. A 12 660 1 0407

756. Microbial Genetics. (4). The relationship between development, metabolism and genetics in microorganisms. Students earning graduate credit will be expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 330 and 543 or departmental consent. A 12 756 0 0422

790. Advanced Immunology. (3). Contemporary problems in immunologic research. Lectures, assigned readings and reports are included. Students earning graduate credit will be 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 in-
clude: respiration; circulation; nutrition; diges-
tion, and energy metabolism; the literature on a topic chosen in consultation with the instructor. Prerequisites: Biol. 204 and Chem. 531. A 12 690 0 0416

418. The Biology of Ecosystems. (3). (Offered fall and spring semesters.) Principles underlying the interrelationships of living organisms and their environment, from the bio-
sphere 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. Lab fee. (Offered fall semester in odd-numbered years.) An introduction to the structure, repro-
duction and numbered major groups of living and extinct vascular plants. An in-
troduction to flowering plant systematics is included. Students earning graduate credit will be expected to perform a primary literat-
ure 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 intro-
duction to the principles which govern plant growth and development, including water relations, long distance transport processes, flowering, photosynthesis and respiration as it relates to growth and development, and the chemical and environmental regula-
tion of developmental processes. Concurrent enrollment in Biol. 506 is optional. Students earning graduate credit will be 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. 112Q. A 12 505 0 0406

506. Plant Physiology Laboratory. (2). 4L. Lab fee. (Offered fall semester in even-
numbered years.) An introduction to the techniques of experimental plant physiology. An emphasis is placed on experimental design, the use of elementary statistics in analyzing results, the presentation of experimental results and the written communica-
tion of experimental findings. Phenomena considered include photosynthesis, respira-
tion, translocation, mineral nutrition, and the control of plant growth and development by environmental and chemical factors. Students earning graduate credit will be expected to design and 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 1 0406

520. Invertebrate Zoology. (4). 3R; 6L. Lab fee. (Offered spring semester in even-numbered years.) A continuation of vertebrate morphology and phylogeny of the invertebrates, with emphasis on the basic body types and their major variations. Students earning graduate credit will be 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. Lab fee. (Offered spring semester in even-numbered years.) Evolution and systematics, natural history and spec-
lar characters of vertebrate animals. Students earning graduate credit will be 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 is also recommended. A 12 524 1 0407

526. Comparative Vertebrate Endocrinology. (3). (Offered spring semester of odd number years.) A comparative study of the endocrine systems in vertebrates with emphasis placed on aspects of endocrine regulation in mammals and contrast-
ing examples from other vertebrates. Topics covered include: a survey of the structure and function of endocrine glands and the hor-
mones they produce; the chemistry of steroid hormones; and, their role in regulation of metabolism, ionic and osmotic balances, amphibian metamorphosis, migratory behav-
ior, and reproduction. Students earning graduate credit will be expected to earn a credit in zoology. Students earning graduate credit will be expected to complete additional assignments chosen in consultation with the instructor, such as a term paper based on technical literature, dissertation of additional animals, etc. Prerequisite: Biol. 330 or 534 and Chem. 112Q or consent of instructor. A 12 526 0 0410

527. Comparative Anatomy. (5). 3R; 4L. Lab fee. (Offered fall semester only.) An introduction to the morphology, structure, and function of vertebrate endocinological systems with emphasis on vertebrate anatomy. Students earning graduate credit will be expected to complete additional assignments chosen in consultation with the instructor, such as a term paper based on technical literature, dissertation of additional animals, etc. Prerequisite: Biol. 204. A 12 527 1 0412

528. Parasitology. (3). 2R; 4L. Lab fee. (Offered fall semester only.) The parasites of man and other vertebrate hosts. Students earning graduate credit will be 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 0407

532. Entomology. (5). 3R; 4L. Lab fee. (Offered fall semester only.) An introduction to the morphology, physiology, life cycles, behavior, ecology and eco-
nomical significance of insects. Students earn-
ing graduate credit will be 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 systematic project. Prerequisite: Biol. 204. A 12 501 1 0407

534. Mammalian Physiology (3). (Offered spring semester in odd-numbered years.) An organ systems approach to mammalian, primarily human, physiology. Emphasis is placed upon nervous and endocrine control systems and the coordination of body functions. Students earning graduate credit will be expected to submit a term paper based upon research on a topic in mammalian physiology. Consultation with the instructor. Prerequisites: Biol. 204 and Chem. 531 or instructor's consent. A 12 534 0 0410

535. Mammalian Physiology Laboratory. (3). 4L. (Offered spring semester of odd-numbered years.) Lab fee. An empirical approach to mammalian physiology. Students seeking graduate credit will be expected to submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Prerequisite: concurrent or prior enrollment in Biol. 534. A 12 535 1 0410

540. Comparative Embryology. (4). 2R; 4L. Lab fee. (Offered spring semester in odd-numbered years.) Gametogenesis, fertilization and developmental processes in animals, with emphasis on vertebrates. Students earning graduate credit will be expected to complete additional assignments chosen in consultation with the instructor. Prerequisite: Biol. 502 is also recommended. A 12 540 1 0427

544. Histology. (4). 2R; 4L. Lab fee. (Offered spring semester in even-numbered years.) The microscopic anatomy of vertebrate tissues with emphasis on mammals. Students earning graduate credit will be 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. Lab fee. (Offered spring semester in even-numbered years.) An introduction to the ecological 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. Lab fee. (Offered fall semester only.) Techniques for analysis of systems consisting of living organisms and their environments. Field trips are required. Students earning graduate credit will be expected to perform an individual project on comparative community structure and report the results as a technical paper. Prerequisite: instructor's consent. A 12 575 1 0420

578. Limnology. (5). 2R; 6L. Lab fee. (Offered spring semester in even-numbered years.) An introduction to the biological and physical processes that operate in lakes, streams and estuaries. Assigned readings, individual projects and field trips are required. Students earning graduate credit will be expected to investigate the limnological properties of two ponds, comparing their characteristics, or investigate a specific taxon or topic of limnology. The results of this investigation will be reported as a technical paper. Prerequisites: Biol. 204 and instructor's consent. A 12 578 1 0420

610. Topics in Botany. (2-4). Lab fee. No more than a total of 6 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 and 640. A 12 610 1 0402

618. Helmintology. (3). 2R; 4L. Lab fee. (Offered spring semester in even-numbered years.) A survey of trematodes, cestodes, acanthocephalans, and nematodes, parasite in wildlife, domestic animals, and human beings. Techniques of identification, life histories, and host-parasite relationships are emphasized. Students earning graduate credit are expected to complete a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 618 1 0407

620. Animal Behavior. (3). (Offered spring 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 will be expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 528 recommended. A 12 620 1 0407

621. Animal Behavior Laboratory. (2). 6L. Lab fee. Individual or team research projects in the area of behavior. Prerequisite or corequisite: Biol. 620. A 12 621 1 0407

626. Comparative Vertebrate Reproduction. (3). (Offered spring semester of even-numbered years.) The anatomy and physiology of the vertebrate reproductive system will be examined. Topics include: (1) evolution of sexual reproduction; (2) evolution of the vertebrate urogenital system; (3) sexual differentiation; (4) puberty; (5) anatomy of the vertebrate reproductive system; (6) reproductive cyclicity; (7) fertilization, pregnancy and birth; (8) reproduction and immunology; (9) hormones and reproductive behavior, and; (10) environment and reproduction. Students earning graduate credit will be expected to participate in weekly seminars in addition to the lectures. Prerequisites: Biol. 320 and 527, or instructor's consent. A 12 626 2 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 will be 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 1 0407

640. Topics in Zoology. (2-4). Lab fee. No more than a total of 6 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 1 0407

650. Protozoology. (4). 2R; 6L. (Offered spring semester in odd-numbered years.) Lab fee. Survey of the free living and parasitic protozoa with an emphasis on host-parasite relationships emphasized. Students earning graduate credit will be expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 650 1 0411

671. Evolutionary Ecology. (4). 3R; 2L. Lab fee. (Offered fall semester in even-numbered years.) A synthesis of basic principles in population genetics and ecology. Emphasis is presented as a framework for the study of topics in evolutionary ecology. Emphasis will include: (1) the maintenance and structure of population level genetic variation; (2) mating structure and the evolutionary advantages of sex; (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 will be taught on several short field trips throughout the semester. Students earning graduate credit will be expected to participate in a weekly seminar in addition to class hours. Prerequisite: Biol. 584. Biol. 419 also is recommended. A 12 671 1 0420

724. Special Problems in Animal Behavior. (3). Topics such as: spontaneity, drive, rhythms, instinct, behavioral plasticity, behavior genetics and the evolution of behavior. Prerequisite: Biol. 578 or instructor's consent. A 12 724 1 0410

730. Comparative Animal Physiology. (3). A phylogenetic examination of the homologous and analogous ways in which animals perform similar functions. Prerequisite: Biol. 534 or departmental consent. A 12 730 1 0410

770. Special Problems in Ecology. (5). 2R; 6L. Lab fee. Emphasis on conservation of natural resources, land and water use, wildlife and fisheries management, and effects of pollution. Assignments and special projects and field trips are required. Prerequisites: Biol. 575 and 578 or instructor's consent. A 12 770 1 0420

Chemistry

The chemistry department offers a broad and flexible curriculum leading to a variety of degrees and options: Bachelor of Science (BS) in chemistry, Bachelor of Science in chemistry—preprofessional option, 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. 524, 532, 545, 546, 547, 615, and their necessary prerequisites, including Math. 344 and Phys. 312, or their equivalents. An additional 14 credit hours of professional development courses must be taken. At least 4 credit hours of these courses must be selected from chemistry courses above 600 (Chem. 603, 605, and 701 are excluded). Courses that will
satisfy the professional development requirement are: (a) Chem. 690 and 669; (b) most elective chemistry courses above 600; (c) numerical methods: Chem. 602, Math. 551, CS 501, 675; (d) electronics: Chem. 625, Chem. 725, Engr. 492; (e) mathematics courses with Math. 344 prerequisite; (f) physics courses with Phys. 312 prerequisite; (g) foreign language: one academic year of German or French; and (h) other courses as may be approved (approval required) by student request to the Chemistry Advising Committee.

In agreement with the American Chemical Society Committee on Professional Training, the chemistry department strongly encourages the BS student to select courses to acquire some knowledge and understanding of computer science, economics, marketing, and business and to utilize every opportunity to develop competence in technical writing and oral communication.

The curriculum for the BS in chemistry is approved by the American Chemical Society for the professional training of chemists, and students completing the program receive certification from the American Chemical Society. Students should consult with an adviser for details.

**Bachelor of Science in Chemistry—Preprofessional Option.** Students in premedical, predental, preveterinary, prepharmacy, preoptometry, or other preprofessional programs may desire this option, for which the following courses are required: Chem. 524, 532, 614, and their necessary prerequisites, which must include Math. 243 and one year of physics: 5 credit hours selected from Chem. 540, 545, 546, and 547; 5 credit hours selected from Chem. 662, 663, 664, and 665; 4 additional credit hours of chemistry courses numbered above 500 and 10 credit hours of Biol. 203Q and 204 (or equivalent). The course selection must include one of the laboratory courses: Chem. 547, 613, 664, or 665.

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 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 6 credit hours of upper-division physics courses from Phys. 551, 621, 631, 712, 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 Arts in Chemistry.** This degree requires: Chem. 524, 532, 545, 546, 547, and the necessary prerequisites, including Math. 344 and Phys. 312 or their equivalents. Students with a substantial interest in the biological sciences may satisfy the BA requirements by substituting Chem. 662 and 664, or Chem. 663 and 665, for Chem. 524 (then Chem. 523 is required) or 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. 524, 546, 614, 615, and 6 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, 416, and 584; Chem. 111Q, 112Q, 523, 531, 532, 662, 663, 664, and 665; Phys. 2130 and 2140; Math. 112 or 111 and 123. Also required are Chem. 666 and 669 (two enrolments), which are cross-listed in the Department of Biological Sciences, and 21 hours of biochemistry electives.

**Chemistry/Business Field Major.** The Charles M. Bueess 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. 201Q and 202Q; B. Law 435; Fin. 340; Mgmt. 360; and Mkgt. 300, 405, and 608. In addition, approximately 30 hours of chemistry and mathematics are required: Chem. 111Q, 112Q, 523, 531 or 523 and 534, and Math. 114 or 242Q. Students must also take 5 to 8 hours of chemistry courses numbered 500 or higher. (Chem. 603 is highly recommended). 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 4 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. It should be noted that Chem. 123 and 124 can be substituted for Chem. 111, 112, and 523 if the appropriate prerequisites can be met. Students should plan to take required physical chemistry courses (Chem. 540, 545, or 546) during their junior year, thereby requiring that physics and calculus prerequisites be taken earlier.

**Minimum Discipline Requirements in Chemistry Programs**

<table>
<thead>
<tr>
<th>Bachelor of Science</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523, 524</td>
<td>8</td>
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<tr>
<td>Chem. 545, 546</td>
<td>6</td>
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<td>Chem. 547</td>
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<td>Chem. 614, 615</td>
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<tr>
<td>Chem. 600-800</td>
<td>4</td>
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<tr>
<td>Phys. 313, 314, 315, 316</td>
<td>10</td>
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<tr>
<td>Math. 112, 2420, 243, 344</td>
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</tr>
<tr>
<td>Professional development</td>
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**Recommended Course Sequence**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 111Q, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 112, Precalculus Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>Spring courses</td>
<td></td>
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<tr>
<td>Chem. 112Q, General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242Q, Calculus</td>
<td>5</td>
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<tr>
<th>Sophomore</th>
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</thead>
<tbody>
<tr>
<td>Fall courses</td>
<td></td>
</tr>
<tr>
<td>Chem. 531, Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 243, Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>Phys. 313Q, University Physics</td>
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<td>Spring courses</td>
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<tr>
<td>Chem. 532, Organic Chemistry II</td>
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<tr>
<td>Math. 344, Calculus III</td>
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<tr>
<td>Phys. 314Q, University Physics II</td>
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<td>Phys. 315Q, University Physics Lab I</td>
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<tr>
<th>Junior</th>
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<tbody>
<tr>
<td>Fall courses</td>
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<tr>
<td>Chem. 545, Physical 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>
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* Part of the required 14 hours of professional development courses (see description above).
<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Chem. 546, Physical Chemistry II</td>
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<tr>
<td>Chem. 524, Instrumental Methods of Chemical Analysis</td>
<td>4</td>
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<tr>
<td>Biological Science</td>
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**Senior**

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<th>Course</th>
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<tr>
<td>Chem. 111Q, 112Q</td>
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<td>Chem. 531, 532</td>
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<td>Chem. 523, 524</td>
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<td>Chem. 540, 545, 546, 547</td>
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<td>Chem. 614</td>
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<td>Chem. 662, 663, 664 †, 665 †</td>
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<td>Chem. 500-800</td>
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<td>Phys. (1 yr.)</td>
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<tr>
<td>Math. 112, 242Q, 243</td>
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<tr>
<td>Biol. 203Q, 204</td>
<td>10</td>
</tr>
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</table>

† One lab course Chem. 547, 513, 664, or 665 must be taken.

**Bachelor of Arts**

<table>
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<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
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<tr>
<td>Chem. 531, 532</td>
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<tr>
<td>Chem. 523, 524</td>
<td>8</td>
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<tr>
<td>Chem. 545, 546 †</td>
<td>6</td>
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<tr>
<td>Chem. 547</td>
<td>2</td>
</tr>
<tr>
<td>Math. 112, 242Q, 243, 244</td>
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</tbody>
</table>

† Combinations of Chem. 662, 663, 664, 665 may be substituted for Chem. 524 or 546 (see description above).

**Biochemistry Field Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
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<td>Chem. 523</td>
<td>4</td>
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<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 662, 663</td>
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<tr>
<td>Chem. 664, 665</td>
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<tr>
<td>Chem. (Biol.) 360</td>
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<tr>
<td>Chem. (Biol.) 666</td>
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<tr>
<td>Chem. (Biol.) 669</td>
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<tr>
<td>Biol. 203Q, 204</td>
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<tr>
<td>Biol. 416</td>
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</tr>
<tr>
<td>Biol. 584</td>
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<tr>
<td>Math. 112 or 111, 123</td>
<td>5-6</td>
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<tr>
<td>Phys. 213Q, 214Q</td>
<td>10</td>
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<tr>
<td>Biochemistry electives</td>
<td>21</td>
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**Chemistry/Business Field Major**

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<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Chem. 111Q, 112Q</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 533-534 or 531</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 361 or 662</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 500-800 *</td>
<td>5-8</td>
</tr>
<tr>
<td>Math. 144 or 242Q</td>
<td>3-5</td>
</tr>
<tr>
<td>Accnt. 210 and 220</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 201Q and 2020</td>
<td>6</td>
</tr>
<tr>
<td>Mkt. 300, 405, 608</td>
<td>9</td>
</tr>
<tr>
<td>Fin. 340</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 360</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 435</td>
<td>3</td>
</tr>
<tr>
<td>Math. 114 or 242Q</td>
<td>3</td>
</tr>
</tbody>
</table>

* Chem. 603 highly recommended.
All programs require additional courses to satisfy general education curriculum requirements and the graduation requirements in Fairmount College of Liberal Arts and Sciences.

**Lower-Division Courses**

**101G. The Science of Chemistry. (3)**. Teaches students the basic concepts of chemistry that will aid them in understanding the physical world in which they live. There is no attempt to teach basic computational or laboratory skills; instead, the emphasis is on such concepts as atomic and molecular theory, energy, structures and theories regarding why reactions occur. A 13 105Q 1 1905

**103Q. General Chemistry. (5). 3R; 4L. Lab fee.** A survey of inorganic, organic, nuclear, and biological chemistry. The course is recommended for the student who plans to take only one course in chemistry. Students who expect to major in the natural sciences should take the Chem. 111Q-112Q sequence. Credit will not be granted for both Chem. 103Q and 1110. Prerequisite: one year of high school algebra or Math. 011. A 13 105Q 1 1905

**110. Preparatory Chemistry. (3).** A general chemistry course for students who have not had adequate preparation in chemistry or physics. The course will enable students to improve their problem-solving skills, briefly review mathematics relevant to general chemistry, and introduce the basic chemical concepts of atoms, molecules, chemical reactions, chemical equations, gas laws, and solutions. Credit is allowed in only one of the following courses: Chem. 101Q, 103Q, 110Q, and 111Q. Prerequisites: 11 units of high school algebra or Math. 011. A 13 1100 1 1905

**111Q. General Chemistry. (5). 3R; 4L. Lab fee.** An introduction to the general concepts of chemistry. Chemical stoichiometry, atomic and molecular structure, bonding, gas laws, states of matter, and chemical periodicity are included. The Chem. 111Q-112Q course sequence is designed to meet the needs of students who wish to take more than one course in chemistry. Credit is allowed in only one of the following courses: Chem. 111Q, 101Q, 103Q, or 110Q. Prerequisites: 11 units of high school algebra or Math. 011 and either high school chemistry or physics or a college level chemistry course. A 13 111Q 1 1905

**112Q. General and Inorganic Chemistry. (5). 3R; 4L. Lab fee.** Continuation of Chem. 111Q. Thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry: qualitative analysis and an introduction to theories of bonding are included. Prerequisite: Chem. 111Q with a grade of C or better. A 13 112Q 1 1905

**123Q. General and Analytical Chemistry. (5). 3R; 6L. Lab fee.** An introduction to atoms, molecules, chemical arithmetic, gas laws, phase and ionic equilibria, and electrochemistry. A laboratory introduction to quantitative analysis, the course includes much of the material ordinarily presented in Chem. 523 and the use of a small digital computer in chemical computations. Students who successfully complete the Chem. 123Q-124Q sequence are not required to take Chem. 523. Prerequisites: 11 units of high school algebra and 1 unit of high school chemistry. A 13 123Q 1 1905

**124Q. General and Analytical Chemistry. (5). 3R; 6L. Lab fee.** Atomic and molecular structure, chemical equilibria, and the use of a small digital computer in chemical computations. Students who successfully complete the Chem. 123Q-124Q sequence are not required to take Chem. 523. Prerequisites: Chem. 123Q with a grade of C or better. A 13 124Q 1 1905

**201. Glass Blowing. (1). 2L. Lab fee.** A laboratory course utilizing the principles and techniques of glass blowing for the production of scientifically useful equipment. Prerequisite recommendation of the chemistry department. A 13 2010 1 1905

**281. Cooperative Education in Chemistry. (1-4).** The course will permit chemistry students to participate in the Cooperative Education program. Offered Cr/NCr only. A 13 281 1 1909

**Courses for Graduate/Undergraduate Credit**

**501. Analytical Chemistry. (4). 2R; 6L. Lab fee.** Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization and oxidation-reduction volumetric analysis. Prerequisite: Chem. 112Q with a grade of C or better. A 13 5010 1 1905

**523. Analytical Chemistry. (4). 2R; 6L. Lab fee.** Evaluation of data, theory and application of gravimetric analysis and precipitation, neutralization and oxidation-reduction volumetric analysis. Prerequisite: Chem. 112Q with a grade of C or better. A 13 523 1 1905

**524. Instrumental Methods of Chemical Analysis. (4). 2R; 6L. Lab fee.** Introduction to electroanalytical chemistry and optical methods of analysis and analysis and separation of complex mixtures, both inorganic and organic. In addition, basic computer programming is discussed as it applies to analytical chemistry. Prerequisite: Chem. 523 or 124Q. A 13 524Q 1 1909

**531. Organic Chemistry. (5). 3R; 6L. Lab fee.** An introduction to the study of organic compounds with emphasis on reaction mechanisms, stereochemistry and spectrographic analysis. Prerequisite: Chem. 112Q or 124Q with a grade of C or better. A 13 5310 1 1907

**532. Organic Chemistry. (5). 3R; 6L. Lab fee.** An introduction to the study of organic compounds with emphasis on reaction mechanisms, stereochemistry and spectrographic analysis. Prerequisite: Chem. 112Q or 124Q with a grade of C or better. A 13 532 1 1907

**533. Elementary Organic Chemistry. (3).** Basic organic chemistry with a special emphasis on the topics of importance to health related professions and education majors. Special emphasis is given to carbohydrates, proteins, drugs, pesticides and energy production. Students should enroll in Chem. 533 simultaneously. Credit is not allowed for both Chem. 533-534 and 531. This course will not meet the needs of chemistry majors or...
534. Elementary Organic Chemistry Laboratory. (2). Lab fee. A basic laboratory course to provide pertinent experiences in the laboratory for those taking the course. Prerequisite: Chem. 533. Prerequisite or corequisite: Chem. 533. A 13 534 1 1907

540. Elementary Physical Chemistry. (5). An introductory treatment of thermodynamics, kinetics, quantum chemistry, spectroscopy, and statistical thermodynamics for students not intending to become professional chemists. In contrast to the more formal, theoretically oriented, traditional physical chemistry courses (545-546), this more practical, less formal course will attempt to survey most of the important areas of physical chemistry in a heuristic and applied manner. The concentrated one semester treatment will serve students majoring in preprofessional programs; students majoring in geology, engineering, biological sciences and physics; and field majors in biochemistry and chemistry. Prerequisites: Chem. 112Q or equivalent. Math. 2420Q or equivalent and one semester of Physics. A 13 540 0 1908

545. Physical Chemistry. (3). Thermodynamics. Gases, first law, thermochemistry, second and third laws, phase equilibria, solutions, chemical equilibria, electrochemistry, and surface chemistry. Prerequisites: Chem. 112Q, Math. 344Q, or its 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. 546 and 546. Prerequisite: Chem. 545 or 546. A 13 547 1 1908

561. Introduction to Biochemistry. (3). A brief history of biochemistry; emphasizing the development of the field of molecular biology; chemistry of biomolecules—proteins, carbohydrates, lipids, nucleic acids, vitamins; molecular basis of bioenergetics and metabolism; storage, transformation, and excretion of nutrients; genetic information. This course meets the needs of majors from health related programs and science education curricula. Prerequisite: Chem. 531 or 533 or one semester of organic chemistry. A 13 561 0 0414

602. Numerical Methods. (3). Lab fee. Applications of numerical methods to problems in chemistry and physics. Roots of equations; curve fitting; interpolation, extrapolation and smoothing of experimental data; numerical differentiation and integration; FORTRAN and computer programming. Prerequisite: departmental consent. A 13 602 1 1905

603. Industrial Chemistry. (3). For students with an interest in practical industrial processes in current use. The course is designed to bridge the industrial-academic gap. Topics covered include chemicals from petroleum, natural gases, and coal; the polymer industry; the pharmaceutical industry; technical report writing; patents, and communication with engineers and nontechnical persons. Cost calculations, economic factors, energy and raw material usage, production and energy, consumption are discussed. Prerequisite: 18 hours of chemistry including Chem. 531 or equivalent. A 13 603 0 1905

605. Medicinal Chemistry. (3). For students interested in chemistry related to the design, development and mode of action of drugs. This course provides an understanding of the importance and relevance of chemical reactions as a basis of pharmacological activity, drug toxicity, allergic reactions, carcinogenicity, etc., and to bring about a better understanding of drugs. Topics include transport, basic receptor theory, metabolic transformation of drugs, discussion of physical and chemical properties in relation to biological activity, drug design, structure-activity relationships and discussion of a select number of organic medicinal agents. Prerequisites: Chem. 532 or 553 or equivalent, a semester of biochemistry (Chem. 561 or 562) and a year of biology are strongly recommended. A 13 0 605 1905

613. Inorganic Chemistry Laboratory. (2). 6L Lab fee. Experimental methods of inorganic chemistry. Prerequisite: Chem. 614 or concurrent enrollment. A 13 613 1 1906

614. Chemical Bonding. (2). Molecular symmetry, structure and bonding of inorganic compounds. Prerequisite: Chem. 546 or 540. A 13 614 0 1906

615. Inorganic Chemistry. (2). Periodicity and trends of the elements, coordination chemistry and properties of inorganic compounds. Prerequisite: Chem. 614. A 13 615 0 1906

624. Advanced Analytical Chemistry. (3). 2R; 5L Lab fee. Fundamentals of absorption and emission spectrophotometry, light scattering techniques, mass spectrometry, nuclear magnetic resonance, polarography, voltammetry and coulometry. Prerequisite: Chem. 524. A 13 624 1 1909

625. 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

636. Advanced Organic Chemistry. (3). Topics to be discussed include stereochemistry, conformation, organic reaction mechanisms including linear free energy relationships, kinetics, isotope effects, catalysis, solvent effects, kinetic and thermodynamic control rearrangements. Prerequisite: Chem. 532. A 13 636 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 chemical physics are discussed by the chemists and physicists. Prerequisite: Chem. 641 or instructor’s consent. A 13 642 0 1905

662. Biochemistry of Cell Constituents, Catalysis, Oxidation, Photosynthesis. (3). Study of major constituents of the cell: protein, carbohydrate, glycoprotein, lipid, nucleic acids, nucleic acid metabolism, vitamins, enzymes, vitamin physical and chemical properties, biological oxidations, photosynthesis; and introduction to intermediary metabolism. A fundamental background of biology or microbiology is recommended but not essential. Prerequisites: Chem. 523 and 532 or equivalents. A 13 662 0 0414

663. Biochemistry of Cell Metabolism, Biosyntheses, Structure, Function and Regulation of Proteins and Nucleic Acids. (3). Study of metabolism and control of carbohydrates, lipids, carbohydrates, proteins, lipids, and proteins; synthesis of proteins and nucleic acids; metabolism processes and control processes in the cell; proteins as enzymes, vitamins, hormones, and other proteins; and regulation of nucleotide synthesis, protein synthesis, and DNA replication and repair. Prerequisites: Chem. 532, Chem. 533, or one semester of biochemistry (Chem. 561 or 562) and a year of biology are strongly recommended. Prerequisites: Chem. 523 and 532 or equivalents. A 13 663 0 0414

664. Biochemistry Laboratory I. (2). 6L Lab fee. Practical education in biochemical processes and experimental techniques. Prerequisites: Chem. 533 or one semester of organic chemistry. Topics to be covered include: fermentation, photosynthesis, and respiration processes and experimental techniques. Prerequisites: Chem. 523; Chem. 523 or one semester of organic chemistry. A 13 664 0 1414

665. Biochemistry Laboratory II. (2). 6L Lab fee. Study of advances in methods of biochemical assay and the techniques of radioisotope techniques of common isotopes, structure, function, purifications and reactions of proteins, amino acids, and DNA; the use of high pressure liquid chromatography and gas chromatography; separation techniques in biological sciences and medicine. Recommended for students seeking admission to medical and paramedical professions or interested in graduate study in chemistry and biological sciences. Prerequisites: Chem. 523 and 532 or instructor’s consent. A 13 665 1 0414

666. Special Topics in Biochemistry. (3). A small number of current problems in biochemistry will be covered. Guidelines for the reading of published research in the field will be required. Prerequisites: Biol. 114 and Chem. 662 and 663. A 13 666 0 9414

669. Research in Biochemistry. (2). Students in the field major participate in a biochemistry research project under the direction of a faculty member. A written report summarizing the results is required. May be repeated once for credit. Prerequisites: Biol. 416 and Chem. 662 or 663 and 664 or 665. A 13 669 0 9414

690. Independent Study and Research. (2). 2 credit. Credit for conducting a project directed by a faculty member in the Department of Chemistry. Repeatable for credit. A maximum of 3 credit hours may be counted toward graduation with instructor’s consent of the department. A 13 690 0 9415

700. Chemistry Seminar. (1). S.U grade only. Seminars are given by students on either papers recently published in the literature or on their own research. Repeatable for credit. A 13 700 0 9105
701. Chemistry Colloquium. (1) S/U grade only. Special topics colloquium on a current subject in chemistry, given by a special faculty member. Repeatable for credit. A 13 701 9 1905

705. Molecular Symmetry. (1) A study of the chemically relevant aspects of group theory. Topics include symmetry elements, characters, representations, and applications involving molecules and representations of groups. A 13 705 0 1905

709. Special Topics in Chemistry. (2-3) A discussion of topics of a special significance and interest to faculty and students. Offerings will vary from term to term. Repeatable for credit. A 13 709 0 1905

712. Coordination Chemistry. (3) The study of classical, organo-metallic and bioorganic coordination complexes. Topics include nomenclature, fundamental bonding concepts, principles of synthesis, mechanisms of substitution and electron transfer reactions and of catalysis, and modes of action in biological systems. A 13 712 9 1906

713. Physical Methods in Inorganic Chemistry. (3) An introduction to electronic and vibrational spectroscopy, magnetic susceptibility, molar conductivity, nuclear magnetic resonance, 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

723. Analytical Spectroscopy. (3) Absorption (UV, visible, IR, and Atomic); emission flame and atomic absorption spectrometry, molecular fluorescence and phosphorescence methods; Raman, nuclear magnetic resonance and electron spin resonance spectroscopy; X-ray methods. Lectures and discussions on theory and practice 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 covered in this course are voltammetry, polarography, chronoamperometry and coulometry; reversible and irreversible diffusion controlled processes; EC (chemical reaction before electrical reaction), EC (electrical reaction before chemical reaction) and catalytic reaction; and organic 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. Lectures deal with digital logic, data acquisition techniques and the on-line digital computer in instrumentation. Laboratory experience covers the design of digital logic circuits, interfacing chemical instruments to 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 antiaromaticity, electrocyclic reactions, cycladditions and sigmatropic rearrangements, organic reactive intermediates, inclusion and cavity ion, carbonates, free radicals, carbenes and nitrenes, photochemistry. Prerequisite: Chem. 705 or equivalent. A 13 735 0 1907

737. Synthetic Methods in Organic Chemistry. (3) A review of synthetic methods in organic chemistry including carbon-carbon bond forming reactions, oxidation and reduction reactions, organometallic chemistry, protective groups in organic chemistry, principles of resonance synthesis and retrosynthetic analysis. A 13 737 0 1907

738. Structure Determination and Spectral Analysis of Organic Compounds. (3) A discussion of chiroptical techniques, infrared, ultraviolet, nuclear magnetic and electron spin resonance and mass spectroscopy and their practical utilization in structure determination. Prerequisite: Chem. 532. A 13 738 0 1907

741. Quantum Chemistry. (3) Theoretical basis of atomic and molecular structure. Topics to be covered include the postulates of quantum mechanics, exact solutions for the particle-in-a-box and the hydrogen atom, variation and perturbation techniques, electron spin, Hartree-Fock and configuration-interaction methods, molecular-orbital and valence-bond wave functions and virial and Heitlinn-Feynman theorems. Prerequisite: Math. 344 or equivalent. Corequisite: Chem. 705 or equivalent. A 13 741 0 1908

742. Chemical Kinetics. (3) A discussion of reaction systems, including the mathematical and experimental characteristics of simple and complex kinetic systems. The theories of chemical kinetics are discussed, as well as the homogeneous reactions in the gas phase, the kinetic aspects of solution reactions, heterogeneous reactions and selected topics of current interest. A 13 742 0 1908

745. Chemical Thermodynamics. (3) A presentation of the basic three laws of thermodynamics in a classical framework designed to increase one's understanding of real physical systems. The molecular viewpoint is given through Boltzmann statistics. The interrelation between classical thermo-dynamics and statistical mechanics is discussed. A 13 745 0 1908

746. Molecular Spectroscopy. (3) The theoretical basis for spectroscopy and spectroscopic determinations of molecular structure. Topics to be covered include polyatomic, atoms, time-dependent perturbation theory, variation and rotation of diatomic molecules, vibration and rotation of polyatomic molecules, electronic spectra and magnetic resonance spectroscopy. Prerequisites: Chem. 741 or its equivalent and Chem. 705 or its equivalent. A 13 746 0 1908

761. Enzyme Mechanisms. (3) An introduction to the study of enzyme mechanisms. Modern approaches include steady-state relaxation and chemical modification methods. Prerequisite: Chem. 662 or 663 or equivalent. A 13 761 0 0414

762. Structure and Function of Nucleic Acids. (3) The study of monomers and polynucleotides, including chemical and physical structure and the organization of RNAs and DNAs, biosynthesis of purines and pyrimidines, replication, gene action, transcription, translation, role, mode of operation and three-dimensional structure of transfer RNAs, protein biosynthesis, modification of biochemical functions of the cell by drugs, cancer and radiation; enzymatic, chemical and biological methods. Prerequisite: Chem. 705 or equivalent. A 13 762 0 0414

763. Biophysical Chemistry. (3) A theoretical examination of the methods used in the study of biological macromolecules. Topics include ultracentrifugation, isoelectric focusing, electron microscopy, optical rotatory dispersion and light scattering. Prerequisites: Chem. 662 or 663 and 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 to be directed by a faculty member. Repeatable for credit. A 13 890 4 1905

990. Research in Chemistry. (2-15) S/U grade only. Research for the student planning to receive the PhD. Research is to be directed by a faculty member. Repeatable for credit. A 13 990 4 1905

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. (3) An introduction to an approach to an understanding of the nature and scope of communication research as it applies to communication theory, mass communication, cross-cultural communication, and the epidrama. An overview of the current status of research in these areas will be provided. Students will be instructed in the basic steps of research, availability of library and other resources, bibliographic search, computer accessing of source materials, organization, style, and format of a research report, citation of sources in footnotes and bibliographies, in accordance with standard style guidelines. This course should be taken at the beginning of the graduate program. A 32 801 0 0601

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: Comm. 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 principles and methods of research with particular emphasis on those forms of research common to communication studies. Students will study research design, methods, and reporting techniques. Prerequisites: Comm. 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 rec-
Computer Science

Students can major in computer science while pursuing either the Bachelor of Science (BS) or Bachelor of Arts (BA) degree in Fairmount College of Liberal Arts and Sciences or the Bachelor of Science in Engineering (BSE) in the College of Engineering. The computer science major under the BSE program is discussed in the College of Engineering section of the Catalog.

**Major.** For the Bachelor of Science (BS) in computer science, students must complete a minimum of 40 hours of computer science courses including CS 212, 300, 340, 405, 420, 485, 501, 510, and 540.

For the Bachelor of Arts (BA) degree with a major in computer science, students must complete a minimum of 34 hours of computer science courses including CS 212, 300, 340, 405, 420, 485, 510, and 540.

In addition, candidates for either the BA or BS degree must complete a minimum of 15 hours of sequence electives. These hours must be selected by consultation with a computer science adviser and should be selected no later than the student's sophomore year. All sequence electives must be approved, in advance, by the computer science faculty. The sequence electives are designed to expose the student to individually chosen areas of computer science application. The sequence electives can be designed to prepare the student for graduate study, scientific applications, business applications, or many other areas of interest.

**Minor.** Students electing to minor in computer science must complete a minimum of 15 hours of computer science courses including CS 140, 200Q, 212, and at least 6 hours of upper-division work. As with the computer science major, it is recommended that students consult with an adviser in computer science in selecting the courses for the minor.

### 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>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Hist. 131Q or 132Q, History of U.S., or Pol. Sci. 121Q, Am. Pol. Elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 200Q, Introduction to Programming</td>
<td>2</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>Natural science elective</td>
<td>5</td>
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**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<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. 242Q and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral science elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 405, File Processing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CS Language</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts elective (literature)</td>
<td>3</td>
</tr>
<tr>
<td>Natural science elective</td>
<td>3-5</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 510, Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>Sequence electives for computer science</td>
<td>6</td>
</tr>
<tr>
<td>Math. 331Q, Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Natural science elective</td>
<td>3-5</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 and fine arts elective</td>
<td>3</td>
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</table>

**Senior Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>CS 560, Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 485, Debugging Techniques</td>
<td>2</td>
</tr>
<tr>
<td>Sequence electives for computer science</td>
<td>9</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavior science elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 420, Concepts of Computer Science</td>
<td>3</td>
</tr>
</tbody>
</table>

Social and behavioral science elective | 3 |
Other elective | 3-6 |

### Model Program for BA 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. 111, College Algebra (or equivalent)</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Hist. 131Q or 132Q, History of U.S., or Pol. Sci. 121Q, American Politics</td>
<td>3</td>
</tr>
<tr>
<td>Elementary foreign language (111 and 112)</td>
<td>10</td>
</tr>
<tr>
<td>CS 200Q, Introduction to Programming</td>
<td>2</td>
</tr>
<tr>
<td>CS 212, PASCAL Programming</td>
<td>3</td>
</tr>
<tr>
<td>Math. 211, Elementary Linear Algebra</td>
<td>3</td>
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</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>CS 300, Fundamental Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CS Language</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language elective</td>
<td>5</td>
</tr>
<tr>
<td>Other elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 405, File Processing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CS 216, Assembly Language Programming</td>
<td>3</td>
</tr>
<tr>
<td>Natural science elective</td>
<td>3-5</td>
</tr>
<tr>
<td>Humanities and fine arts elective (literature)</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral science elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**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>Sequence electives for computer science</td>
<td>6</td>
</tr>
<tr>
<td>Math. 331Q, Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral science elective</td>
<td>6</td>
</tr>
<tr>
<td>Humanities and fine arts elective</td>
<td>3</td>
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<tr>
<td>CS 540, Operating Systems and Architecture I</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts elective</td>
<td>3</td>
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<tr>
<td>Natural science elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Senior Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 510, Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>Sequence electives for computer science</td>
<td>9</td>
</tr>
</tbody>
</table>
Lower-Division Courses

105. An Introduction to Computers. (3). 2R; 2L. This course is a computer literacy course for students who wish to familiarize themselves with the computer. It covers basic computer concepts in hardware and software and illustrates a wide range of applications in education, government, business, industry, and the home. Students gain experience in actually operating a microcomputer through lab exercises using standard software packages. These include word processing, spreadsheet, data base, and graphics packages. No credit toward the major or minor in computer science. Credit is granted only in one of the following CS 1100 or CS 105. Prerequisites: Familiarity with typewriter keyboard and minimal typing skills. A 34 105 1 0701

1100. An Introduction to Computers and Their Applications. (2). 2R; 2L. An introductory course offered on television for students who wish to familiarize themselves with the computer. It covers basic computer concepts in hardware and software and illustrates a wide range of applications in education, government, business, industry, and the home. Students gain experience in elementary BASIC programming in a computer environment. Credit is granted only in one of the following: CS 1100; CS 105. A 34 1100 2 0701

140. Introduction to Computer Hardware. (3). 2R; 2L. An introduction to computer hardware. Topics include number systems, Boolean logic, computer components, and programming. The laboratory is used for example of a microcomputer introduced in lecture and for drill. Students will use elementary laboratory equipment and will put together simple electrical circuits typical of the kind found in microcomputers. Prerequisite: 1 unit of high school algebra. A 34 140 1 0702

150. Workshop. (1-5). Short-term courses with special focus on introducing new computer techniques. Repeatable for credit. Prerequisite: departmental consent. A 34 150 2 0702

190. Introduction to Programming for Business. (3). 2R; 2L. The course is a survey of the means and methods of business data processing. It includes the description of computer hardware used in the business environment and its application to systems development. The course includes a programming component using a computer language. No computer science language course may be taken concurrently. Credit granted in only one of these three courses: CS 190, CS 2000, EE 199. Prerequisites: 1 1/2 units of high school algebra (or equivalent), 1 unit of high school geometry (or equivalent) or departmental consent. A 34 190 1 0703

200Q. Introduction to Programming. (2). An introduction to the process of analyzing problems and describing their solutions in procedure-oriented languages. Topics include concepts and uses of computers, functions, algorithms, program documentation, and a survey of computer programming languages. No direct experience with computers is provided in this class. Credit granted in only one of these three courses: CS 190, CS 2000, EE 199. Prerequisites: 1 1/2 units of high school algebra (or equivalent), 1 unit of high school geometry (or equivalent), or departmental consent. A 34 2000 1 0704

201. FORTRAN Language. (3). 2R; 2L. Fundamentals of computer programming in FORTRAN and its application to problems. Prerequisite: Math. 109 or 111 or 112, or departmental consent. Credit not granted to students who have already completed EE 199. A 34 201 1 0704

202. PL/I Language. (3). 2R; 2L. Fundamentals of computer programming in PL/1 and its application to problems. Prerequisite: Math. 111 or 112 or departmental consent. Credit not granted to students who have already completed EE 199. A 34 202 1 0704

203. APL Programming. (3). 2R; 2L. Fundamentals of computer programming in APL and its application to problems. Prerequisite: CS 190 or 2000 or EE 199, and Math. 109 or 111 or 112, or departmental consent. A 34 203 1 0704

205. COBOL Language. (3). 2R; 2L. Fundamentals of computer programming in COBOL and its application to problems. Prerequisite or corequisite: CS 190 or 2000 or EE 199. A 34 205 1 0704

206. BASIC Language Programming. (3). 2R; 2L. Fundamentals of computer programming in BASIC and its application to problems. Prerequisite: CS 190 or 2000 or EE 199. A 34 206 1 0704

212. PASCAL Programming. (3). 2R; 2L. Fundamentals of computer programming in PASCAL and its application to problems. Prerequisites: CS 190 or 2000 or EE 199, and Math. 109 or 111 or 112, or departmental consent. Credit not granted to students who have already completed EE 199. A 34 212 1 0704

214. LISP Programming. (3). 2R; 2L. Fundamentals of computer programming in LISP and its application to problems. Prerequisites: CS 190 or 2000 or EE 199, Math. 109 or 111 or 112, or departmental consent. A 34 214 1 0704

216. Assembly Language Programming. (3). 2R; 2L. Fundamentals of computer programming in 370 BAL and its application to problems. Prerequisites: CS 140, 2000, EE 199, Math. 109 or 111 or 112, or departmental consent. A 34 216 1 0704

Upper-Division Courses

300. Fundamental Algorithms. (3). 2R; 2L. A second course in programming designed to continue building the student's knowledge and techniques of program development. Topics include algorithmic design, implementation, and testing procedures to allow the student to apply the material. Prerequisites: CS 2000 and CS 212 and signed departmental consent. Math. 211; "C" or better in each prerequisite course. Math. 211 may be taken concurrently. A 34 300 1 0704

340. Computer Organization and Programming. (3). 2R; 2L. A study of basic computer organization and programming techniques required to control it. Topics include number representation, arithmetic, communication between major computer components, instruction set, the computer instruction cycle, addressing techniques and the concepts of microprograms. Programming problems will demonstrate the concepts. Prerequisites: CS 216 or EE 299. A 34 340 1 0705

350. Microcomputing for Scientists and Engineers. (3). 2R; 2L. An introduction to microcomputers and their applications in science and engineering. Topics include PASCAL, language, assembly language, numerical methods, computer-aided design, software and hardware interfacing, device control, and data acquisition. Actual use of microcomputers for experiment control and evaluation will be emphasized. Credit not granted toward the major in computer science. Prerequisites: Chem. 1110 or 1230 or Phys. 1110 or 2130 or Engr. 125. A 34 350 1 0705

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, empirical methodology, sequential and update, external sort/merge, random access, data base, indexes, list file structure, and trees. Prerequisite: CS 300. A 34 405 1 0704

420. Concepts of Computer Science. (3). Selected theoretical areas in computer science are introduced. Several independent topics are presented to interest the student in further independent study or graduate work in one of these areas. Probable topics include Turing Machines, halting problems, predicate calculus, cybernetics, and coding theory. Prerequisites: CS 140, 300, and Math. 3310. A 34 420 0 0701

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: departmental consent. Offered CR/NC only. A 34 481 2 0701

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 locating and removing errors for 3 to 4 hours each week in a debugging practice. Prerequisites: CS 340, 405, and three courses numbered CS 201 through 216. A 34 485 1 0705

497. Special Topics. (1-3). Special topics of current interest in computer science. Prerequisite: departmental consent. A 34 497 0 0701

498. Individual Projects. (2-3). Repeatable
for a total of 6 hours of credit. Graded S/U only. Prerequisite: departmental consent. A
34 498 4 0701

Courses for Graduate/Undergraduate Credit

techniques used to solve nonlinear equations, interpolate, integrate and solve systems of
equations. The implications of finite precision floating point arithmetic are discussed.
Topics include the initial and boundary values of linear and nonlinear equations are also covered. Selected algorithms are implemented on the computer. Prerequisites: Math. 243 and CS 300. A 34 501 1 0704

510. Programming Languages. (3). Formal definition of programming languages, including
syntactar and semantic analysis. Also examined are underlying properties of algorithmic
languages, including scope of declarations, storage allocation, grouping of statements, binding of non-local constituents, subroutines and tasks. Prerequisite: CS 300. A 34 510 0 0704

512. Systems Programming. (3). 2R; 2L. Introduction to advanced concepts of
assembly language programming and their application in systems programming. Topics
covered include input/output programs, operating system structures, operating system
macros, dynamic resource allocation and task management. The course requires one or
more programming projects involving representative systems programs. Prerequisites:
CS 300, 340, and 405. A 34 512 1 0704

515. Compiler/Interpreter Techniques. (3). 2R; 2L. Review of programming language
structures, translation and implementation. Compilations of simple expressions and
statements, Overall design and organization of compilers and interpreters, including lexical
and syntactic scan, construction of symbol tables, object code generation, diagnostic
concepts of computer architecture, particularly the differences between large computers
and small computers and the special features of small computers, such as horizontal and
vertical micro-programming; use of display terminals, cassette tapes, and discs; networks
of small computers; and trends in small compiler use and design. Prerequisite: CS 300.

527. The History of Computing. (3). Cross-listed as Phil 527. This course is a study of
the development of automatic computing machinery, particularly the evolution of their
mechanism and development of programming. Topics discussed include mechanical
computers, electronic digital computers, and both mechanical and electronic
computers, as well as the conceptual origins of computing. A 34 527 0 0701

540-541. Operating Systems and Architecture I and II. (3-3). Design of computer system
emphasis software and computer architecture. Batch processing systems and their operating
systems are discussed, including addressing techniques, memory management, file design and systems
accounting. Concurrent processes are discussed for both hardware and software, in
cluding topics such as I/O devices, controllers, interrupts, queuing, resource
allocation, asynchronous processes, paging, real-time operating system and synchronization
in multiprocessing and multiprogramming systems. Advanced architectures and operating
system implementations are considered. Prerequisites: A 34 540 0 0702; A 34 541 0 0702

560. Data Structures. (3). The formal specification of data structures. Linear lists and arrays,
 orthogonal lists and multi-linked structures are studied, and representation via
trees and graphs and searching and sorting techniques are included. Prerequisite: CS
405. A 34 560 0 0702

565. Data Base Design. (3). Principles of data base design and management for
computer systems. Various aspects of file organization and file design techniques are ex­
amined. Problems of security and integrity of data are also discussed. Prerequisite: CS 405. A 34 565 0 0702

580. Introduction to Software Engineering. (3). 2R; 2L. At the basis of software knowledge,
presently available tools, and current theories and conjectures regarding the process of program development. These topics are studied from several different viewpoints, ranging from the individual
program statement to a large program project. Prerequisites: CS 340, 405, and three CS
courses numbered 201 through 216. A 34 580 1 0704

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
on which its design is based. Focus will be on the novel features the language has to offer
such as packages, generics, separate compilation and multiline structuring. Laboratory
sessions will provide hands-on program modification, experience to reinforce textbook
knowledge of the language. Prerequisite: CS 510. A 34 611 1 0704

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 architecture, particularly the differences between large computers
and small computers and the special features of small computers, such as horizontal and
vertical micro-programming; use of display terminals, cassette tapes, and discs; networks
of small computers; and trends in small computer use and design. Prerequisite: CS
510. OR EE 594. A 34 641 0 0702

computer systems, as contrasted with general purpose, time-sharing systems. Study of
the processes for development of operating systems, the design methodologies for application
programming and data bases, and characteristics of typical operating systems. Prerequisites:
CS 340, 405, and Math. 3310 or equivalent. A 34 644 0 0702

671. 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 34 671 0 0704

673. Pattern Recognition. (3). An introduction to Pattern Recognition and Image
Processing, including clustering algorithms, cluster validity, feature extraction, classifier
development, Bayes decision theory, parameter estimation, model fitting, pattern recognition, image enhancement, image registration, FFT, texture, and application
in various fields. Prerequisites: CS 212 and 300; Math. 311 or 511; Math. 243 and
3310, all with a "C" or better. Math. 370 recommended but not required. A 34 673 0 0701

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, approximations of the 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, high-level applications of the computer to the crossroads of computer technology, management science, and human relations; systems analysis is the keystone in the education of the well-trained computer applications
analyst. Topics include systems design, cost benefit, data base, distributed processing,
project management, and documentation. Prerequisite: CS 405 or substantial 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 nondeterministic, plus the concepts of decidability, computability and formal language theory. Topics in information science will include basic coding theory, cybernetics, models of the human brain and their relevance to machine intelligence. Prerequisite: CS 510 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 2 0701

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 3 0701

Courses for Graduate Students Only

805. Compiler Theory. (3). Theory of compilation of programming languages. Finite
state machines and lexical analysis. Context-free languages and recognition. Theory of
parsing, including recursive-descent, top-down and bottom-up parsers. Formal
description of semantic information. Code compilation, compiler-compiler. Not open for
credit to those with previous credit for CS 811. Prerequisites: CS 510 and 720. A 34 805 0 0704

810. Programming Languages: Advanced Concepts. (3). An advanced study of
programming language structures and design. Data and control structures and their
abstraction. Concurrent programming structures. Translation of syntax and semantics, including models for establishing program correctness. Criteria for language design. Prerequisites: CS 510 and 720. A 34 810 0 0704

821. Analysis of Algorithms. (3). Introduc-
tion to the techniques used to analyze both specific algorithms and classes of algorithms. Popular models including Knuth's Mix and random access machine will be covered. Specific techniques such as divide-and-conquer, recurrence equations, and dynamic programming, will be studied. Applications to set operations, hashing, graph searching, transitive closure and partitioning will be analyzed. Prerequisites: CS 560 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 machine architecture, computer performance evaluation and reliability of computing systems. Architectures of typical systems belonging to the IBM, CDC and Burroughs families of computers will be studied. Prerequisite: CS 540. A 34 841 0 0702

842. Operating Systems Concepts. (3). A comprehensive treatment of the design of executive software for systems ranging from simple multiprogramming to multiprocessor and microprocessor environments. Concepts of concurrent and parallel processes, related problems of intra- and inter-system communication, synchronization and integrity will be addressed. General principles of resource management as related single-processor and multiprocessor environments will be presented. 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 and centralization versus distribution. Study of the use of microcomputers in representative configurations is also included. Prerequisite: CS 540 or 641 or EE 694. A 34 843 0 0702

862. Principles of Data Base Design. (3). An advanced treatment of the principles of data base design. The following issues will be 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

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 580. A 34 882 0 0705

890. Graduate Seminar. (2). A series of seminars on topics of current research interest in computer science. Participants will be required to present one or two seminars on topic(s) to be selected with the approval of their graduate advisers. Repeatable up to 4 credit hours. Graded S/U only. Prerequisite: departmental consent. A 34 890 9 0701

891. Practicum. (3). An intensive applied learning experience involving the analysis and solution of a significant practical problem, and appropriate documentation of the work done. Students are required to participate in advanced department seminar where their practicum experiences will be shared with other students and faculty. Graded S/U only.

Prerequisite: departmental consent. A 34 891 2 0701

892. Thesis. (1-6). May be repeated for up to 6 hours of credit. Graded S/U only. Prerequisite: departmental consent. A 34 892 4 0701

893. Individual Reading. (1-5). Graded S/U only. Prerequisite: departmental consent. A 34 893 3 0701

998. Special Topics. (2-3). Topics of current interest to advanced students of computer science. Repeatable for credit with departmental consent. Prerequisite: departmental consent. A 34 998 4 0701

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 494 are required along with Math. 111 and 114. 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.

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 30 hours, 3 of which may, with departmental consent, be taken in a cognate subject (such as foreign language, theater, etc.) offered in a course by another department. The course work must be distributed as follows:

I. Basic Requirements (6 hours)
   1. Eng. 270—must be taken during first 9 hours of work in major
   2. Eng. 272Q or 274

II. Area Requirements (15 hours)
   One course each from five of the following areas:
   1. Medieval literature—Eng. 350 or 521
   2. Renaissance literature—Eng. 352 or 522
   3. Restoration and 18th century literature—Eng. 354 or 524
   4. 19th century literature—Eng. 356, 526, or 527
   5. 19th century American literature—Eng. 362, 501, or 502
   6. Modern literature—Eng. 358, 364, 501, or 502, 530, 531
   7. Electives (9 hours)

Minor. A minor consists of 15 hours and requires Eng. 270 and at least 6 hours of upper-division work. Eng. 101 and 102 are not counted toward a minor. A number of minors have been specially designed to support majors in other fields; for further information, contact the chairperson of the English department.

Creative Writing
A student planning to major in creative writing must complete Eng. 101 and 102, and thereafter complete a total of 30 hours of course work in English, including the following courses:

I. Required Courses (6 hours)
   Eng. 270 and 285Q (285Q to be completed with a grade of B or better, or receive departmental consent for further creative writing course work)

II. Skill Courses (at least 12 hours)
   From Eng. 301, 303, 401, 403, 517, 518, 565, 604, 605, or University Honors English courses (1-3)

III. Critical and Interpretive (at least 3 hours)
   Selected from Eng. 274, 315, 320Q, 330Q, 335, 470, 512, 513, 514, 665, or 672

IV. Modern and Contemporary (at least 3 hours)
   Selected from Eng. 324, 333, 337, 358, 364, 365, 501, 502, 530, 531, or 536

V. Historical Development (at least 3 hours)
   Selected from Eng. 262Q, 272Q, 322, 331, 332, or 550

VI. Historical Era (at least 3 hours)
   Selected from Eng. 290Q, 340Q, 350, 352, 354, 356, 390, 515, 521, 522, 524, 526, 527, 545, or 546

Minor. A minor with a creative writing sequence is available and consists of 15 hours of course work in creative writing (Eng. 285Q plus 12 hours of skill courses just listed).
Teaching

Students must file a declaration of English teaching major with an assigned English-education advisor at the time they apply to the teacher education program. A 2.50 grade point average in English is required of all majors applying for admission to the professional semester of student teaching in secondary school English.

Major for Students Planning to Teach English in Secondary Schools: The teaching major in either Fairmont College of Liberal Arts or the College of Education is 51 hours, distributed as follows:

I. Language
   Eng 315 or 667
II. Composition
   Eng 680
III. Literature
   1. Foundations—Eng 270, 272Q, and 274
   2. British and American literature—Eng 340Q and 262Q, 356 or 358; and 252 or 364
   3. Cross-cultural literature or language—Eng 356, 540, or 672
IV. Speech
   Speech 650 and one of these—Speech 143Q or Speech 221Q
V. Instructional Services
   IS 616 and IS 401 or 771
VI. Electives
   9 hours in English, or certifiable second teaching field or in approved area of competency to be selected in consultation with an English-education advisor.

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. Recommended especially for students whose 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 placement exam. A 14 101 0 1501

102. College English II. (3). A course emphasizing critical reading, research, and argumentation. The various sections of Eng 102 explore different research topics which are listed in the Composition Program Handbook, available in the Department of English and from advisors. When scheduling permits, Eng 102 may also be taken concurrently with designated Q and G courses. Such satellite Eng 102 sections undertake writing and research assignments related to the subject of the G and Q course. Consult course schedule for designated sections. Eng 102 should be taken sequentially with Eng 101 in the freshman year. Prerequisite: Eng 101, passed 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 follow a specific theme. Prerequisites: 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 0601

Upper-Division Course

481. Cooperative Education. (1-3). This course is designed to provide the student with practical experience, under academic supervision, that will complement and enhance the student's academic program. Individual programs must be formulated in consultation with appropriate program sponsors and approved by the academic department. Offered Cr/NCR only. A 14 481 0 1507

Courses for Graduate/Undergraduate Credit

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 varieties and samples of school writing, and develop their own writing skills by writing, revising and evaluating the work of others. 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 1501

685Q. Advanced Composition. (3). This course explores the relationships among contemporary issues, problem-solving, and communication. The first objective of the course is to encourage students in interdisciplinary inquiry into some aspect of social policy, inquiry which asks students to apply the analytical approaches of their major fields to current issues of broad, general interest. 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 1501

685S. Advanced Composition. (3). This course is designed to provide the student with practical experience, under academic supervision, that will complement and enhance the student's academic program. Individual programs must be formulated in consultation with appropriate program sponsors and approved by the academic department. Offered Cr/NCR only. A 14 685S 0 1501

686Q. Advanced Composition. (3). This course is designed to provide the student with practical experience, under academic supervision, that will complement and enhance the student's academic program. Individual programs must be formulated in consultation with appropriate program sponsors and approved by the academic department. Offered Cr/NCR only. A 14 686Q 0 1501

688Q. Advanced Composition. (3). This course is designed to provide the student with practical experience, under academic supervision, that will complement and enhance the student's academic program. Individual programs must be formulated in consultation with appropriate program sponsors and approved by the academic department. Offered Cr/NCR only. A 14 688Q 0 1501

Courses for Graduate/Undergraduate Credit

517 & 518. Playwriting I and II. (3 & 3). Cross-listed as Speech 516 and 517. Not repeatable for credit. A 14 517 0 1507 & A 14 518 0 1507

555. Writers Tutorial: Prose Fiction. (3). Tutorial work in creative writing in prose fiction with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing coordinator. A 14 555 0 1507

586. Writers Tutorial: Poetry. (3). Tutorial work in creative writing in poetry with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing coordinator. A 14 586 0 1507

604. Writing Seminar: Fiction. (3). An advanced course designed primarily for the non-traditional student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of prose fiction. Not credited toward the MFA degree. Prerequisites: 6 hours of undergraduate creative writing courses, or instructor's consent based on submitted manuscript. Departmental consent required for undergraduate enrollment. A 14 604 9 1507

605. Writing Seminar: Poetry. (3). An advanced course designed primarily for the non-traditional student, both graduate and undergraduate, who desires intensive experience in the conceptualization and writing of poetry. Not credited toward the MFA degree. Prerequisites: 6 hours of undergraduate creative writing courses, or instructor's consent based on submitted manuscript. Departmental consent required for undergraduate enrollment. A 14 605 9 1507

Courses for Graduate Students Only

801. Creative Writing: Fiction. (3). Advanced work in creative writing. Repeatable for credit. Prerequisite: creative writing coordinator. A 14 801 9 1507

805. Creative Writing: Poetry. (3). Advanced work in the writing of poetry. Repeatable for credit. Prerequisite: creative writing coordinator. A 14 805 9 1507
Linguistics

Upper-Division Course

315. Introduction to English Linguistics. (3). Cross-listed as Ling. 315. Introduction to linguistic principles, including phonological and grammatical concepts. A 14 315 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. Prerequisites: 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 social dialect in America and methods of studying it. May be repeated for credit when content varies. 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 nonnative speakers are discussed. Students learn to analyze interlanguage patterns, design appropriate teaching units for class and language laboratory use. D 12 727 0 1220

740. Graduate Studies in Linguistics. (3). Selected topics in theories of language and methods of linguistic study. With departmental consent, the 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 to the lower division general student selections from the English masterpieces that constitute the literary heritage. A 14 220G 0 1502

223. Books and Ideas. (3). Reading, discussing and some writing about literature from all periods and cultures (fiction, poetry, drama and essays). Designed especially for non-English majors; not credited toward an English major or minor. A 14 223 0 1502

224Q. 20th Century British and American Literature. (3). A survey of major works by important British and American authors of the 20th century. A 14 224Q 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 deepen the appreciation and understanding of literary works as they do and how they do it. Readings are selected with careful attention to the needs and interests of non-English majors, and a cultural rather than a technical approach is employed. A 14 230G 0 1502

231G. Exploring Literature in Media. (1). 2R. An appreciation section, meeting once a week for two hours, to expand the scope and range of Eng. 230G through multimedia presentations, closely correlated with the reading in Eng. 230G. Films, panel discussions, poetry readings, recordings, small-group discussions and presentations, etc. A 14 231G 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 appreciating the central themes and dominant ideas. Multimedia presentations, which are closely correlated to the representative works being studied, will amplify the scope and range of literature under review. Media will include films, readings and recordings. A 14 232G 0 1502

252. Modern American Writers. (3). Subject to be announced each semester. A 14 252 0 1502

262G. 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 in the century and how they relate to the growth of a national literature. A 14 262G 0 1502

270. Introduction to Literature. (3). Introduction to major literary forms; instruction in critical reading and writing through study of representative works in drama, fiction and poetry. Required of all English majors and must be taken during the student's first 9 hours as a declared major. Prerequisites: Eng. 101 and 102 or A 14 270 0 1502

272G. Origins of the Western Literary Tradition. (3). A study of the literary forms that first appear in classical and biblical literature and are more developed in the English literary tradition. Readings from mythology, the classics and selected books of the Bible. A 14 272G 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 14 274 0 1502

275Q. Studies in Popular Literature. (3). Cross-listed as Amer. Stud. 310. A course in contemporary American fiction and cultural analysis of popular literature (e.g., revolutionary literature, science fiction, western fiction, detective novel), with an emphasis both on the literary merits of this work and the way it reflects popular tastes and values. Repeatable for credit with change of content. A 14 275Q 0 1503

280. Literary Studies. (2-3). Course content varies from one semester to another. Repeatable for credit. A 14 280 0 1502

280G. The Bible as Literature. (3). The Bible is studied as a literary artifact through extensive readings in both Old and New Testaments. Literary techniques are pointed out, and their meaning for the manner of composition of the Bible is discussed. A 14 280G 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

320Q. The Nature of Drama. (3). A course designed to acquaint the student with 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

322. The Drama: Origins and Development. (3). A survey of the drama from its beginnings in ancient Greece through the mid-19th century. A 14 322 0 1502

324. Modern Drama. (3). Continental. English, Irish and American plays of the late 19th and early 20th centuries. A 14 324 0 1502

330Q. The Nature of Fiction. (3). A course designed to acquaint the student with narrative fiction. To that end, the short story, short novel, and novel. In covering works of fiction drawn from different cultures and historical periods, the course focuses primarily on the characteristics of fiction, giving some attention to historical development and to theories of fiction. A 14 330Q 0 1502

331 & 332. The Novel in England I and II, (3 & 3). The rise and development of the novel—I: Defoe through Austen; II: Scott through Hardy. A 14 331 0 1502 & A 14 332 0 1502


335. Types and Techniques of Poetry. (3). A study of the standard forms of prosody and the stylistic devices of poetry. A 14 335 0 1503

337. Contemporary Poetry. (3). A study of poetry since 1945, primarily American and British. A 14 337 0 1502

340Q. Major Plays of Shakespeare. (3). Designed for students who wish to study the best work of Shakespeare's career in one semester. Students who take this course may take Eng. 515 once for credit. A 14 340Q 0 1502

350. Chaucer and the Middle Ages. (3). Middle English poetry, prose and drama from the 12th to 15th century. A 14 350 0 1502

352. Literature of the English Renaissance. (3). A survey of English literature from 1485 to 1660. A 14 352 0 1502

354. Restoration and 18th Century Literature. (3). A survey of English literature from 1660 to 1798. A 14 354 0 1502


358. Modern British Literature. (3). English and Irish literature in the 20th century. A 14 358 0 1502

364. Modern American Literature. (3). Major trends and representative works in American literature from 1900 to the present
with emphasis on the first 50 years of the 20th century. A 14 364 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 selected 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 14 365 0 1502

400G. The Literary Imagination: Epic, Romance, Tragedy, Comedy. (3). A course designed to acquaint the student with the major modes that have shaped the Western literary tradition. It focuses on the tendency of the imagination to construct different kinds of fictions that satisfy the human demand for various forms of literary pleasure—the pleasure that derives from the experience of love and war on a heroic scale (epic and romance), of pain and suffering (tragedy), and of 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 400G 0 1502

450. Independent Reading. (1-3). Designed for majors and nonmajors who wish to pursue independent readings and research projects in areas not normally covered in course work. Repeatable for credit. Prerequisite: departmental consent. A 14 450 0 1502

470. Topics in Literary Criticism. (3). Exploration of various historical and modern approaches to literary criticism and study of issues in literary criticism. Prerequisite: Eng. 270 or departmental consent. A 14 470 0 1502

Courses for Graduate Undergraduate Credit

501. American Authors. (3). Subjects to be announced each semester. Repeatable for credit. A 14 501 0 1502

502. Types of American Literature. (3). Drama, fiction, poetry. Subjects to be announced each semester. Repeatable for credit. A 14 502 0 1502

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 writing abilities, conducting individual and group conferences, the writing process, the basic elements of Standard Written English, and theories of second language and dialect acquisition. Concurrent enrollment in Eng. 511. Tutorial Practicum, recommended. This course is designed for those 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. Peer Tutoring, is required. A 14 511 2 1507

512. Studies in Fiction. (3). Subjects to be announced each semester. Repeatable for credit. A 14 512 0 1502

513. Studies in Poetry. (3). Subjects to be announced each semester. Repeatable for credit. A 14 513 0 1502

514. Studies in Drama. (3). Subjects to be announced each semester. Repeatable for credit. A 14 514 0 1502

515. Studies in Shakespeare. (3). Subjects to be announced each semester. Repeatable for credit, except by students who take Eng. 540. A 14 515 0 1502

521. Studies in Medieval Literature. (3). Study in genres, motifs, and motifs in literature from the 12th to 15th century, with particular topics selected and announced by instructor. Repeatable with change of content. Prerequisite: Eng. 350 or some familiarity with medieval literature. A 14 521 0 1502

522. Studies in Renaissance Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 522 0 1502

524. Studies in Restoration and 18th Century Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 524 0 1502

526. Studies in Romantic Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 526 0 1502

527. Studies in Victorian Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 527 0 1502

530. Studies in Modern Literature I. (3). British and/or American literature, 1900-1945. Subjects to be announced each semester. A 14 530 0 1502

531. Studies in Modern Literature II. (3). British and/or American literature, 1945 to present. Subjects to be announced each semester. A 14 531 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 14 535 0 1502

536. Writing by Women. (3). Cross-listed as WS 536. The work of major women writers, both British and American, in poetry and prose. A 14 536 0 1502

540. American Folklore. (3). Cross-listed as Amer. Stud. 540. A survey of the types and functions of unwritten traditional materials in the United States, including tales, jokes, folk music, customs, and crafts, including some ethnic varieties: the unwritten materials that form the uniqueness of American culture. A 14 540 0 1502

545. Comparative Literature: Ancient and Pre-Renaissance. (3). A study of contrasting structures, themes and literary conventions as found in representative works of the ancient Near East and the Western tradition. Readings may vary, epics, romances and dramas, with emphasis on appreciation and on the affinities and the uniqueness of the works compared. A 14 545 0 1503

546. Comparative Literature: Renaissance and Modern Europe. (3). A study of some controlling themes and mood in Renaissance and modern European literature. Readings may vary, epics, romances and dramas, with emphasis on appreciation, critical awareness and the real similarities and differences between works. A 14 546 0 1503

550. Comparative Literature: Myths, Ancient and Modern. (3). A study of representative literary traditions, with emphasis on the interrelationship and the contrast of traditions from ancient and modern times. A 14 550 0 1503

580. Special Studies. (1-3). Topic selected and announced by the individual instructor. Repeatable for credit. Prerequisite: departmental consent. A 14 580 0 1502

610. Old English. (3). Cross-listed as Ling. 610. A 14 610 0 1502

750. Workshop. (2-4). Repeatable for credit. A 14 750 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 bibliographic tools, (2) terminology, both technical and historical, (3) various approaches to the study of literature, and the relationships of biography to literary study and the relevance of other disciplines, such as psychology, to literature; (4) the writing of interpretative and research essays. Throughout the semester a balance between instruction and research is maintained. A 14 800 0 1502

811. Graduate Readings in Pre-Renaissance Literature. (3). Early and middle English poetry, prose and drama to the 15th century. A 14 811 9 1502


815. Graduate Readings in Romantic Literature. (3). Wordsworth, Coleridge, Byron, Shelley, Keats, Scott and their contemporaries. A 14 815 9 1502

816. Graduate Readings in Victorian Literature. (3). Wordsworth, Coleridge, Byron, Shelley, Keats, Scott and their contemporaries. A 14 816 9 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: Medieval, Renaissance, and 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 figures as Augustine, Fenelon, Bulwer, Sheridan, Steele, Rush, 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 for 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. Prerequisite: 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 Wichita State University is designed to provide students interested in film and the visual media with a focused sense of the possibilities, limitations, and actual accomplishments of the visual media as they have, in fact, developed. The minor also offers opportunities to study film as an art form and to gain experience in media production. The film studies minor consists of 18 semester hours from the courses listed below, selected with the approval of the coordinator of film studies.

Wichita State University does not at this time offer a film studies major. However, the minor will prove useful to students majoring in literature, journalism, and speech, and will also appeal to those in fields where some knowledge of mass communication as a cultural phenomenon is desirable, including sociology, history, anthropology, psychology, education, administration, and American studies.

Students seeking more information about the film studies minor should contact Dr. James Erickson in the department of English.

Courses approved for the film studies minor are: Hist. 106, The Way It Was; Western Civilization in Film, Speech 220, Introduction to Film Studies; GD 231, Basic Photography (Motion Picture); English 307G, Narrative in Literature and Film; Speech 320, Cinematography; GD 430, Graphic Design III—Media; Am. Stud. 499A, American Film Culture; Am. Stud. 499B, Women in American Film; Am. Stud. 499C, The Western; Am. Stud. 499D, Kansas in Film; Eng. 499, Film from Novelist: Hemingway, Faulkner, Steinbeck; Hist. 499, Why We Fight: World War II in Film; Speech 500, Documentary and Propaganda Films; Speech 504, Television Production and Direction; and Speech 604, Advanced Television Production and Direction.

French (See Modern and Classical Languages and Literatures)

Geology
The Bachelor of Science (BS) in geology provides in-depth training for professional work in industry or government as well as for graduate study. The Bachelor of Arts (BA) in geology provides training for graduate study or teacher preparation background. A number of 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. 111Q, General Geology
2. Geol. 312, Historical Geology, 320, Mineralogy, and 324, Petrology
3. Geol. 540, Field Mapping; 544, Structural Geology; 552, Physical Stratigraphy; 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
5. An applied geology course that includes either Geol. 620, Geochemistry; 650, Geohydrology; 660, Geophysics; 680, Economic Geology; or 682, Petroleum Geology
6. One additional course from 500 level 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 on the following options: (a) 10 hours of modern language, (b) an additional 9 hours of computer science/mathematics, or (c) an additional 9 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, General 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). The study of the physical environment. Basic concepts in the physical sciences and current problems with which physical scientists are concerned. A 16 101Q 0 1901

111Q. General Geology. (4). 3R; 2L. Lab fee. An overview of the earth, the concepts of its origin, composition, materials, structure, landforms and history; and natural processes operating to create man's physical environment. Field trips into the earth laboratory are 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

300Q. 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 man's desire for a high standard of living. Some emphasis on environmental control. A 16 300Q 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, oceanography and astronomy. Field trips are required. Not open to students who have taken Geol. 111Q or Geog. 201. 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 oceans; economic geology 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 biostratigraphic and tectonic events in selected areas. Also included is the origin and evolution of life. Field trips are 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 recognitions of the typical forms, properties, occurrences, associations, and identification. Field trips are required. Prerequisite: Geol. 111Q. A 16 320Q 1 1914

324. Petrology. (3). 1R; 6L. Lab fee. The origin, distribution, occurrence, description, and classification of igneous, metamorphic, and sedimentary rocks with laboratory emphasis on the identification of rocks. Field trips are required. Prerequisite: Geol. 320. A 16 324 1 1914

410. Honors in Geology. (3). An independent study project on a topic of the student's choice must be original research or creative work. Repeatable to a maximum of 6 credit hours. 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 geographic significance. The course is graded on a pass/fail basis. A field mapping fee is required when course locality and content differ. Where appropriate, travel, lodging, and board costs will be charged. A 16 430 2 1914

Courses for Graduate/Undergraduate Credit

501. Raw Materials of Antiquity. (3). 2R; 1L. Lab fee. A systematic study of the geologic origin of mineral and metal ores used in prehistoric and ancient times. Also included are the cultivation, location, and manufacture of raw materials used in prehistoric and ancient times. A 16 501 1 1914

520. Optical Mineralogy. (3). 1R; 6L. Lab fee. Properties of amorphous and crystalline materials in polarized light. Use of the petrographic microscope for the quantitative determination of rock-forming minerals and mineraloids in thin-section is used, and the identification and interpretation of the genesis and history of the Pleistocene and Recent Epochs. A 16 520 1 1914

523. Igneous and Metamorphic Geology. (3). 2R; 3L. The evolution 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 are required. Prerequisite: Geol. 520. A 16 523 1 1914

524. Petrography. (3). 1R; 6L. Lab fee. Description, classification, and analysis of plagioclase and volcanic igneous rocks, granulite and foliated metamorphic rocks; felsic rocks, and chemical and sedimentary rocks; and well withings with the petrographic microscope. Prerequisite: Geol. 520. A 16 524 1 1914

544. Structural Geology. (3). 2R; 3L. Lab fee. 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 are required. Prerequisite: Geol. 524. A 16 552 1 1914

540. Field Mapping Methods. (3). 9L. Lab fee. Field mapping methods, with special reference to use of level, compass, barometer, alidade, and airphoto. Field trips are required. Prerequisite: Geol. 201 or Geol. 111Q. A 16 540 1 1914

552. Physical Stratigraphy. (3). 2R; 3L. Lab fee. Description, classification, correlation, and relative ages of stratigraphic rock units, and the origin of primary structures of clastic rocks. Laboratory methods are used for the interpretation of stratigraphic contacts. A 16 552 1 1914

554. Special Studies in Geology. (3). 2R; 3L. Lab fee. A systematic study of selected areas of the field of geology. Course content differs upon demand, to provide both in-depth analysis of selected special topics, and also as a systematic petrographic study of sedimentary rocks in thin section, insoluble residues, and heavy-mineral analysis. Field trips are required. Prerequisite: Geol. 524. A 16 554 1 1914

560. Geomorphology. (3). 2R; 3L. Lab fee. Elements of aerial photography, and field mapping methods. 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 of the United States. A 16 562 0 1914

564. Map and Aerial Photograph Interpretation. (3). 2R; 3L. Lab fee. Elements of aerial photography, composition, interpretation, and application of map analysis, including geography, urban planning, land-use inventory, and engineering methods. Remote-sensing methods are introduced. Field trips are required. Prerequisite: the opinion of the instructor. Prerequisite: Geol. 560 or instructor's consent. A 16 564 1 1914


574. Special Studies in Biogeology. (3). 2R; 3L. Lab fee. A systematic study in selected areas of the field of biogeology. Course content differs upon demand, to provide in-depth analysis in the fields of (a) invertebrate paleontology, (b) vertebrate paleontology, (c) micropaleontology, (d) paleoecology, and (e) paleoecology. Prerequisite: Geol. 312 or 552. A 16 570 1 1914
trips are required. Repeatable for credit to cover all five areas listed. A 16 574 1 1918

581. Numerical Geology. (3). 2R; 3L. Treatment of numerical data in geology including univariate and bivariate statistics and elementary programming in FORTRAN. A student is expected to use knowledge and computer techniques used to analyze them as well as case histories of applications are emphasized. Prerequisite: Geol 111Q; Math 370; CS 2001 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 geological significance. The course is given upon demand and may be repeated for credit when course locality and content differ. Where applicable, off-campus field trips will be arranged at the option of the instructor. Offered on demand. Prerequisite: instructor's consent. A 16 630 2 1914

667. Earth Science Instructional Methods. (3). Practice in teaching an introductory course in the earth sciences. Developing and presenting the latest scientific laboratory techniques and evaluating their effectiveness. May be taken more than once if content and objectives differ. Prerequisite: senior standing and permission of the department chairperson. A 16 667 0 1914

669. Geohydrology. (3). 2R; 3L. Lab fee. The hydrologic cycle, physical and chemical properties of water; fluid flow through permeable media, exploration for and evaluation of groundwater, water quality and pollution; and water law. Prerequisites: Geol 552 and Math 243 or instructor's consent. A 16 669 1 1914

680. Economic Geology. (3). 2R; 3L. Lab fee. Occurrence of metallic and nonmetallic economic mineral deposits and the physical-chemical principles governing their origin. Includes laboratory examination of ores and industrial minerals and elements of mineral beneficiation. Field trips are required. Prerequisite: Geol 324. A 16 680 1 1916

682. Petroleum Geology. (3). 2R; 3L. Lab fee. The origin, migration, and accumulation of oil and gas in the earth's crust, as well as their economic significance, features of modern fields; and energy alternatives and impacts. Field trips are required. Prerequisite: Geol 544. A 16 682 1 1914

684. Subsurface Geology. (3). 2R; 3L. Lab fee. All subsurface methods, including laboratory, logging, testing and treatment, valuation, and mapping methods. Field trips are required at the option of the instructor. Prerequisites: 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 must be completed at the option of the instructor. Offered on 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) palynology, (f) economic geology, (g) sedimentation, (i) stratigraphy, (j) geophysics, and (k) petroleum. Independent study in selected areas of geology with a written final report required. Prerequisite: consent of sponsoring faculty. A 16 698 3 1914

701. Seminar. (1). Current topics in geology. Reports on current student and faculty research. Required of all new degree-seeking graduate students. A 16 701 9 1914

755. Workshop in Geology. (1-3). Short-term courses with special focus on geological problems. Prerequisites: graduate standing and/or instructor's consent. A 16 755 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) palynology, (f) economic geology, (g) sedimentation, (i) stratigraphy, (j) geophysics, and (k) petroleum. A written final report is required. Prerequisite: consent of sponsoring faculty. 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. (3). 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 geological and archaeological materials. Stratigraphic chronology, radiometric, geologic, chemical, and biological-geologic processes; evolutionary processes; and phenomenological dating techniques. Prerequisite: graduate standing in geology or anthropology (archaeology). A 16 820 1 1914

823. Igneous and Metamorphic Petrology. (3). 1R; 6L. Lab fee. Igneous parageneses, 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 determination of petrogenetic relationships. Field trips are 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 are required. Prerequisite: Geol 526. A 16 826 1 1914

830. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area or region of geologic significance. The course content differs and may be repeated for credit when course locality and content differ. Where appropriate, travel, lodging, and board costs will be charged. Prerequisites: summer field geology (or equivalent) and instructor's consent. A 16 830 2 1914

840. Geotectonics. (3). Physical and geologic 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 are required. Prerequisite: instructor's consent. A 16 840 0 1914

852. Field Stratigraphy. (3). 2R; 3L. Lab fee. Advancement 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 252, or instructor's consent. A 16 852 1 1914

870. Advanced Biogeology. (3). 2R; 3L. Lab fee. Paleogeologic reconstruction of ancient plant/animal communities and environments, with emphasis on community structure, biontaxonomy, synthesis of total raw data and problem solving. Field trips are required. Prerequisite: a course in biogeology or equivalent. A 16 870 1 1914

880. Mineral Deposits. (3). 2R; 3L. Lab fee. An advanced treatment of the occurrence, classification, and origin of metalliferous ore deposits: applied petrography of selected ore and host-rock suites: mineralogy of opaque ores and their textures. Field trips are required. Prerequisite: Geol 680: 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

125Q. Principles of Geography. (3). An introductory course emphasizing the relationship between human activities and natural environment. A 16 125Q 0 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, landscapes, land use, natural resources, cartographic elements: introduction to regional studies. Field trips are required at the option of the instructor. A 16 201 1 1917

2100. World Geography. (3). A general survey of world geography, including an analysis of the physical, economic, and historical, and human geography of the major world regions. A 16 2100 0 2206

235. Meteorology. (3). 2R; 2L. Lab fee. An introductory study of the atmosphere and its
properties and the various phenomena of weather. A brief survey of important principles of physical, dynamic, synoptic and applied meteorology is included. This course does not apply toward a major or minor in geology. 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 0 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 will be charged. A 16 320 2 2206


Courses for Graduate/Undergraduate Credit

510. World Geography. (3). A general survey of the world geography, including an analysis of the physical, political, economic, historical, and human geography of the major world regions. A 16 510 0 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 chemicals, 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 will be charged. A 16 620 2 2206

630. Geography of Mexico. (3). Physical, human, and cultural geography of Mexico, including important historical and historical settings. Relations of sources to arts, crafts, industry, and architecture. A 16 630 0 2206

670. Urban Geography. (3). Lab fee. Geography of cities; the origin, growth, functional characteristics and environmental problems of urban areas; structure and dynamic elements of urban land use; and analysis and approaches to urban planning; problems of urban ecology. A 16 670 1 2214

681. Mineral Crises of Antiquity. (3). An earth-resource viewpoint of the key events of civilization from prehistory through the 19th century. The role of mineral wealth in the affairs of man from prehistorical Grand Prehistory through the Copper, Bronze, and Iron Ages; the Greek, Roman, and Danubian Empires and related mineral resources of Europe and Africa; the gold and silver wealth of early Latin America; the mineral resources of revolutionary America; to the development of the American west for copper, silver, and gold. Prerequisite: upper division or graduate standing. A 16 681 0 2206

750. Workshop in Geography. (1-4). Short-term courses with special focus on geographic 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 will be 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 Geron, 100Q, 303, 404, 501, 513, 518, and 12 hours of electives approved by the gerontology program adviser from the listed courses. The bachelor's degree minor in gerontology requires at least 15 hours, including Geron, 100Q, 9 hours selected from Geron, 303, 404, 513, and 518, and 3 hours of electives from the listed courses.

The gerontology major combines multidisciplinary 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

404. Psychology of Aging. (3). Cross-listed as Psych. 404. P 15 404 0 2209

430. Concepts of Loss. (3). Cross-listed as Nurs. 430. P 15 430 0 2203

481. Cooperative Education. (3-6). Same as Econ. 501 but offered as part of the Cooperative Education program. See Geron, 501 for description and prerequisites. P 15 481 2 2299

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 weekly with the field placement supervisor. Repeatable for credit not to exceed a total of 6 hours. Prerequisite: instructor's consent. P 15 501 2 2201

502. Older People and Organizations. (3). Cross-listed as Soc. 502. This course examines the agencies, organizations, and programs that deal with the elderly. The relationship between various social networks and the participation of the elderly in these groups. Prerequisite: Soc. 211Q or instructor's consent. P 15 502 0 2208


512. Issues in Minority Aging. (3). Cross-listed as Min. Stud. 512. Prerequisites: Min. Stud. 100, Geron, 100Q, Soc. 211, or instructor's consent. P 15 512 0 4999

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.
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 or 12 hours of gerontology or instructor's consent prior to registration. P 15 800 2 2201

History

Major. A major in history requires a minimum of 20 hours. History majors must specialize in one of the following areas:

1. Ancient and medieval history—requires Hist. 101 plus one additional lower-division course
2. Modern European history—requires Hist. 102 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. 131G or 132Q plus one additional lower-division course
5. General history—requires 2 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 398. In addition, sufficient hours need to be elected to bring the total to 29. At least 6 of these hours must be upper-division hours that are in the area of specialization. Hist. 108G and Hist. 330G may not be used on a history major.

Minor. A minor in history consists of 15 hours, including a maximum of two lower-division courses and at least 3 upper-division courses.

Lower-Division Courses

101G & 102G. History of Western Civilization. (4&4). 101G. prehistory to 1648. 102G. 1648 to the present. A 18 101G 0 2205 & A 18 102G 0 2205

105 & 106G. The Way It Was: Western Civilization in Film. (3). Departmental fee. 105 an examination of selected topics in the history of Western civilization from antiquity to the late 19th century through the use of commercial motion pictures and lectures and discussions of the experiences dealt with in the films. 106: continuation from the 17th century to the present. Not open to history majors or to those with credit in Hist. 101G & 102G. A 18 105 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 Sumerian, Hittite, Minoan, Mycenaean, Etruscan, Mohenjo-Daro, Khymer, Inca, Maya and Aztec. A 18 108G 0 2205 & A 18 112G 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 Middle Ages. 114: from the beginning of the Middle Ages to the present. A 18 113G 0 2205 & A 18 114G 0 2205

131G & 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 131G 0 2205 & A 18 132Q 0 2205

150. Workshop in History. (2-3). A 18 150G 0 2205

200. Women Throughout Western Civilization. (3). Cross-listed as WS 200. A survey of the position of women throughout history in the context of the civilizations from the beginning of civilization to the present. A 18 200 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 popular mass media such as pop music, cinema, pulp magazine literature, comics, television, as well as mass media issues, culture, culture and mass media in American history. A 18 213G 0 2205

220. Media Courses in History. (2-3). Courses created or coordinated by the Department of History which are offered through various media: radio, television and newspaper. A 18 220G 0 2205

222Q. East Asia. (3). Cross-listed as Pol. Sci. 222Q and Rel. 222Q. A survey of basic topics in the history of China, India, and Japan, including history, culture, society, politics, economics. This course is taught by a team of instructors from various departments. A 18 222Q 0 2205

225. Your Family in History. (3). A course designed to bridge the gap between history and genealogy through a demonstration of how family history can be researched. A 18 225G 0 2205

Upper-Division Courses

300. Introduction to Historical Research and Writing. (3). Basic instruction in research methodology, composition and criti-
royal absolutism. Enlightenment, ideology and economic change. A 18 579 0 2205

580. Europe in the Age of Revolution, 1787-1815. (3). Unrest under the Old Regime, processes of revolution and counter-revolution in France, revolutionary and Napoleonic imperialism, and institutional and cultural change. A 18 580 0 2205

581. Europe, 1815-1870. (3). A 18 581 0 2205

582. Europe, 1870-1914. (3). A 18 582 0 2205

583. Europe, 1914-1945. (3). A 18 583 0 2205

590. History of Russia. (3). Political and cultural history of Kievan, Muscovite and Imperial Russia. A 18 590 0 2205

591. History of the Soviet Union. (3). A 18 591 0 2205

595. History of Eastern Europe. (3). The development of the Bulgar, Czech, Magyar, Polish, Romanian and Yugoslav peoples. A 18 595 0 2205

596. History of Russian Thought. (3). Russian cultural and intellectual history from 1881 to the present; the Silver Age, Marxism, revolutionary ideologies, NEP culture, socialist realism. Stalinism, the thaw, the contemporary situation. A 18 596 0 2205

597. History of Russian Thought. (3). Russian cultural and intellectual history from 1881 to the present; the Silver Age, Marxism, revolutionary ideologies, NEP culture, socialist realism. Stalinism, the thaw, the contemporary situation. A 18 597 0 2205

610 & 611. Social and Intellectual History of Europe. (3&3). 610: the social and intellectual history of Europe in the 17th and 18th centuries. 611: the social and intellectual history of Europe in the 19th and 20th centuries. A 18 610 0 2205 & A 18 611 0 2205

612 & 613. European Diplomatic History. (3&3). 612: European international politics and diplomatic practices, with emphasis on the rise of modern powers and their statesmen, and the Concert of Europe to World War I. 613: Versailles settlement, totalitarian aggression, appeasement, World War II, and total war and decolonization of Southeast Asia and the Middle East as prelude to major power involvement. A 18 612 0 2205 & A 18 613 0 2205

614. Economic History of Europe. (3). Cross-listed as Econ 625. A 18 614 0 2205

615. Hitler and the Third Reich. (3). The establishment and collapse of the Weimar Republic, the rise and fall of Hitler's Third Reich, the divided Germany of the present and the role of each in world affairs, 1914 to the present. A 18 615 0 2205

616. Germans and Jews. (3). The history of antisemitism in central Europe, 19th and 20th centuries. A 18 616 0 2205

617Q. 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 617Q 0 2205

620. 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. A 18 620 0 2205

629. A History of Tudor and Stuart England. (3). Examination of the fundamental political, social, economic, intellectual and religious developments in English history from 1485 to 1714. A 18 630 0 2205

632. 18th Century Great Britain. (3). From the accession of William and Mary to the French Revolution. A 18 632 0 2205

634. 19th Century Great Britain. (3). From the French Revolution to the death of Queen Victoria. A 18 634 0 2205

680 & 681. History of Science. (3&3). 680: ancient and medieval science from its beginnings in the Near East to the end of the Middle Ages. 681: the rise of modern science from its first formative steps in the medieval world to the 20th century. A 18 680 0 2205 & A 18 681 0 2205

682. Social and Environmental History of Science and Technology. (3). An examination of the social and environmental implications of the development of science and technology from its earliest beginnings to the present day. A 18 682 0 2205

683. Military History. (3). Major military developments and the conduct of war from antiquity to the mid-20th century. A 18 683 0 2205

684. The Impact of Total War, 1939 to 1945. (3). Military developments of the major powers since World War I, emphasizing formulation of doctrine, strategy, technology and tactics. The conduct of World War II is also studied, with conclusions drawn as to the impact of the war. A 18 684 0 2205

685. History of Military Thought. (3). Historical review and appraisal of the military theories of such theorists as Machiavelli, Clausewitz, Mahan, Douhet, Liddell Hart, and Mao Tse Tung. A 18 685 0 2205

698. Historiography. (3). Review of the major schools of historical thought, philosophies of history and eminent historians from the ancient world to the present. This course is required of history majors. A 18 698 0 2205

725. Advanced Historical Method. (3). Review of basic historical research methods, the general character of field bibliographies and research interpretations and the techniques of professional narrative development. Required of graduate degree students during their first year of enrollment. Prerequisite: departmental consent. A 18 725 0 2205

729. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 729 9 2205

730. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 730 9 2205

733 Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 733 9 2205

734. Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 734 9 2205

750. Workshop in History. (1-3). Repeatable for credit but will not satisfy requirements for history majors. A 18 750 2 2205

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 5000 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 18 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. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. Offered Cr/NC only. A 33 281 2 4903

Upper-Division Courses

398. Travel Seminar. (1-4). An interdisciplinary travel seminar: a survey 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 10 398 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/NC only. A 33 481 2 4903

Courses for Graduate Students Only

875. Thesis. (1-6). A course for students who are finishing the Master of Arts in Liberal Studies (MALs). The student writing a thesis must be enrolled in this course until the thesis is completed and all thesis requirements have been satisfied. Prerequisite: consent of student's degree committee chairperson and instructor. A 33 875 4 4999

885. Terminal Project. (2-6). A course for students who are near the end of their MALs program and involved in a Terminal Project. The Terminal Project may have many aspects such as field work, practicum, 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

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:


3. Advertising-Public Relations—Journ. 115Q, 325, 350, 510, 525, 550, 560, 611, and one journalism elective or Speech 837 or 770. Public relations students may substitute Journ. 502 for Journ. 525. The outside concentration for this sequence consists of Psych. 304, 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

115Q. Introduction to Mass Communication. (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 115Q 0 0601

150. Journalism Workshop. (1-3) A course designed to provide specialized instruction, using a variable format, in a journalism-relevant subject. A 19 150 2 0699

200. Beginning News Writing. (3) 1R; 4L. Required for the minor in journalism, the course includes evaluation of news, reporting and writing of various types of news stories, with emphasis on achieving accuracy and good writing. Reasonable typing competence is required. Prerequisite: Eng. 102. A 19 200 1 0602

240. Introductory Photographic Journalism. (3) 2R; 3L. Lab fee. Basic photographic theory and technique, with emphasis on aspects of importance to journalism, writers and editors. Students take, develop, and prepare pictures for publication. The journalism department provides a limited number of cameras. Prerequisite: Journ. 200. A 19 240 1 0602

### Upper-Division Courses

300. Beat Reporting. (3) Reporting and writing about events in the community. Stories assigned and handled under the instructor's direction may be used in various publications. Prerequisite: Journ. 200. A 19 300 5 0602

322. Broadcast News. (3) 3R; 3L. Cross-listed as Speech 322. Theory and techniques of preparing news for the broadcast media. Students prepare newscasts and news reports for public radio station KMUW. Lab periods arranged with instructor. Prerequisites: Journ. 200 and Speech 224. A 19 322 1 0603

325. Introduction to Advertising. (3) Survey of advertising fundamentals and practices, including copywriting, layout, visualization, market research and packaging. Prerequisite: Journ. 200 or departmental consent. A 19 325 0 0604

340. Applied Photographic Journalism. (3) 3R; 3L. Lab fee. Covering photographic assignments for the campus newspaper and other publications, under the overall supervision of a journalism instructor. Prerequisite: Journ. 240. A 19 340 1 0602

350. Introductory Public Relations. (3) An introduction to the theory and practice of professional public relations. Topics covered include the role of public relations in the preparation of public relations, the tools used in planning and evaluating communication, and specialized publics. Prerequisite: Journ. 200. A 19 350 0 0604

380Q. History of Communication. (3) The development of the mass media, studied in context with other historical events. American journalism from colonial days to the present is emphasized. Course includes bibliography. A 19 380Q 0 0601

440. Advanced Photographic Journalism. (3) 3R; 3L. Lab fee. Advanced photographic theory and technique, with emphasis on the feature page photo essay, advertising photography for daily news publications, and the photographic interpretation of news stories. Prerequisites: Journ. 200 and 322. A 19 440 1 0602

481. Cooperative Education. (1-4). Offered for Credit/No Credit only. A 19 481 2 0602

### Courses for Graduate/Undergraduate Credit

500. Advanced Reporting. I. (3) 1R; 4L. A course for juniors and seniors on the techniques of reporting and writing complex and important types of news stories. Includes police work, local government, sports and economic reporting, and includes the study and practice of journalistic interviewing. Prerequisite: junior standing. Journ. 200 and either 300 or 322. A 19 500 1 0602

501. Investigative Reporting. (3) 1R; 4L. Study and application of the techniques of reporting and writing complex news stories involving the less obvious aspects of local and state government, education, and various court proceedings. The lab will be by arrangement to permit independent investigation into the news of government or public affairs that is not easily obtainable. Prerequisites: Journ. 500 for majors and departmental consent for graduate students. A 19 501 1 0602

502. Public Information Writing. (3) Basic journalistic skills of clear, precise writing are used to communicate effectively with various audiences. Students write press releases, speeches and popularizations of complex documents. Techniques learned in this course are valuable in writing grant proposals, committee reports, pamphlets and journal articles. Prerequisites: senior standing or departmental consent. A 19 502 0 0602

510. Editing. (3) 1R; 4L. Selection, evaluation and preparation of copy and pictures for publication. Covers copy editing, rewriting, headline and caption writing, and page layout. Prerequisites: junior standing and Journ. 200. A 19 510 1 0602

520. Seminar in Journalism. (3) Exploration of problems and controversies involving the press, the nature of news, sources and consumers of news. Prerequisite: departmental consent. A 19 520 0 0602

522. Advanced Broadcast News. (3) 3R; 3L. Cross-listed as Speech 522. A course in advanced techniques of preparing news for radio and television presentation; with emphasis on actual work in radio and television newsmaking. Lab periods arranged with instructor. Prerequisite: Journ. 522. A 19 522 0 0603

525. Advertising Copywriting. (3) Detailed practice at writing various kinds of advertising copy, including both print and broadcast forms. Emphasis on the more precise writing that makes responsible copy by the advertiser. Prerequisite: Journ. 325 or departmental consent. A 19 525 0 0604

550. Editorial Writing. (3). A study of editorial judgment, including practice in the writing of editorials and editorial page features, and a study of research materials available to editorial writers. Prerequisites: junior standing and Journ. 200. A 19 550 0 0602

560. Law of the Press. (3). Emphasis on the case method in examining laws and court cases applicable to the mass media. Introduction of the First Amendment and covers such topics as libel, privacy, invasion of the written press. Prerequisites: Journ. 200 or departmental consent. A 19 560 0 0601

570. Magazine Journalism. (3). A course on magazine production, including the choosing of subjects, approaches and illustrations, the handling of photographic stories, the handling of production and management concerns. Prerequisite: Journ. 200 or departmental consent. A 19 570 0 0601

571. Magazine Writing. (3). A course on writing for magazines, with emphasis on analyzing the market and patterning articles to fit the needs of specific magazines. Prerequisite: Journ. 200 or departmental consent. A 19 571 0 0602

611. Media Management. (3). A study of the business and management operations of the mass media designed to give journalism students an understanding of the interrelationships in mass media enterprises. Prerequisites: junior standing or departmental consent. A 19 611 1 0602

645. Special Topics in Journalism. (1-3). Directed Individual research in various aspects of journalism and mass communication or related topics: communications theory, mass media in society, audience research, types of news stories, laboratory periods arranged with instructor. Prerequisite: senior standing. A 19 645 3 0601

690. Journalism Internship. (3-6). On-the-job experience and training in news, advertising or public relations, or radio or television news broadcasting. Prerequisite: departmental consent. A 19 690 2 0601

715. World Press. (3). A comparative study of press and broadcast systems around the world, with emphasis on press freedoms and controls. Prerequisite: Journ. 690 or senior standing. A 19 715 1 0601

720Q. Dimensions of Mass Communication. (3). A detailed study of the mass media, their role as social institutions, their control, support, content and audience, and their effects. A 19 720Q 1 0601

750. Journalism Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a journalism-relevant subject. A 19 750 2 0699

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.
Latin and Greek (See Modern and Classical Languages and Literatures)

Linguistics

Major. A major in linguistics consists of a minimum of 24 hours from the courses listed below, including at least 9 hours from Group A and at least one phonetics course—Ling. 218, Ling. 223, Fr. 505, or Span. 505. A major must be combined with either a minor or in a foreign language or the 111-112 sequence in two different foreign languages and 3 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 6 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 1105 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


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 phonology 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. Linguistics. Comparative Linguistics. (3). Methods of establishing genetic relationship between languages and reconstructing protolanguages. 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


505. French. Advanced Phonetics and Diction. (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 1102

579. German. Linguistics in the Teaching of German. (3). Cross-listed as Ger. 579. A 10 579 0 1505

635. French and Spanish. Introduction to Romance Linguistics. (3). Cross-listed as Fr. 635 and Span. 635. A 10 635 0 1102

Group C—Areas of Contact Between Linguistics and Other Disciplines

Lower-Division Courses

220. CDS. Developmental Psycholinguistics. (3). A 10 220 0 0 815

301. Philosophy. Language and Philosophy. (3). Cross-listed as Phil. 301. A 24 301 0 1509

325. Philosophy. Formal Logic. (3). Cross-listed as Phil. 325. A 24 325 0 1509

Courses for Graduate/Undergraduate Credit


615. Anthropology. Language and Culture. (3). Cross-listed as Anthr. 615. A 10 615 0 2202

727. CDS. Teaching English as a Second Language. (2-3). Cross-listed as CDS 727 and Eng. 727. A 10 727 0 1200


The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R, 2L, means 4 hours of lecture and 2 hour of lab.

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

Major. For the Bachelor of Arts (BA) with a major in mathematics, students must complete 21 hours of courses in mathematics or statistics offered by the department numbered 500 or above. In addition, an algorithmic language for computers, such as PL/I, APL, COBOL, FORTRAN, or PASCAL, is required.

For the Bachelor of Science (BS) in mathematics, majors must complete Math. 511 and 24 additional hours in mathematics or statistics offered by the department numbered 500 or above. In addition, an algorithmic language for computers, such as PL/I, APL, COBOL, FORTRAN, or PASCAL, is required.

For the BS in mathematics with emphasis in statistics the major must complete 27 hours of courses in mathematics or statistics offered by the department numbered 500 or above, including Math. 511; either Math. 545 or 547; and 15 hours of statistics, which must include either Stat. 571-572 or Stat. 771-772. In addition, an algorithmic language for computers, such as PL/I, APL, COBOL, FORTRAN, or PASCAL, is required.

For students who are contemplating graduate work it is highly recommended that they include Math. 511, 513, 547, and 640 in their program, along with courses in one or more of French, German, or Russian.
Students majoring in mathematics should consult closely with their adviser on any of these programs.

Minor. For a minor in mathematics, students must take a minimum of 15 semester hours of credit courses in mathematics or statistics, including 3 hours of work in courses numbered 350 or above.

Noncredit Courses

007. Arithmetic. (3). Offered C/NCR only. A review and study of the basic arithmetic operations for the mature student whose previous training in arithmetic is inadequate for the completion of college mathematics courses. A 20 007 0 1701

011. Algebra. (5). Offered C/NCR only. The topics from high school algebra essential to the study of university-level mathematics. This course may be used to meet departmental prerequisites in place of 1/2 units of high school algebra. Not applicable to degree. A 20 011 0 1701

021. Plane Geometry. (3). Offered C/NCR only. The topics from high school geometry necessary to the understanding of the study of college-level mathematics. Not applicable to degree. A 20 021 0 1701

Lower-Division Courses

101Q. Mathematics Appreciation. (3). Elementary topics in mathematics of interest to those who are not majoring in mathematics. A 20 101Q 0 1701

109. College Algebra with Review. (5). Topics covered include real numbers, algebraic expressions, exponents and radicals, systems of equations, and the solution of inequalities. These topics are followed by the content of Math. 111. Credit is allowed in only one of the three courses: Math. 109, 111 or 112. (Only 3 hours applies toward a Wichita State University degree.) High school geometry or Math. 021 is a prerequisite to the following courses.

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: 1/2 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 study of analytic geometry. A 20 112 0 1701

123. College Trigonometry. (3). A study of the trigonometric functions with applications.

144. Business Calculus. (3). A brief, but careful, introduction to calculus for students of business and social sciences. Credit in both Math. 144 and 242Q is not allowed. Prerequisite: Math. 109 or 111 or 112 with "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 6 hours credit with departmental consent. Prerequisite: departmental consent. A 20 150 0 1701

211. Elementary Linear Algebra. (3). Linear algebra and related topics. Prerequisite: 1 unit of high school algebra or Math. 011. A 20 211 0 1701

242Q. Calculus I. (5). Analytic geometry and the calculus in an integrated form. Credit in both Math. 242 and 144 is not allowed. Prerequisite: Math. 111 with a "C" or better, or 2 units of high school algebra, and 1 unit of high school geometry and 1/2 unit of high school trigonometry, or Math. 123 and either 109 or 111 with a "C" or better in each. A 20 242Q 0 1701

243. Calculus II. (5). A continuation of Math. 242. Study of integration and applications and an introduction to infinite series are included. Prerequisite: Math. 242Q with a "C" or better. A 20 243 0 1701

Upper-Division Courses

300Q. The Evolution of Mathematics. (3). A study of the development of mathematics from antiquity to the present. The purpose is to see how mathematics has developed from man's efforts to understand the world and to expand the extent to which mathematics has molded our civilization and culture. Since mathematics is the language of scientists, the effects of mathematics from various ages and countries is studied. This course develops mathematical skills. A 20 300Q 0 1701

311. Introduction to Linear Algebra. (1). A study of systems of linear equations, matrices, vectors, eigenvalues and eigenvectors. Credit not allowed in both Math. 211 and Math. 311. Prerequisite: Math. 344 or concurrent enrollment. A 20 311 0 1701

311Q. Discrete Mathematics I. (3). A study of some of the basic topics of discrete mathematics that will include elementary logic, properties of sets, mathematical induction, counting problems using permutations and combinations, trees, elementary probability, and an introduction to graph theory. Prerequisite: Math. 111 or Math. 112 or equivalent college-level mathematics course. A 20 311Q 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 "C" or better. A 20 344 0 1701

360. Seminar in Mathematics. (1). Topics of special interest to particular students. May be repeated for up to a total of 4 credit hours with departmental consent. Prerequisite: departmental consent. A 20 360 0 1701

480. Individual Projects. (1-5). Repeatable up to 10 hours. Prerequisite: departmental consent. A 20 480 0 1701

Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the M.S. in mathematics.

501. Elementary Mathematics. (5). A study of topics necessary to understanding of the elementary school curriculum such as set theory, real numbers and geometry. Not for major or minor credit. Prerequisite: elementary education major and a passing score on a qualifying examination. A 20 501 0 1701

503-505. Topics in Modern Mathematics I and II. (3-5). An investigation of the newer topics in the secondary school curriculum. Repeatable for credit. Prerequisite: departmental consent. A 20 503 0 1701; A 20 504 0 1701

511. Linear Algebra. (3). An elementary 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. 111 or departmental consent. A 20 513 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 a "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 "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 constants coefficients, variation of parameters and existence and uniqueness for initial value problems and systems. Prerequisite: Math. 344 with a "C" or better. A 20 550 0 1701

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: CS 201, 202 or 203 and Math. 344 with a "C" or better, or departmental consent. A 20 551 0 1703

553. Mathematical Models. (3). This course will cover case studies from the fields of engineering, technology, and the natural and social sciences. The emphasis will be to describe a problem and then develop the mathematics necessary to solve the problem. The case studies will be selected to illustrate several of the topics from among: linear algebra, differential and integral equations, stochastic processes, linear optimization, and computerized data analysis. Each student will be required to participate in a term project which will be the solution of a particular problem approved by the instructor. Prerequisite: Math. 344 with a "C" or better, or departmental consent. A 20 553 0 1703

557. 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
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 6 hours credit with departmental consent. Prerequisite: departmental consent. A 20 580 0 1701

590. Introduction to Mathematical Logic. (3) A study of symbolic logic and an axiomatic development of propositional calculus. Boolean algebra, switching circuits, predicate calculus and formal languages are covered, with emphasis on formalizing mathematical systems. Prerequisite: Math. 511 or departmental consent. A 20 590 0 1701

615. Elementary Number Theory. (3) Properties of the integers studied by elementary means. Prerequisites: Math. 144 and upper division standing or Math. 344 or departmental consent. A 20 615 0 1701

621. Elementary Geometry. (3) A study of the structure of Euclidean geometry. Prerequisite: Math. 144 or 243. A 20 621 0 1701

640. Advanced Calculus II. (3) An examination of the calculus of functions of several variables and surface integrals. Prerequisites: Math. 511 and 547 with a C or better in each. 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 C or better. A 20 651 0 1703

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 introduction 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 6 hours credit with departmental consent. Prerequisite: departmental consent. A 20 750 2 1701


753. Ordinary Differential Equations. (3). Existence, uniqueness, stability, and other qualitative theories of ordinary differential equations. Prerequisite: Math. 545 or departmental consent. A 20 753 0 1701


Courses for Graduate Students Only

801-802. Topics for Mathematics Teachers I and II. (2-3). Topics for secondary school mathematics teachers that relate to the secondary school mathematics curriculum. Topics are chosen according to the needs and interests of the individual students. Repeatable for credit with departmental consent. Not applicable to 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

819. Selected Topics in Number Theory. (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

828. Selected Topics in Topology. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 828 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. (3). 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). A continuation of Math. 751. Prerequisite: Math. 751 or equivalent. A 20 851 0 1703


Statistics

No major or minor in statistics is available, but a BS with emphasis in statistics is offered as described under the mathematics section. Statistics courses satisfy general education requirements. As part of the 124 semester hours required for graduation, students may take up to 15 semester hours of statistics courses in addition to the 45 or 50 semester hours of course work allowed in mathematics.

Lower-Division Course

1700. Statistics Appreciation. (3). A non-technical 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


Courses for Graduate/Undergraduate Credit

Credit in courses numbered below 600 is not applicable toward the MS in mathematics.

570-572. 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 intervals
estimates, statistical tests of hypothesis, correlation and regression analysis, introduction to nonparametric statistical techniques, least squares, analysis of variance and topics in design of experiments. Prerequisite: Math 144 or 243, 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 estimation costs. Applications will 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. 442; 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 will involve problems from engineering, medical, economics, social and natural sciences, and other disciplines. Prerequisite: any elementary statistics course such as Stat 370, Soc. 501 or Psych. 442; A 20 576 1 1702

661. Probability. (3). A study of axioms of probability, discrete and continuous random variables, limits, convergence, examples of distribution functions, moment generating functions, and sequences of random variables. Prerequisite: Math. 344 with C or better. A 20 661 0 1701

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 in inference with emphasis on applications to engineering. Prerequisites: Math. 344 with “C” or better. A 20 671 0 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 stochastical dependence, distributions of functions of random variables limiting distributions, order statistics, theory of statistical inference, nonparametric tests and analysis of variance and covariance. Prerequisite: Math. 545 or 547 with C or better or departmental consent; A 20 771 0 1702; A 20 772 0 1702

Courses for Graduate Students Only

878. Special Topics. (2-3). Repeatable with different 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 is placed in the department on the analysis of cross-cultural communication which stresses the uniqueness of the individual's language and behavior as it relates to communications across ethnic and cultural lines. Minority studies also offers experiences that allow students to explore their own uniqueness and provides methods for interacting favorably with other people.

Major. The major in minority studies consists of at least 24 hours, including Min. Stud. 210; any two of Min. Stud. 240, 331, 332, 333, or 334; Min. Stud. 337, 338, or 399; Min. Stud. 540; Min. Stud. 545; and Min. Stud. 548. A concentration of not fewer than 15 hours in one additional field of study at Wichita State must also be taken. Minority studies majors must follow this sequence unless deviations are approved in advance by the department.

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 6 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 and must include Min. Stud. 210; any two of 240, 331, 332, 333, or 334, 337, 338, or 399; and 380.

Lower-Division Courses

100Q. Introduction to Minority Studies. (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 and between people of particular minority people in the United States is also undertaken. A 10 300 0 2299

201Q. Fundamentals of Cross-Cultural Communications. (3). An examination of the impact of differences in culture and methods of communicating. A study of communications and its relationship to behavior in this country and between people of particular minority people in the United States is also undertaken. A 20 300 0 2299

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. Special emphasis is placed on the social impact of Dr. King's life on the civil rights movement and interracial relations in the United States. A 20 320 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 lives of the African-American, Asian-American, and Mexican-American women that have been generated and perpetuated through the ages by providing accurate information about their lives and attitudes that help people better understand minority women in America and understand their attitudes, sensitivities and emotions. A 30 240 0 2299

260. Prominent Minorities in the Making of America. (3). Designed to explore, compare and contrast minority thought and product, such as social, economic and political reform. Class delves into the social concepts of prominent American minorities through the coverage of popular novels, biographies, autobiographies, memoirs, etc. Prerequisite: Min. Stud. 100Q. A 30 260 0 2299

Upper-Division Courses

331. Individual Group Cross-Cultural Communications-Black. (3). Designed to enable students to explore their own unique characteristics and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 210Q. A 30 331 0 4999

332. Individual Group Cross-Cultural Communications-Chicano. (3). Designed to enable students to explore their own unique characteristics and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 210Q. A 30 332 0 4999

333. Individual Group Cross-Cultural Communications-Indian. (3). Designed to enable students to explore their own unique characteristics and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 210Q. A 30 333 0 4999

334. Individual Group Cross-Cultural Communications-White. (3). Designed to enable students to explore their own unique characteristics and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 210Q. A 30 334 0 4999

337. Biracial Cross-Cultural Communications-Black/White. (3). An examination of concepts and behaviors useful in analyzing interpersonal behavior in an organizational setting between two selected ethnic groups. Reading 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. Prerequisite: Min. Stud. 331, 332, 333 or 334. A 30 337 0 4999

338. Biracial Cross-Cultural Communications-Indian/Chicano. (3). An examination of concepts and behaviors useful in analyzing interpersonal behavior in an organizational setting between two selected ethnic groups. Reading 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. Prerequisite: Min. Stud. 331, 332, 333 or 334. A 30 338 0 4999

380. Multiracial Cross-Cultural Communications. (3). A special laboratory group experience for advanced students. Leadership
styles, group development skills and interpersonal competence in a multilingual setting are developed. Prerequisite: Min. Stud. 337 or 338. A 30 380 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, interpersonal competence and the multicultural work environment are examined. Offered for Cr/NCr only. Prerequisite: 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/young Americans; (4) learning the legal procedures for resolving many of the problems of the minority elderly, and (5) trying offered and tested solutions to the problems encountered by minority elderly. Crosslisted as Geron. 512. Prerequisites: Min. Stud. 100Q, Geron. 100, Soc. 211Q, or instructor's consent. P 15 512 0 4999

540. Advanced Multiracial Cross-Cultural Communications. (3). An advanced study on social topics in human relations. Prerequisite: Min. Stud. 380 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. Prerequisite: Min. Stud. 540 or concurrent enrollment. A 30 545 0 4999

548. Practicum in Cross-Cultural Communications. (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 selection of research projects is fundamental. Also evaluative research will be studied. Prerequisite: Min. Stud. 540 or concurrent enrollment. A 30 548 2 4999

580. Individual Projects. (3). Course is designed to provide the student with an educational and experimental background that relates to the minority experience in America. Lectures, written assignments, encounters with related research in the minority communities constitute the teaching methodology for the course. Prerequisite: 30 hours of Wichita State credit or departmental consent. Repeatable for a total of 6 hours. A 30 580 3 2299

725. Concepts of Cross-Cultural Communications. (3). A critical examination of the concepts of cross-cultural communication. An in-depth examination of the rationale used to evaluate different ethnic groups, language and behavior. This course provides a comprehensive understanding of special terminologies and necessary adaptations of communications to between and among diverse ethnic groups in the society. Selections from scholars such as Proctor, Smith, John, Giffin, Patton, Power, Gottman, Rogers and Aragon are studied. A 30 725 2 4999

750. Workshop. (1-4). Workshops are 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 cursory examination of some alternative styles of behavior to deal with problems peculiar to minority people in the United States is undertaken. A 30 750 2 4999

Course for Graduate Students Only

860. Seminar in Cross-Cultural Communication. (3). A review of recent developments, research and areas of application. 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). Lab fee. This course is an introduction to the Chinese language with an emphasis on the basic elements of the language. Prerequisite: Chinese 111 or equivalent learning experience. A 17 111 0 1107

112. Elementary Chinese II. (5). The continuation of the introduction to the Chinese language with an emphasis on learning the fundamentals of pronunciation, reading, understanding, reading, and writing the language. Prerequisite: Chinese 111 or 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 30 semester hours beyond Fr. 112, or its equivalent, and must include the following courses: Fr. 220, 223, 227, 300, 526, and 530, or equivalents. In addition to the above courses 12 hours must be selected from the following courses: Fr. 515, 541Q, 623, 630, 631, 632, 633, 634, 635. No fewer than 9 hours must be in 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 courses listed under Major students must take: 1. At least 21 hours in a second language or 2. At least 15 hours from one or more of the following related fields: other foreign languages, art history, English, history, or philosophy (these courses must be chosen in consultation with the teacher education advisor) or 3. A totally separate second major as prescribed by the Catalog. Strongly recommended are Fr. 525 and 623.

Requirements for entering this program are:
1. Grade point average of 2.75 or higher in French
2. Specific departmental approval based on demonstrated competencies 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 300 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 2 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/NCr only. Open to upper division and graduate students only. This reading 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 will not count toward a degree. A 26 060 0 1102

Lower-Division Courses

111-112. Elementary French. (5-6). Lab fee. Covers speaking, reading and writing, including grammar, reading, and writing. Minimum of 30 semester hours beyond Fr. 112, or its equivalent, and must include the following courses: Fr. 220, 223, 227, 300, 526, and 530, or equivalents. In addition to the above courses 12 hours must be selected from the following courses: Fr. 515, 541Q, 623, 630, 631, 632, 633, 634, 635. No fewer than 9 hours must be in 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 courses listed under Major students must take: 1. At least 21 hours in a second language or 2. At least 15 hours from one or more of the following related fields: other foreign languages, art history, English, history, or philosophy (these courses must be chosen in consultation with the teacher education advisor) or 3. A totally separate second major as prescribed by the Catalog. Strongly recommended are Fr. 525 and 623.

150. Workshop in French. (2-4). Repeatable for credit. A 26 150 2 1102

2100. Intermediate French. (5). French review, with emphasis on conversation, folklore, and modern culture. Prerequisite: 2 units of high school French, or Fr. 112, or departmental consent. A 26 2100 0 1102

215. Study Abroad. (3-6). Transfer of credit from a French-speaking university in (a) grammar, (b) conversation, (c) reading. A 26 215 0 1102

220. Intermediate French Grammar and Composition. (3). Prerequisite: Fr. 112 or departmental consent. A 26 220 0 1102
Courses for Graduate/Undergraduate Credit

Upper-Division Courses

300. Intermediate French Readings II. (3) Intensive reading and analysis of French literary works of all periods. This course may be used to meet the LAS literature requirement. Prerequisite: Fr 223 or equivalent. A 26 300 0 1102

325. Intermediate French Conversation. (3) Conversational practice. Emphasis is on learning new vocabulary and idiomatic structures. Prerequisite: Fr 112 or equivalent. A 26 325 0 1102

Courses for Graduate/Undergraduate Credit

Upper-division courses are given on a rotating basis. Fr 300 is a prerequisite for all upper-division literature and civilization courses, unless otherwise indicated. All literature courses, including Fr 223 and 300, may fulfill the general education literature requirement.

515. Major Topics. (1-4). Special studies in (a) language, (b) literary reports, (c) commercial French, (d) the language laboratory, (e) music, (f) composition and (g) problems in teaching French. Repeatable for credit. Prerequisite: departmental consent. A 26 515 0 1102

525. Advanced Conversation. (3). A course designed to increase fluency in speaking French. Assignments include oral reports, dialogues and work in the language laboratory. Prerequisite: Fr 325 or equivalent. A 26 525 0 1102

526. Advanced Composition and Grammar. (3). Emphasis on themes writing, original compositions and detailed study of modern French grammar. Prerequisite: Fr 223 or equivalent. A 26 526 0 1102

530. Introduction to French Literature. (3). Survey of French literary history from the Middle Ages to the present. Prerequisite: Fr 300. A 26 530 0 1102

540Q. French Literature in English Translation. (3). May be used to satisfy the general education literature requirement but does not count toward a French major or minor. A 26 540Q 0 0312

541Q. Black French Literature in English Translation. (3). A study of the concept of Negritude through the works of major contemporary African and Caribbean writers. No knowledge of a foreign language is necessary. This course may count toward a French major or minor if readings and papers are done in French. A 26 541Q 0 0312

623. Seminar in French. (3). Seminar in French literature, language, or civilization. Prerequisite: two literature courses in French numbered above 500. Repeatable for credit. A 26 623 0 1102

630. Medieval and Renaissance French Literature. (3). Prerequisite: Fr 300 A 26 630 0 1102

631. 17th Century French Literature. (3). Prerequisite: Fr 300 A 26 631 0 1102

632. 18th Century French Literature. (3). Prerequisite: Fr 300 A 26 632 0 1102

633. 19th Century French Literature. (3). Prerequisite: Fr 300 A 26 633 0 1102

634. Contemporary French Literature. (3). Prerequisite: Fr 300 A 26 634 0 1102

635. Introduction to Romance Language Linguistics. Cross-listed as Span 635 and Ling. 635. An introduction to the historical phonology and morphology of the romance languages with particular emphasis on French and Spanish. Prerequisite: departmental consent. A 26 635 0 1102

750. Workshop in French. (2-4). Repeatable for credit. A 26 750 0 1104

815. Special Studies in French. (3). Prerequisite: departmental consent. Repeatable for credit. A 26 815 0 1102

German

Major A. A major in German consists of a minimum of 24 hours beyond the level of Ger. 112. Students may select an emphasis in literature or in language as described below.

The literature emphasis is recommended for students whose concerns are primarily in the humanities or who anticipate graduate study in literature. Students must take Ger. 324, 341 or 441Q, 524, 577, and at least 6 hours in Ger. 650.

The language emphasis is suggested for students whose objectives are in teaching (see Major B), linguistics, or in the application of language skills in support of other professional pursuits. Students must take 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 must consult with the department before enrolling in German courses.

Major B. The teaching major in German at Fairmont 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. Students must also include one of the three options:

1. Complete at least 21 hours in a second language

2. Complete at least 15 hours from one or more of the following related fields: English, history, linguistics, philosophy, or political science (courses must be chosen in consultation with the teacher education advisor).

3. Obtain a totally separate second major as prescribed in the Catalog.

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 include:

1. Grade point average in German of 2.75 or above.

2. Special departmental approval based on demonstrated competencies in the use of both oral and written German (not based on course grades).


Minor. A minor in German consists of 11 hours beyond the 112 level. Students are permitted to count no more than one of the following for the minor credit: 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 for Masters of Arts or Master of Science degree. No previous knowledge of German is required. This course will not count toward a degree. Offered Cr/NCr only. A 17 010 0 1103

Lower-Division Courses

101. Beginning German. (3) For acquiring practical skill in speaking and understanding everyday German as well as general information concerning German-speaking countries. Does not substitute for German 111 A 17 101 0 1103

102. Beginning German II. (3) A continuation of German 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 German 112 A 17 102 0 1103

111. Elementary German I. (5) Lab fee. A 17 111 0 1103

112. Elementary German II. (5) Lab fee. Prerequisite: Ger. 111, 101-102 or equivalent. 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 Fairmont 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 and discussion of short works. Prerequisite: Ger. 112 with grade of C or better, or departmental recommendation. Transfer from Ger. 220. A 17 223 0 1103
225. German Conversation. (2). The development of oral fluency. Prerequisite: Ger. 2200Q 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. Will not count toward fulfillment of language requirement. A 17 441Q 0 1103

Courses for Graduate/Undergraduate Credit

524. Advanced Conversation and Composition. (3). Prerequisite: Ger. 324 or instructor’s consent. A 17 524 0 1103

531. Practicum in German-English Translation. (3). Supervised individual reading and translation from German into English of material in the student’s area of interest: humanities, social sciences, natural sciences, or current affairs. A 17 531 0 1103

577. 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 1505

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 1505

641. German Literature in Translation. (3). Consideration of the works of one major author, from the study of Germanmann or trend of a 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: from 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

350Q. 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. All works will be in translation and no knowledge of Latin or Greek is required. Applies toward a major in classical studies, but not toward a minor in Latin or Greek. A 26 350Q 0 1110

Courses for Graduate/Undergraduate Credit

515. Special Studies. (1-4). Topic announced by instructor. Repeatable for credit. Prerequisite: instructor’s consent. A 26 515 0 1110

531. Advanced Greek. (3). Sophocles and Euripides. Prerequisite: Greek 224. A 26 531 0 1110

532. Advanced Greek. (3). Thucydides. Prerequisite: Greek 531. A 26 532 0 1110

Japanese

Lower-Division Courses

111. Elementary Japanese I. (5). Lab fee. 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 the language. A 17 111 0 1108

112. Elementary Japanese II. (5). Lab fee. This course is a continuation of introductory Japanese language 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 9 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, and:
1. At least 21 hours in a second language or
2. At least 15 hours from one or more of the following related fields: English, Italian for Ital. 223; Ital. 223 or 3 high school units for Ital. 224. A 26 223 0 1104; A 26 224 0 1104.
### Lower-Division Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>511-512</td>
<td>Elementary Latin. (5-5) Basic grammar with emphasis on early reading.</td>
<td>A 26</td>
<td>A 26 111 O 1109</td>
</tr>
<tr>
<td>150</td>
<td>Workshop in Latin. (2-4) Repeatable for graduates.</td>
<td>A 26</td>
<td>A 26 150 2 1109</td>
</tr>
<tr>
<td>210</td>
<td>Intermediate Latin Reading and Review. (5). Latin review and readings of prose and poetry. Prerequisites: Latin 112, 2 units of high school Latin or departmental consent. A 26 210 O 1109</td>
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<td></td>
</tr>
<tr>
<td>223</td>
<td>Intermediate Latin. (3). General review of grammar selected readings of prose and poetry. Prerequisites: Latin 112, 2 years of high school Latin or departmental consent. A 26 223 O 1109</td>
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<tr>
<td>224</td>
<td>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 O 1109</td>
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#### 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, meter, and diction. A 26 541 O 1109
- 542. Vergil’s Aeneid. (3). Selected books of the Aeneid in the original and the rest in translation. Study of imagery, symbolism, structure, meter, and diction. Consideration is given to the place of the Aeneid in the Augustan Rome and in the epic tradition. A 26 542 O 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, Seneca, some in the original and some in translation. A 26 543 O 1109
- 544. Love in Ancient Rome. (3). The relationship of the sexes and the use of myth in the poetry of Ovid, Propertius, Propertius, Tibullus, and Catullus. A 26 544 O 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 O 1109
- 546. Advanced Latin. (3). Directed reading of Latin. Reading may be done in Latin prose composition at the option of the students. Repeatable for credit when content varies. A 26 546 O 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 O 1109
- 653. Lucretius and Epicureanism. (3). Reading of Lucretius’ De Rerum Natura and study of Epicureanism, the atomic theory and Democritian materialism. Consideration is given to the place of Lucretius in Latin poetry. A 26 653 O 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 Cr/NCR only. Open to Latin American studies majors and to upper or graduate students who need to fulfill departmental requirements of a reading knowledge of a foreign language for the Master of Arts or Master of Science. No previous knowledge of Portuguese required. Will not count toward a degree. A 26 060 O 1120

### Lower-Division Courses

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<tr>
<th>Course Code</th>
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<th>Description</th>
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<tbody>
<tr>
<td>111-112</td>
<td>Elementary Portuguese. (5-5). Course emphasis includes understanding, speaking, reading and writing Portuguese. A 26 111 O 1120; A 26 112 O 1120</td>
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<tr>
<td>210</td>
<td>Intermediate Portuguese. (3). Portuguese review, with emphasis on conversational, grammar and cultural readings. Prerequisite: Portuguese 112 or equivalent, consent. A 26 210 O 1120</td>
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### Russian

- There is no major or minor in Russian.

### Lower-Division Courses

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<th>Course Code</th>
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<tbody>
<tr>
<td>111</td>
<td>Elementary Russian. (5). Lab fee. A continuation of Russian 111 in order to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: Russian 111 or equivalent. A 17 111 O 1106</td>
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### Upper-Division Course

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<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>300</td>
<td>Russian Literature in Translation. (3). Consideration of the works of one or two major authors, or a literary movement or trend, or of a specific genre. No knowledge of Russian is necessary. Repeatable once for credit. A 17 300 O 1106</td>
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### Spanish

#### Major

- A major in Spanish consists of a minimum of 30 semester hours beyond Span. 111-112. There are three available options for majors. Basic to all three are the following courses: 220, 223, 225, 300, 325, 525, and 526, or equivalents.

- Literature. In addition to the above courses, a major emphasizing Hispanic literature requires 12 hours of upper-division literature and/or linguistics.

- Language and Civilization. In addition to the basic courses listed above, a major with an emphasis in language and civilization requires 12 hours selected from the following courses: 505, 515 or 622 (1 hour minimum), 552, 557, 626, and 627, or equivalents.

- Teaching. The major with teaching emphasis in Spanish in either the Fairmount College of Liberal Arts and Sciences or the College of Education consists of at least 30 hours beyond Span. 112 or its equivalent. These hours must include the basic hours listed above plus a minimum of 12 upper-division hours, 6 of these chosen from the language major and 6 from the literature major. Span. 623a may substitute for 526.

To complete the teaching major, the student must add one of the following options:

1. At least 21 hours in a second language.
2. At least 15 hours in any acceptable teaching field (see the teacher education adviser for acceptable fields).
3. A totally separate second major as prescribed by the Catalog.
Students who wish to enter the student teaching program must have a 2.75 grade point average in Spanish and departmental approval in order to be admitted to the professional semester. It is strongly recommended that teaching majors take Span. 1105 and or 623a, 1542F, 426, 433, and 466E are required of all majors and minors seeking a teaching certificate.

Majors interested in teaching Spanish at the elementary school level should consult the department's professor in charge of teacher education.

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the Span. 111-112 level and must include Span. 220, 223, 225, and one course at the 500 level or above.

Related Fields. Courses in Spanish or Latin American history, political science, economics, or art are strongly recommended for all majors. With departmental approval courses in related fields taken in the Wichita State University Summer Program in Mexico may count toward the Spanish major.

Native Speakers. Native speakers are those who have completed a substantial amount of their education in a Spanish-speaking country. Native speakers of Spanish are normally not admitted to 100 and 200 level courses. To complete a major, 12 hours of upper-division work is required.

High School Spanish. Students who have completed more than 2 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 O 1105

150. Workshop in Spanish. (2-4). Repeatable credit. A 26 150 2 1105

2100. Intermediate Spanish. (5). Spanish review, with emphasis on conversation and cultural readings. Not open to students with previous credit in Span. 221 (dropped). Designed primarily for students wishing to fulfill the liberal arts language requirement. It is recommended that prospective majors and minors go directly into Span. 223, 225 or 220. Prerequisite: Span. 112 or 2 units of high school Spanish, or departmental consent. A 26 2100 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 or 2 units of high school Spanish or departmental consent. A 26 215 0 1105

220. Intermediate Spanish Grammar and Composition. (3). Prerequisite: Span. 112 or 2 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 readings and reports. This course may be used to meet the LAS literature requirement. Prerequisite: Spanish 1105 or departmental approval in Spanish. A 26 223 O 1105

225. Spanish Conversation I. (2). Prerequisite: Span. 112 or 2 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. 224. Offered Cr/Ncr 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: Spanish 220 or departmental consent. A 26 300 O 1105

325. Spanish Conversation II. (2). Continued study of Spanish Conversation I with continued emphasis on fluency in Spanish and on vocabulary building. Prerequisite: Span. 225 or departmental consent. A 26 325 O 1105

481. Cooperative Education. (1-4). See Span. 281. A 26 481 2 1105

Courses for Graduate/Undergraduate Credit

505. Spanish Phonetics. (3). Cross-listed as Linguistics 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 works, (c) commercial Spanish, (d) 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 O 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

540. Contemporary Spanish Literature in English Translation. (3). Course content may vary from semester to semester, including Spanish and/or Latin American literature. This course may count toward a Spanish major or minor with departmental consent. Repeatable for credit. Prerequisite: departmental consent. A 26 540 0 1105

543Q. Contemporary Chicano Literature. (3). A study of modern and contemporary Chicano writers in the United States, including such writers as Alurista, Ernesto Galarza, Rudolfo Anaya, Jose Villegas, and Corky Gonzales. Knowledge of Spanish is helpful but not necessary. This course does not count toward a Spanish major or minor. A 26 543Q 0 1105

552. Business Spanish. (3). This course will provide students the opportunity to learn and practice business correspondences, business vocabulary, translation and interpretation of business texts. Prerequisite: Span. 256. A 26 552 O 1105

557. Literary and Technical Translating, (3). Intensive translation of literary works, technical and legal documents from Spanish into English and vice versa. Prerequisite: Span 526 or departmental consent. A 26 557 O 1105

560. Spanish Play Production. (1-3). In-depth study of a major work of literature to be 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 O 1105

621. Survey of Latin American Literature. (3). Main currents of Latin American literature from 1800 to present. Prerequisite: Span. 300 or departmental consent. A 26 621 O 1105

622. Special Studies. (1-4). Topic for study chosen with aid of instructor. Repeatable for credit. Prerequisite: instructor's consent. A 26 622 O 1105

623. Seminar in Spanish. (1-5). Special studies in (a) language, (b) Spanish and Latin American culture and civilization, and (c) methods of teaching Spanish in the elementary and secondary schools. Repeatable for credit. Prerequisite: departmental consent. A 26 623 O 1105

625. Contemporary Spanish-American Novel. (3). Prerequisite: Span. 300 or departmental consent. A 26 625 O 1105

626. Spanish Civilization. (3). Intensive study of Spanish culture, including historical and geographical factors in its development, and its contributions to world civilization. Portuguese civilization also is considered. A 26 626 O 1105

627. Ibero-American Civilization. (3). Intensive study of Ibero-American culture, including the historical and geographical factors in its development and its contributions to world civilization. A 26 627 O 1105

628. Contemporary Latin American Theater. (3). A study of contemporary theater from Latin America, including Latin American plays, one-act plays, and short stories. Prerequisite: Span. 300 or departmental consent. A 26 628 O 1105

629. Latin American Essay. (3). Study of nineteenth and twentieth century Latin American writers dealing with the Latin American essay. Prerequisite: Span. 300 or departmental consent. A 26 629 O 1105
the foundations (if any) of morality. Because of the breadth of the philosophical enterprise, the study of philosophy can be approached from many directions and need not involve a hierarchy of prerequisites. Philosophy majors pursue many careers—teaching, law, medicine, city management, carpentry, and sales. The philosophy department reflects the breadth and diversity of the philosophical enterprise and offers a wide variety of courses.

Major. A major requires a minimum of 27 hours of philosophy courses, at least 15 of which must be in courses numbered 300 and above. Each major must meet with a departmental adviser at least once a semester to plan or review a program of study. These programs will be designed in terms of the individual student’s interests and future plans. Up to 12 hours of philosophy courses taken before the decision to major in philosophy will count toward a major. Additional hours may be counted with the adviser’s consent.

Minor. A minor consists of 15 hours of philosophy courses, selected in consultation with a departmental adviser, that will orient students to the philosophical aspects of their major fields.

Lower-Division Courses

100G. The Meaning of Philosophy. (3). An exploration of the meaning of philosophical activity. Through an examination of several basic interpretations of the distinguishing intentions, characteristic procedures, and essential functions of the philosophic endeavor, this course seeks to introduce the student to some of the fundamental problems and possible values of philosophy. The underlying purpose of this course is to develop in the student a broad understanding of the meaning of philosophy as a diverse and self-critical historical enterprise. A 24 100G 0 1509

121. Introduction to Philosophy. (3). A study of philosophical questions about ethics, religion, politics, human nature, knowledge, and reality. The course attempts to assist students in developing their own views and the ability to respond intelligently to philosophical questions. A 24 121 0 1509

125Q. 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 practical problems and opportunities presented by the modern university experience. It seeks to provide clarification and guidance in understanding the university and in choosing one’s own future. A 24 129 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 goals, methods, and limitations 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 relationship between language and philosophy. It will focus on questions such as: What is the relation between language and thought? Language and the world? What can the study of language contribute to the resolution of philosophical problems? A 24 301 0 1509

303Q. Nineteenth Century Philosophy. (3). A study of selected nineteenth century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Kierkegaard, 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 perspectives on positions of business and business practice are analyzed through an investigation of actual cases and issues drawn from contemporary business. Texts are designed for a general audience as well as for the business or philosophy student. Attention will be devoted to such topics as the ethical dilemma of investment/production, the nature and extent of corporate social responsibility, governmental regulation, conflict of interest, employment practices, and environmental responsibility. A 24 305 0 1509

307. Skepticism. (3). Skepticism has assumed many faces. It has been a recognition of the limits of knowledge, a sense for the

Music

See College of Fine Arts section for requirements and curriculum.

Philosophy

The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct itself to such diverse topics as the nature of reality, the conditions of knowledge, the justifications for political authority, the reality of sub-atomic particles, the existence of God, the criteria of aesthetic evaluation, the structure of logical reasoning, and

144Q. Moral Issues. (3). An introduction to philosophical thought about ethics. A number of contemporary moral issues will be discussed and various philosophical approaches to their solutions considered. A 24 144Q 0 1509
incompleteness of the world and a meditation on and celebration of the uncertainties of life. These and other manifestations of the skeptical spirit will be examined in both classical and modern thinkers such as Socrates, Sextus Empiricus, Hume, Montaigne and Halle will be consulted. A 24 307 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. Philosophical problems discussed will include concepts of rationality, decision theory, economic freedom, economic justice, morality, and markets, and the methodology and presuppositions of economic inquiry. A 24 308 0 1509

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 justifiability of civil disobedience, the limits of legal constraints on the individual and the nature and justification of punishment. Attention will be given both to classical and contemporary readings, and both the natural-law and positivist legal traditions will be emphasized. A 24 311 0 1509

315Q. 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 will be discussed. A 24 315Q 0 1509

320. Philosophy of Science. (3). A study of the methods of science, 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 Spinoza, Leibniz, Berkeley, Locke, Hume, Red, Adam Smith, Butler, Hutcheson, Wolf, and Kant, and movements such as empiricism, rationalism, the Scottish common sense school, and idealism. A 24 315Q 0 1509

325. Formal Logic. (3). Cross-listed as Ling. 325. A study of systems of formal logic including sentential and predicate logic. The use of truth tables 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 and families, health care team, professional rights and responsibilities, behavior control, euthanasia and institutional care will be examined. This 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, Pythagoras, the Atomists, the Pluralists, the Sophists, Socrates, Plato and Aristotle. A 24 331Q 0 1509

338. Philosophy of Feminism. (3). Cross-listed as WS 138. An exploration of philosophical issues raised by the feminist movement, with emphasis on conceptual and ethical questions. A 24 338 0 1509

344. Philosophy of Religion. (3). Cross-listed as Rel. 344. An examination of some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, religious morality and the problem of evil. A 24 344Q 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 categories and concepts of justice, and the problem of revolution in moral schemes will be 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, with special attention devoted to literature as an aesthetic phenomenon 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 of the arts, the legitimacy of general art theory, the presuppositions of specialized art theories, the creative act, art and truth, and life, and the nature and function of art criticism. A 24 375 0 1509

481. Cooperative Education in Philosophy. (1-4). See Phil. 281. A 24 481 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

513. Recent British-American Philosophy. (3). Examination of philosophical ideas and movements in recent British and American Philosophy. Movements such as logical positivism, pragmatism, ordinary language philosophy and philosophy after philosophy will be discussed. Readings will be selected from such sources as Russell, Wittgenstein, Pierce, Dewey and Quine. A 24 513 0 1509

515. 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 24 515 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; other minds; the past, present and 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 the 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 section of this course one or more themes or topics in ancient philosophy is explored. Prerequisite: one course in philosophy. 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, causality, particulars, universals, appearance and essences 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, the methodology peculiar to social science, the nature of sound explanation, 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 will include such figures as Husserl, Heidegger, Marx, existentialism, Haymronas, Marburg, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lacan, Derrida, Foucault, and Ricoeur. Philosophical movements examined will include such notions as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics, and marxism. A 24 557 0 1509

585. Studies in a Major Philosopher. (3). A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor's consent. A 24 585 0 1509

590. Special Studies. (3). Topic for study announced by the instructor. Repeatable for credit. Prerequisite: instructor's consent. A 24 590 0 1509

650. Major Seminar. (3). Topic to be announced by the instructor. Prerequisite: departmental faculty seminar. Prerequisites: departmental faculty seminar. A 24 650 0 1509

699. Directed Readings. (2-3). A course designed for the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental faculty seminar. A 24 699 0 1509

The following abbreviations are used in the course descriptions: F stands for lecture and L for laboratory. For example, 2H, 2L means 2 hours of lecture and 2 hours of lab.
Physic

Major. The following courses are required for a physics major: Phys. 213Q-214Q or 313Q-314Q-315Q-316Q, 551, 552, 631-632, and 711; Math. 550 and 545, 547 or 651; and 5 hours of chemistry.

For the Bachelor of Arts (BA), 2 hours of Phys. 516 or 517 are required. Six additional hours of upper-division physics are also required.

For the Bachelor of Science (BS), 4 hours of Phys. 516, 2 hours of Phys. 517, 8 additional hours of upper-division physics, and 5 additional hours of chemistry are required. Ten hours of a 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 6 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 6 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 will acquaint students with the subject matter of physics, the education and work of physicists, and some of the more important and interesting current problems in the field. Not open to students with credit in 213Q, 214Q, 313Q, 314Q. Offered Cr/NCr only. Prerequisite: one year of high school algebra. A 21 101 0 1902

110. Introductory Physics. (4). 3R; 3L. Lab fee. A general physics course for liberal arts students and those who have not had physics in high school. Topics to be included are mechanics, heat, electricity and magnetism, wave phenomena, and modern physics. Not open to students who can meet prerequisites for Phys. 313Q. Prerequisite: one year of high school algebra. A 21 110 0 1902

116. Physical Principles of Mechanics. (2). This course provides basic principles of mechanics for nonmajors in physical education. Students engage in laboratory activities followed by group discussion of the concepts that have been studied. A 21 116 1 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, and the exercise of the student are determined by the particular needs of the profession. Prerequisites: Math. 550 and 545, 547 or 651; and 5 hours of chemistry. 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 which may be included are: comparison of the planets, 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. Lab fee. The application of the techniques and analysis of the data of modern astronomy. This course is intended for the student with some background in the physical sciences. 195G and 196 count as a laboratory science. Field trips are required. Prerequisites: two semesters of high school algebra or the equivalent, or instructor consent, and Phys. 195G, which may be taken concurrently. A 21 196 1 1911

198. Discovery in Astronomy. (3). A selected topic in astronomy will be discussed to develop an understanding of the discoveries and problems of modern astronomy. This course is intended 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

213Q. General College Physics I. (5). 4R; 3L. Lab fee. 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 213Q 1 1902

214Q. General College Physics II. (6). 4R; 3L. Lab fee. Electricity, light and modern physics. This course is a continuation of Phys. 213Q. Prerequisites: Phys. 213Q or 313Q. A 21 214Q 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. Additional topics are recommended as preparation for this course. Natural science majors are required to take the lab. Phys. 315, that accompanies this course. Credit will not be given for both Phys. 213Q and 313Q. Corequisite: Math. 243. A 21 313Q 0 1902

314Q. University Physics II. (4). The second semester of a calculus-based physics sequence. Electricity, magnetism and light are studied. Additional topics are required to take the lab, Phys. 316Q, that accompanies this course. Credit will not be given for both Phys. 214Q and 314Q. Prerequisites: Math. 243 with a grade of C or better and Phys. 213Q or 313Q with a grade of B or better, or Phys. 313Q. A 21 314Q 0 1902


400. Special Studies in Physics. (1-2). Repeatable but total credit may not exceed 6 hours for physics majors. Prerequisite: departmental consent. A 21 400 3 1902

407. Seminar. (1). Student reports on topics of general interest in physics. Repeatable for credit up to 2 hours but may not be counted for credit toward a minor in physics. Prerequisite: 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). Lab fee. A series of courses covering basic physical concepts which provide the general scientific knowledge necessary for the elementary teacher. Prerequisite: inservice elementary teacher. A 21 501 1 1902

516. Advanced Physics Laboratory. (2). 4L. Lab fee. Experiments in classical and modern physics designed to stress scientific method and experimental facilities. The experiments are open-ended projects requiring individual study. Repeatable up to a maximum of 6 credit hours. Corequisite: Phys. 551. A 21 516 1 1902

517. Electronics Laboratory. (2). 1R; 3L. Lab fee. Experiments in electronics that treat some of the applications of electronics in scientific research. Experiments will cover the uses of vacuum tubes, transistors, IC, and digital circuits. Prerequisite: Phys. 314Q. A 21 517 1 1902

555. Physical Optics. (3). Electromagnetic waves, diffraction and interference, radiation, scattering and optical properties of matter. Prerequisites: Phys. 214Q or 314Q and Math. 344. A 21 555 0 1902

601. Special Topics in Astrophysics. (1-2). Several topics in astronomy and astrophysics will be studied in depth. Lectures, independent readings, and student projects may be assigned. May be repeated up to 6 hours. Prerequisites: Phys. 195G and 551. A 21 601 3 1912

621. Elementary Mechanics I. (3). Motion of a particle in one and several dimensions, central forces, the harmonic oscillator and the Lagrangian formulation of mechanics. Prerequisites: Phys. 214Q or 314Q with a grade of C or better and Math. 344 with a grade of C or better. A 21 621 1 1903

625. Electronics. (3). 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 21 625 1 1902

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
with a grade of C or better and Math. 344 with a grade 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. 461 or instructor's consent. A 21 642 0 1902

671. Thermophysics. (3). The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations and an introduction to statistical mechanics. Prerequisites: Phys. 2140 or 3140 and Math. 344. A 21 671 0 1902

701. Advanced Topics in Physics. (3). A course on an advanced, current topic of interest in physics. The topic may be chosen from nuclear physics, solid state physics, astrophysics, biophysics or other areas. Prerequisite: Phys. 711 or departmental consent. A 21 701 0 1902

711. Modern Physics I. (3). Introduction to quantum mechanics, the Schroedinger equation, elementary perturbation theory and the hydrogen atom. Prerequisites: Phys. 651. A 21 711 0 1902


714. Theoretical Physics. (3). Cross-listed as Math. 714. A study of mathematical techniques that may be applied to physics and other sciences. Topics to be covered typically include power series methods, WKBJ method, contour integration, integral transforms, Hilbert space, special functions and solutions of partial differential equations. Prerequisites: Math. 550 and instructor's consent. A 21 714 0 1902


Courses for Graduate Students Only

800. Individual Readings. (1-3). Repeatable for credit up to 3 hours. Prerequisite: 30 hours of physics and departmental consent. A 21 800 3 1902

801. Selected Topics in Physics. (2-3). Repeatable for credit up to 6 hours. Prerequisite: departmental consent. A 21 801 0 1902

807. Seminar. (1). Review of current periodical literature in physics and faculty research. Repeatable for credit up to 2 hours. Prerequisite: 20 hours of physics. A 21 807 9 1902

809. Research. (1-3). Repeatable for credit up to 6 hours. A 21 809 4 1902

811. Quantum Mechanics I. (3). Elementary principles, formulations and methods of quantum mechanics, with special application to atomic and molecular phenomena. Prerequisites: Phys. 621 and 711, or departmental consent and Math. 550. A 21 811 0 1902


832. Classical Electricity and Magnetism II. (3). Continuation of Phys. 831. Prerequisite: Phys. 831. A 21 832 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). The 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 6 of which must be in upper-division courses.

Group 1. Political Theory and Philosophy—Pol. Sci. 300, 345, 444, 547, or 549


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 in 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 this option emphasizes the preparation of undergraduates for public service, those who plan to enter graduate school in the fields of administration and public policy will also 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 (6 hours)—Econ. 201Q, Principles of Economics I, and 3 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 there are no eternal truths, there are eternal problems. Some of the major ideas will include the following: the rulers and the ruled, liberty versus order, the right of dissent, polit-
102. Politics: Who Gets What—Labora-
tory. (1-2). This laboratory explores the pro-
cesses of social conflict. Students collect and
analyze field data to better understand poli-
tical decision making. A 22 101 G 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 inter-
national problems. The intention, however, is
to achieve this aim in a way that is rather
than to transmit facts. The dual aims thus
become the development of a sensitivity on the
part of students to international problems
that will be a part of their lives and to create
a framework in which the students can
analyze the international problems they en-
counter in the future. A 22 103G 0 2207

121Q. American Politics. (3). An analysis of
the basic patterns and structure of the Amer-
can political and social systems and
problems of American politics. A 22
121Q 0 2207

150. Political Science Workshop. (1-
3). Prerequisite: instructor's consent. A 22
150 2 2207

153. Model United Nations. (2-4). A work-
shop to prepare students to participate
effectively in various model United Nations,
especially the Midwest Model UN in St. Louis.
A 22 153 0 2207

155. Practical Politics. (2-3). A course fo-
cusing on either election campaigns or legis-
lative sessions depending on which is in
progress during the specific 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 legis-
lators and interest group leaders are involved.
In addition, the class attends one of the legis-
lative 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. Em-
phasis upon policy formation and administra-
tion, finance and intergovernmental relations.
A 22 216 0 2207

222Q. East Asia. (3). Cross-listed as Hist
222Q. Rel. 222Q, and LAS 222Q. A survey of
basic topics on China, Korea, and Japan
including history, culture, society, philosophy,
religion, politics, and economics. The course
is taught by a team of instructors from several
departments. A 22 222Q 0 2207

226Q. Comparative Politics. (3). An anal-
ysis of the patterns and structures of the
Western democratic and political systems,
transitional regimes and authoritarian or totali-
tarian systems. A 22 226Q 0 2207

228. Autocracy, Dictatorship and Totali-
tarianism. (3). Nazi Germany; Fascist Italy
and Communist systems receive special at-
tention as major prototypes and variations of
the systems being examined. More traditional
dictatorships of one-party states also re-
tain attention. Topics emphasize changes
giving rise to these regimes; leaders-
ships, ideology, terror; the party, revolutionary
personalities; revolutionary takeovers; and
problems and policies of these regimes. A 22
228 0 2207

230. Politics of Developing Areas. (3).
A survey of the political systems in Latin
America, Africa, the Middle East, and
Asia. The course examines the impact of
colonialism as a system, the effects of
colonialism and patterns of emerging na-

300. Political Analysis. (3). Introduction to
traditional and scientific research ap-
proaches in political science. Attention is
paid to content, structure, and methodology
of political science and major challenges that
students will face in their careers. A 22
300 0 2207

315. The Presidency. (3). The presidency
focuses on the role of the executive office.
A 22 315 0 2207

316Q. The Congress. (3). Focuses on the
Congress, with particular attention to inter-
action among the House and Senate and
the role of Congress as a part of the
American political decision-making process.
A 22 316 Q 0 2207

317. Urban Politics. (3). An analysis of poli-
tics in urban areas, including such topics as
the nature and distribution of community
power, influence and leadership, the nature of
crime in urban areas, the role of the city
leadership, and urban problems and policies.
A 22 317 0 2207

318. Political Parties. (3). The role of polit-
ical parties in the American political decision-
making process is examined. A 22 318 0 2207

319. State Government. (3). The role of the
state government in the American political system
is examined. 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
Asia. The course examines the impact of
colonialism as a system, the effects of
colonialism and patterns of emerging na-

321. Introduction to Public Administration. (3).
A general survey of the scope and nature of
government administration, policy, and admin-
istration, administrative regulations and ado-

325. Women in the Political System. (3).
Cross-listed as WS 325. A course focusing on
the role of women in the political system.
A 22 325 0 2207

An indepth examination of the Soviet political
system. Using the United States as a point of
reference, the course compares political
processes in the systems of the two super-
powers. Topics for study include political
ideas and politics; the political system and
the individual, including treatment of political
decisions and relations of power; the state and
the masses, evolution and development of
the Communist party of the Soviet Union;
leadership selection; treatment of minorities;
and the relationship of political parties, govern-
ment, and problems and policies. A 22
330 0 2207

335Q & 336. International Politics and In-
stitutions. (3-3). Focuses on inter-
ternational politics and institutions. Emphasis
is given to the role of international
organizations in the international system,
the role of the United Nations, and the
role of the United States. A 22 335Q 0
2207 & A 22 336 0 2207

338. Soviet Foreign Policy. (3). The con-
cept, content and control of Soviet foreign
relations; instruments and tools of Soviet
diplomacy; analysis of the strategy and tactics
of the Soviet foreign policy and the role of
the Soviet Union in the world. A 22
338 0 2207

345. Classical Medieval Political Theory. (3).
The course is designed to examine the
ideas and the systems of political
thought through works of Plato and Aristotle.
The course explores the political ideas and
the systems of political thought through works
of Plato and Aristotle. The course
explores the political ideas and
the systems of political thought through works
of Plato and Aristotle. The course
explores the political ideas and
the systems of political thought through works
of Plato and Aristotle.

353. Model United Nations. (2-4). A work-
shop to prepare students to participate
effectively in various model United Nations,
especially the Midwest Model UN in St. Louis.
A 22 353 0 2207

Focuses on the role of the Supreme Court
and the role of the federal judiciary. A 22
354 0 2207

355. Practical Politics. (2-3). A course fo-
cusing on either election campaigns or legis-
lative sessions depending on which is in
progress during the specific 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 legis-
lators and interest group leaders are involved.
In addition, the class attends one of the legis-
lative sessions in Topeka. 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 topics in political
science in a seminar setting. Content varies
depending upon the instructor. Repeatable
for credit. A 22 390 0 2207

398. Directed Readings. (1-3). A course
designed for exceptional students to meet
and develop intellectual and academic
skills. Repeatable for credit. A 22 398 3
3207

444. Modern Political Theory. (3). This
course continues the study of Western politi-
cal philosophy beginning with the decisive
break with the classical tradition that was
made by Machiavelli early in the sixteenth
century. Major philosophers studied are
Hobbes, Montesquieu, and Rousseau, who
are known as philosophers of the social con-
tract. They each exercised a great influence on
the creation of the American political system.
Many political theorists—both individual and
collective—were active during the direction of
twentieth century political philosophy, and who exerc ised
a great Influence on the direction of the thought of
the direction of the thought of twentieth century
political science. Philosophers such as Hans Kelsen,
William Barret, Friedrich Nietzsche, and
John Dewey are studied. Attention is given
to the impact of these new philosophies upon
political structures and issues. A 22 547 0 2207

Courses for Graduates/Undergraduate Credit

505. The Politics of Health. (3). A course
designed to show how governmental policy in the
United States makes decisions in the health
arena, describes the political forces shaping
health policy, and analyzes the arguments for and against an
increased governmental role in health. A 22 505 0 2207

506. The Politics of Aging. (3). Cross-listed as
Geron 501. This course will focus on the role
of the elderly as competitors in the political
arena. In assessing the elderly's strengths and
weaknesses, we will analyze the following:
the elderly's role in political behavior, strategies of the elderly—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). Empha-
sis is on the political system of China and non-Western concepts of social organization. Themes of political
integration and political development are used to minimize distortion or cultural bias.
Study encompasses the role of the political system, the role of the senior government,
China is striving to realize. Some assessment is
time for the future development of
communism in China. Topics include Chinese
newspaper, political and culturally distinct
philosophy, political leadership, leadership
currentization and political participation; the
Chinese Communist Party, political commu-
tications, and reaction; political development; policy choices; and major events,
such as the Hundred Flowers Campaign, the
Great Leap Forward and the Proletarian
Cultural Revolution. A 22 524 0 2207

525. Postindustrial Politics. (3). An exami-
nation of the political system of postindustrial
nations, such as the United States, Britain and Japan. Emphasizes cleavage patterns, sta-
Abbreviations, systems and comparative
political analysis. A 22 525 0 2207

533. Policy Development in Foreign Rela-
tions. (3). The process of U.S. foreign policy
making in the American structure of govern-
ment. Particular attention is given to institutional
conflict. A 22 533 0 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 foundation areas (Group I); traditional human oriented areas (Group II), and applied areas (Group III).

The program is designed to prepare students for graduate 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) consists of a minimum of 30 hours in psychology. Psych. 1110 is prerequisite for all higher number psychology courses. All BA majors are required to take Psych. 1110, 401, 411, and 211 or 601. In addition, 6 hours must be taken from each of the groups listed below.

Group One: 302, 322, 332, 342Q, 402, 502Q, 512, or 532
Group Two: 304Q, 314, 324Q, 404, 504, 514, 524, 534, 544, or 604Q
Group Three: 306, 336, 406, 416Q, 446, 526, 546, 556, 606, or 616

Minor. The minor consists of a minimum of 15 hours selected in consultation with the student’s major adviser.

Lower-Division Courses

101. Stress and Stress Management. (3).
2R: 2L. This course is designed to introduce the student the theory of stress and to survey major stress management techniques. Two components of the course will be featured: in-class discussion focusing on understanding the concept and impact of stress, and participation in laboratory modules for the development of techniques. The students will attend class meetings as well as participate in some or all of those training sessions. A 23 101 0 2001

1110. General Psychology. (3). An introduction to the general principles and areas of psychology. A 23 1110 0 2001


211. Advanced General Psychology. (3). A more intensive study of topics from Psych. 111: history and classical schools of psychology, contemporary systems, theories and research in basic areas of psychology. Prerequisite: Psych. 1110. A 23 211 0 2001

Upper-Division Courses


3040. Social Psychology. (3). A psychological study of the individual in the social situation. Prerequisite: Psych. 1110. A 23 3040 0 2001

305. Psychology of Work. (3). A broad survey of psychology and work topics will be covered, including some relevant history, worker selection, training, the psychological impact of menial work, management theory, job evaluation, motivation, recognition, communication and contemporary problem-solving research in worker satisfaction and productivity. A 23 306 0 2001


322. Physiological Psychology. (3). Physiological factors in behavior. Prerequisite: Psych. 111. A 23 322 0 2001

324Q. Psychology of Personality. (3). Theoretical concepts, factors in development and methods of assessment. Prerequisite: Psych. 111Q. A 23 324Q 0 2001


336. Alcohol Use and Abuse. (3). A study of the individual's needs and problems associated with alcohol use. Both non-problem and abusive drinking will be investigated, as well as the prevention of problems linked to alcohol abuse, treatment of alcoholism, and the needs of special populations. Investigation of combined alcohol and drug abuse as well as study of psychosocial aspects of use of drugs other than alcohol will be included in the course. Prerequisite: Psych. 111Q. A 23 336 0 2002

342Q. Psychology of Motivation. (3). Current and classical problems, concerning theory and research in motivation. Prerequisite: Psych. 111Q. A 23 342Q 0 2001

401. Psychological Statistics. (3). Emphasizes basic quantitative techniques in measurement and evaluation of behavior and research. Prerequisites: Psych. 111Q and Math. 111 or 112. A 23 401 0 2007

402. Psychology of Consciousness. (3). Consciousness and its varied states as a psychological process, explored through theoretical, experimental and empirical points of view. Prerequisite: Psych. 111Q. A 23 402 0 2001

404. Psychology of Aging. (3). Cross-listed as Geront. 404. An exploration of current research on the individual's behavioral response to the processes of aging focusing on changes in attitudes, emotions, personality, psychopathology, intellectual skills and achievement after physical maturity. Prerequisite: Psych. 111Q. A 23 404 0 2009


411. Research Methods in Psychology. (4). 3R: 3L. A research course required of all majors. Recitation will cover the philosophy of the experimental approach, experimental design, appropriate data analysis techniques, and historical trends and developments in experimental psychology. Laboratory will expose students to experimental techniques in the major subdivisions of psychology. All students will design, conduct,
and report an independent experiment. Prerequisite: Psych. 401. A 23 411 1 2001

416Q. Psychology and Problems of Society. (3). A study of psychological research and principles applied to various contemporary social issues, and proposals for behavior change. Prerequisite: Psych. 1110. A 23 416Q 0 2005

421. Field Work in Psychology. (3). Special projects and practicums under supervision in public and/or private agency settings. Psychological study, observation, service and/or research may be undertaken with prior approval by the department. Repeatable for a maximum of 6 credit hours, but only 3 hours may be earned per semester. Prerequisites: Psych. 111Q and departmental consent. A 23 421 2 2005

446. Introduction to Applied Behavior Analysis and Social Learning. (3). A study of the basic assumptions, principles and issues of behavior therapy and social learning and of current applications of this general approach to problems in living in a variety of settings such as mental hospitals, prisons, institutional and group home treatment for juvenile delinquents, classroom for normal and retarded children, marital conflict, parentchilding skills, drug abuse, obesity, social skills, and depression. Prerequisites: Psych. 111Q and departmental consent. A 23 446 0 2003

481. Cooperative Education. (1-3). This course is designed to provide the student with practical experience under academic supervision, that will complement the student's academic program. Consultation with and approval by an appropriate faculty agency is necessary. Offered C/N/C only. A 23 481 2 2005

Courses for Graduate/Undergraduate Credit

502Q. Comparative Psychology. (3). The evolution and development of behavior are stressed. Lectures are supplemented by field trips and projects. Prerequisite: one of Group One. A 23 502Q 0 2001

504. Advanced Social Psychology. (3). An intensive review of selected contemporary issues in social psychology. Prerequisite: Psych. 304Q. A 23 504 0 2005

508. Psychology Tutorial. (3). Selected topics in psychology. Repeatable for a maximum of 6 hours of credit. Prerequisites: Psych. 111Q and departmental consent. A 23 508 0 2001

510. Primatology. (3). A survey of the primates (including humans) and their behavior. Topics covered include: Principles of evolution and taxonomy, the transition to hominids, sapience, the evolution of behavior, the development of language, learning in the primates and the development of behavior. Prerequisite: Psych. 111Q and instructor's consent. A 23 510 2 2001


544. Abnormal Psychology. (3). An introduction to the study of abnormality 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. Hypotheses regarding prevention of abnormality are presented. Prerequisite: Psych. 324Q. A 23 544 0 2001

546. Practicum in Applied Behavior Analysis and Social Learning. (3, 4-5). The goals of this course are to train the student in the basic procedures of applied-social behavior analysis and data collection. Students are taught systems and applying behavior change strategies to an individual who is currently experiencing a problem in living. Training will occur in the departmental clinic or in community agencies under the supervision of faculty/agency staff. Repeatable once. This course does not carry graduate credit for clinical-experimental graduate students. Prerequisites: Psych. 446 and departmental consent. A 23 546 0 2001

556. Introduction to Clinical Psychology. (3). Application of psychological principles to the field of problem behavior. Prerequisite: Psych. 324. A 23 556 0 2003

568. Computer Applications to the Behavioral Sciences. (3). This course is an introduction to computer applications to the behavioral sciences. Included are 1) data techniques of analyzing experimental data, 2) statistical applications, 3) interactive computing and computer-based experiments, 4) "canned" statistical programs, 5) word processing, and 6) other computer applications. Prerequisites: 9 hours in the social sciences including Introduction to Statistics or instructor's consent. A 23 568 1 2007

601. Systems and Theories in Psychology. (3). An intensive review of systems and theories in psychology designed to consolidate particular areas of psychology into a more comprehensive view of the discipline. Prerequisite: 15 hours of psychology or instructor's consent. A 23 601 0 2001

604Q. Developmental Psychology. (3). Cross-listed as Geron. 604. Selected topics in psychological development from the perspective of issues and crises across the entire life span from birth to death. The format of the course includes individual projects. Prerequisites: Psych. 314 and 404. A 23 604Q 0 2009

606. History of Psychology. (3). Psychological theory and experimentation from ancient to modern times. Prerequisites: 9 hours of psychology or instructor's consent. A 23 606 0 2001

608. Special Investigation. (1-3). Cross-listed as Geron. 655. Upon consultation with the instructor, advanced students with adequate preparation may undertake original research in psychological problems. Repeatable for a maximum of 6 hours. Prerequisites: 7 hours in psychology and psychological consent. A 23 608 4 2001

616. Operant Conditioning Laboratory. (3). A laboratory to study many aspects of behavior by operant techniques. Prerequisite: Psych. 302. A 23 616 1 2002

648. Advanced Behavior Therapy/Social Learning. (3). Further study of selected topics such as problem solving, systems analysis, cognitive-behavior therapy, token economies, biofeedback and ethics of control of human behavior. With instructor's consent, advanced students from either project may also be undertaken in departmental clinic or community agencies. This course cannot carry graduate credit for clinical-experimental graduate students. Prerequisites: Psych. 546 and departmental consent. A 23 648 9 2001


750. Psychology Workshop. (1-3). A course of specialized instruction, using various problem areas in the field of psychology. Prerequisite: 23 750 2 2001

Courses for Graduate Students Only

802. Seminar in Clinical Psychology. (3). A seminar in clinical social theory, research and practice. Prerequisite: instructor's consent. A 23 802 9 2003

811. Seminar in Cognitive-Behavioral Assessment. (4). 3R; 3L. Rationale and methods of assessing interaction between the individual and the environment. Development of interviewing skills, practical experience in the use of various data collection strategies and experience in the analysis of these collected data. Prerequisite: instructor's consent. A 23 811 9 2003

815. Clinical Research and Practice. (3). Designed to give the student further experience in clinical skills and clinical research. Enrollment is required both semesters of the second year for students concentrating in the clinical area for a maximum of 6 hours. Prerequisite: instructor's consent. A 23 815 2 2003

817. Assessment of Personality and Human Interaction. (2). Rationale and methods of assessing personality as manifested in patterned regularities of interactive behavior with particular reference to behavior disorder and psychotherapeutic relationships. Prerequisites. Psych. 802 and instructor's consent. A 23 817 9 2003


826. Seminar in Behavior Therapy. (4). 3R; 3L. A critical review of theory, research and practice in behavior therapy. Prerequisites: Psych. 302, or equivalent, and instructor's consent. A 23 826 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 general systems theory. Prerequisite: instructor's consent. A 23 830 9 2005

831. Research in Community Psychology. (3). Special topics and group field research projects in community psychology. 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 preventative programs in community agencies and organizations. Repeatable for a maximum of 6 credit hours. Prerequisites: Psych. 830, 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. Prerequisite: instructor's consent. A 23 833 0 2005

834. Seminar in Consultation and Counseling. (3). The theories and techniques of consultation, counseling and interviewing within the context of social systems. Terms are thoroughly examined and applied. Prerequisite: instructor's consent. A 23 834 0 2005


844. Seminar in Personality and Psychosocial Disorders. (3). Relationship of normal behavior development and maladjustment and also a critical review of theory and research. Prerequisites: Psych. 544, or equivalent; and instructor's consent. A 23 844 9 2005

851. Seminar in Physiological Psychology. (3). Intensive study of theory and research in physiological factors in behavior. Prerequisites: Psych. 322, or equivalent, and instructor's consent. A 23 851 9 2001

852. Univariate Research Design. (3). Analysis of variance for various single and multivariate research designs and analysis of variance, multiple comparisons and other selected topics. Also included is the use of computer program packages for the analysis of data. The course emphasizes psychological research in laboratory and applied settings. Prerequisite: Psych. 842 or instructor's consent. A 23 852 9 2001

853. Multivariate Research Design. (3). Multivariate methods, techniques, and design in psychological research including multiple regression, discriminant analysis, profile similarity, factor analysis and other selected topics. Also included is the use of computer program packages for the analysis of data. The course emphasizes research in applied and field settings. Prerequisite: Psych. 842 or instructor's consent. A 23 853 9 2001


870. Seminar in Current Developments. (3). Intensive study of current issues, techniques, research and application. Repeatable for different topics for a maximum of 6 hours. Prerequisite: instructor's consent. A 23 870 9 2001

872. Seminar in Comparative Psychology. (3). Intensive study of psychological and ethological research and theories of behavior. The course is oriented around the evolution and ontogenetic development of behavior. An ethological project is required. Prerequisites: Psych. 502, or equivalent, and instructor's consent. A 23 872 9 2001

873. Seminar in Motivation and Emotion. (3). Intensive study of theory and research in motivational and emotional processes. Prerequisites: Psych. 312, or equivalent, and instructor's consent. A 23 873 9 2001

875-876. Thesis. (2-2). Required of all graduate majors. Prerequisite: adviser's consent. A 23 875 4 2001; A 23 876 4 2001

885. Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisites: Psych. 332, or equivalent, and instructor's consent. A 23 885 9 2001

Public Administration

Several graduate programs are offered in public administration, as described in the Wichita State University Graduate School Bulletin.

Courses for Graduate/Undergraduate Credit

700. Urban Affairs. (3). A 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 students with applied public policy research methods. Emphasis is upon locating, appraising and utilizing secondary sources of data of the type 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 13 702 4 2214

710. 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 develops the principles of systems analysis and the tools by which these principles can be applied. Example applications are taken from urban problems. Emphasis is upon the formulation of realistic models and solutions. Computer techniques are developed in class as 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 materials as theories of decision making, environment for stimulating creativity, cognitive inhibitors to problem identification, alternative evaluation techniques, decision implementation and utilization of quantitative tools in decision making. Prerequisite: instructor's consent. P 13 730 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 in student need and faculty expertise. Directed to Master of Public Administration students. May be repeated if topics are different. Prerequisite: instructor's consent. P 13 755 0 2214

Courses for Graduate Students Only

875-876. Thesis. (2-2). Prerequisite: adviser's consent. P 13 875 0 2214; P 13 876 0 2214

890. Urban Affairs Internship. (3-6). The internship is designed to integrate academic pursuits and practical experience. Students admitted to the internship are assigned to work one or more days each week with an approved government, community or private organization for a period of 3 to 12 months. As a part of the internship experience, the intern is required to submit and be accepted upon an internship paper. Prerequisites: completion of all urban affairs core courses and 6 hours of additional graduate credit courses. 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 will address 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

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 and 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.

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 adviser 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 6 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 6 hours may be taken at the 100 level.
Lower-Division Courses


120G. The Biblical Heritage. (3). The collection of books known as the Bible has been central to the development 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, not confessional. It culminates with a survey of the roles played by the Bible in contemporary American culture. A 15 120G 0 1510

125. World of the Bible. (3). This course seeks to understand the Bible within its geographical, historical, and religious context—the polytheistic world of the ancient near Eastern and Mediterranean civilizations of Babylon, Assyria, Egypt, Persia, Greece, and Rome from the period of the patriarchs to the rise of Christianity. Special attention will be paid to similarities and differences between Biblical ideology and views current in neighboring religious traditions. A 15 125 0 1510

130Q. Introduction to Religion. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on the methods used in the study of religion. A 15 130Q 0 1510

131G. Traditional Religion and the Modern World. (3). A study, both of some of the traditional religious systems (Buddhist, Hindu, Confucian, Taoist, Judaic and Christian) and of several of the important modern criticisms of religion with a view to confronting the problem of whether traditional religion can be significant in the modern world. A 15 131G 0 1510

150. Workshop in Religion. (2-4). A 15 1510

210. Current Religious Issues. (3). A critical study of contemporary issues in the West, with attention to Jewish and Christian perspectives. 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 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, Zionist, etc.). The course focuses on Jewish customs and practices as well as Jewish religious thought. A 15 221 0 1510

222Q. East Asia. (3). Cross-listed as LAS 222Q, Hist 222Q, Rel 222Q. A survey of basic topics on China, Korea, and Japan including history, culture, society, philosophy, religion, politics, and economics. The course is taught by a team of instructors from several departments. A 15 222Q 0 1510

223. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique critical period in the history of India's ancient Vedic tradition. The worldview from which they arise is sharply different in characteristic from the West. One of its consequences has been the direct investigation of consciousness by sophisticated meditation techniques, a type of religiously oriented which India has become famous. This course will examine the development of that worldview and explore the diverse ways in which it has been interpreted and understood as a way of life and path of spiritual cultivation in the Hindu and Buddhist tradition. A 15 223 0 1510

224Q. Christianity. (3). An overview of Christianity from New Testament times to the present time, with development and change of the religious and theological traditions. Catholic, Protestant, and Orthodox Christianity are treated; contemporary problems and trends are explored. A 15 224Q 0 1510

225. Jesus. (3). There have been varied responses to and different 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

230. Jewish/Christian Relations. (3). An exploration of the significant historical and ideological aspects of Jewish-Christian religions through the writings of major religious thinkers such as St. Augustine, Martin Luther, and Martin Buber. Themes include Law and Gospel, the concept of Messiah, the True Israel, the land of Israel, and the question of a modern Jewish-Christian dialogue. A 15 230 0 1510

240. Religion in America. (3). A survey of the beliefs and practices of some of the major religious traditions in the United States. Attention is paid to the role of religion in American society. A 15 240 0 1510

245. Islam. (3). The religion in its geographical, social, political, and cultural context, both Arab and non-Arab. A 15 245 0 1510

250Q. Eastern Religions. (3). An introduction to the religions of India and China. Classical religions and traditions of India and China have been elaborated and interpreted as a way of life and path of spiritual cultivation in the Hindu and Buddhist tradition. A 15 250Q 0 1510

255. Zen and Taoism. (3). Zen is a form of Buddhism that emphasizes spontaneity and the utterance. The way of the here and now, employing spontaneity, nonintellectual methods as the ultimate basis of life and thought. A 15 255 0 1510

260Q. Psychic Phenomena. (3). Spiritual traditions have everywhere and at most times appeared in a trinity of form: natural, divine, and human. This interpersonal view of the psychic, the occult, the astrological, will be the subject of philosophical/psychological investigation. Topics include psychic out-of-body experiences, ESP, clairvoyance, telepathy, ethereal bodies in Hinduism, and the Tibetan Buddhist. 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: departmental option. A 15 280 0 1510

280. Cooperative Education. (1-4). Offered on a Credit/No Credit basis. A 15 280 1 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

312. New Testament Topics. (3). An in-depth study of a major facet of the religion of the New Testament such as the synoptic tradition, Johannine theology, Pauline theology, and intertestamental periods. A 15 312 0 1510

323. Protestantism. (3). This course will trace the development of the Protestant Christian tradition and analyze its distinctive themes. After a historical survey of the family of Protestantism, we shall take up definitively Protestant themes such as justification by faith alone, the authority of scripture, and the primacy of Scripture, interpreting them with current phenomena. A 15 323 0 1510

324. Catholicism. (3). This course will trace the development of the Catholic Christian tradition and analyze its distinctive themes. After a historical survey, the course will stress such distinctive Catholic theological emphases as the notion that grace bestows nature, that a sacramental life is essential for faith, that reason and faith should interlock harmoniously, integrating them with current phenomena. A 15 324 0 1510

327. Primitive Religion. (3). Cross-listed as Anthropology 327. A 15 327 0 1510

331. Modern Protestant Theologians. (3). Critical study of how Protestant theologians in the 19th and 20th centuries responded to modern thought. Includes Schleiermacher, Tertullian, Karl Barth, and others. A 15 331 0 1510

333Q. Women and Religion. (3). Cross-listed as WS 333. An examination of past and present religious roles of women in the cultural and religious context of the Western world. A 15 333Q 0 1510

China's ancient Taoist tradition. The Taoist view of the universe as a harmonious organic unity in which man fittingly participates by selfless spontaneity rather than calculated intervention is radicalized in Zen, and at the same time, it is the Taoist sensibility that leads to the modern interpretation of the Buddhist approaches to enlightenment. This course will trace 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 15 355 0 1510
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 3640 0 1510

346. Philosophy of Religion. (3). Crosslisted as Phil. 346. A 15 3460 0 1510

352. Modern Judaism. (3). A survey of the varieties of Judaism that have arisen since the Enlightenment. The course examines the origins, beliefs and practices of modern Orthodox, Conservative, Reconstructionist and Reform Judaism. In what ways are these different forms of Judaism particularly "modern"? In what ways are they continuations of an older tradition? A 15 3620 0 1510

364. Zionism and Israel. (3). An examination of the national element in Judaism and the movement that has arisen in relationship to this nationalism in the 19th and 20th centuries. The course will conclude with an investigation into the relationship between Zionism and the modern state of Israel. A 15 3640 0 1510

410Q. Comparative Religion. (3). An observation and analysis of the patterns found in the characteristic religious phenomena (e.g., myths, symbols, rites, institutions), with a view to a systematic understanding of man's religious life as it has expressed itself throughout history. A 15 410Q 0 1510

419. Modern Atheists. (3). An examination and critical evaluation of some of the seminal critiques of religion in general and Christianity in particular that have been produced in the modern world. Includes selections from such figures as Spinoza, Voltaire, Feuerbach, Marx, Nietzsche, and Camus. A 15 4190 0 1510

421. Sociology of Religion. (3). Crosslisted as Soc. 521. A 15 4210 0 1510

442. Greek and Roman Religion. (3). The transformations in the religions of the Mediterranean world and the Near East between the conquests of Alexander the Great and the triumph of Christianity under Constantine. The course covers the traditional forms of Greek and Roman religion, the impact of Greek culture and religion on the East after Alexander, the mystery religions, the spread of gentilic cults in the Roman Empire, Gnosticism, astrology, and the development of Christianity within the Roman Empire. At its most inclusive level, the course deals with the particular religious synthesis lying at the basis of Western civilization; the fusion of Jewish, Greek and Roman patterns of thought in the Christian world of late antiquity. A 15 4420 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 in which religions have justified, tried to limit, or ameliorate violence. A 15 4460 0 1510

451. Spiritual and Psychic Experience. (3). An interdisciplinary study of the variety 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 4510 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 tradi-
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 life, including childhood, adolescence, adulthood, middle age and old age. Topics include dating and marriage, the interplay of social and historical contexts and their effects on the self and relationships with others. Prerequisite: Soc. 1110. A 25 300 0 2208

301. Computers and Society. (3). The course has two major objectives: (1) to examine the interactions among humans and microcomputers, and (2) to study the effect of microcomputers on social interaction and socialization within society. In particular, the course focuses upon the work setting and the family. Some of the topics covered include: (a) new roles in the work setting, (b) computer as a family member, and (c) the computer as a social utility. Prerequisite: Soc. 1110. A 25 3180 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 marital 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 Male. (3). The male role in America is examined from a variety of sociological perspectives and within particular settings, e.g., work, family and leisure. Other relevant topics include: socialization, intimacy and adult developmental stages and crisis. Sex role changes and related topics are covered through the examination of contemporary America. A 25 316 0 2208

318. Environmental Sociology. (3). Explores relationships between humans and their environment. Partly emphasized are population, environment, 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 deviant 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. 1110. 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 departmental 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-infant relationships, the role of older children, and the transition from active parenthood. Other topics discussed include single parents, divorce, step-parenting and dual-career parents. Several different parenting techniques and styles will be discussed as well. A 25 325 0 2208

330Q. Social Inequality. (3). An analysis of status, class and caste in various societies especially American society. The relationship of social inequality to various social institutions is also included. Prerequisite: Soc. 1110. A 25 330Q 0 2208

331. Population. (3). The size, composition, distribution and recent trends in the population of the United States and the relation of population to world problems. Prerequisite: Soc. 1110. A 25 331 0 2208

333Q. Sociology of the Future. (3). The future is viewed within the sociological perspective of planned and possible alternatives. A body of literature is presented including theory and field studies of alternative social outcomes, and what indicators are presently available as options for social planners, social critics, as well as the general citizen. Prerequisite: Sociology 1110 or 2200. A 25 333Q 0 2208

334. Sociology of the Community. (3). An exploration of basic unit of social organization, the community. The 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: Sociology 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 the social factors affecting workers and the worker-employer relationship. A comparative study of the distribution of occupations and the roles of workers and management. Prerequisite: Sociology 1110 or Instructor's consent. A 25 335 0 2208

336Q. Health and Lifestyle. (3). Views health as a social characteristic which is defined and influenced by social processes. Studies the social resources for health which exist in social norms, relationships, and the networks. Variations in personal health practices are identified, according to characteristics such as age, sex, and marital status. Consideration is given to the role of changing social standards for health and the stress factors associated with poor health. The social construction of health and its influence on individuals and the social structure of society. Prerequisite: Sociology 1110A. A 25 336Q 0 2208

350. Social Interaction. (3). The course studies the social interactions between people. The emphasis is on the symbolic interactionist perspective in sociology. The goal of the course is for students to understand how social interaction influences their daily activities. Topics include: the meaning and importance of the symbol; the nature and development of self; social roles and their influence on individuals, and the social control of the individual. Prerequisite: Sociology 1110. A 25 350 0 2208

Courses for Graduate/Undergraduate Credit

501. Sociological Statistics. (3). Generally designed to provide graduate students with a basic understanding of the application of statistical techniques to sociological data. The course covers both bivariate and multivariate analysis. Prerequisite: Sociology 1110 or Math. 331Q, 111 or equivalent. A 25 501 0 2208

502. Older People and Organizations. (3). Cross-listed as Geront 502. This course examines the theories and organizations that deal with or are comprised of the elderly. The relationship between social and psychological networks and the participation of the elderly is covered. Prerequisite: Sociology 1110 or Instructor's consent. A 25 502 0 2208

510. Field Research Methods. (3). An examination of a variety of qualitative research tools and techniques used by sociologists. As part of the learning-experience component, students will be involved in direct field observation in natural social environments. Prerequisite: Sociology 1110. A 25 510 0 2208

511. Applied Quantitative Research. (3). Emphasis is placed on applying quantitative designs to sociological problems including survey design, sampling, collection of data and interpretation of results. Prerequisite: Sociology 212 and a course in statistics. A 25 511 0 2208

513. Sociology of Aging. (3). Cross-listed as Geront 513. Analyzes the social dimensions of aging, including social support, family support, and changing demographic structure and role changes and their impact on society. Prerequisite: Sociology 1110A. A 25 513 0 2208

516. Sociology of Sex Roles. (3). Cross-listed as WS 516. A course analyzing the construction of social roles, including the selection of marriage partners, the husband-wife and parent-child relationships, and the role of men and women in society. Prerequisite: Sociology 1110A. A 25 516 0 2208

517. Intimate Relationships. (3). The course is designed to examine the social dimensions of intimacy. The course will include an analysis of intimacy in different types of relationships, i.e., romantic, marriage, friendship, marriage, and research in the area will be reviewed with a special focus on the place of intimacy in social interaction. Prerequisite: Sociology 1110A. A 25 517 0 2208

523. Sociology of Law. (3). The study of law and legal institutions within their social context. Prerequisite: Sociology 1110A. 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 democracies, political structures, and bureaucratic organization and process. Prerequisite: Sociology 1110A. A 25 526 0 2208

527. Violence and Social Change. (3). The analysis of social processes and functions of extreme and violent political behavior, e.g., revolutionary, insurrectionary and protest movements. The course includes an analysis of contemporary social change. Prerequisite: Sociology 1110A. A 25 527 0 2208

537. The Social Consequences of Disability. (3). Cross-listed as Geront 537. An
eclectic survey of the social aspects of disability, and the impact of social values institutions and policies upon adults with disabilities. Appropriate for 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

598. 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 25 598 2 2208

600. Selected Topics in Sociology. (3). Study of a specialized area of sociology with emphasis on student research projects. Areas covered include deviant behavior, political sociology, the family and others. Repeatable for a maximum of 4 hours credit. Prerequisites: Soc 1110, instructor's consent and substantive area course. A 25 600 0 2208

645. History of Sociological Theory. (3). Analysis of emergence of sociological theory. Prerequisite: 9 hours of sociology. A 25 645 0 2208

646. Principles and Concepts of Sociology. (3). Critical evaluation of major principles and concepts, their derivation and relationships to systematic theory. Prerequisite: Departmental consent. A 25 646 0 2208

651. Directed Research. (3). Designed to give the student further research skills in an area of special interest. Students are under the direction of a member of the faculty who will guide 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 2206

687. Introduction to Urban Affairs. (3). Cross-listed as Pol. Sci. 687 and Econ. 687. An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 201 and Soc. 1110 or a course in political science. A 25 687 0 2206

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

Courses for Graduate Students Only

800. Research Methods in Sociology. (3). The application of research methods to sociology data. Included are research design, collection of data, development of questionnaires, schedules and scales, interviewing methods, analysis of data and summary. Prerequisites: Soc. 501 and 510 or 511 or 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 sociology. Included are participant observation, in-depth interviewing, disguised observation and unobtrusive measures. Prerequisites: Soc. 510 or departmental consent. A 25 805 9 2208

815. Seminar in the Family. (3). A review of recent research on the family and the theoretical implications thereof. Prerequisites: Soc. 515 or departmental consent. A 25 815 9 2208

820. Seminar in Social Movements. (3). Analysis of the elements in social movements as factors in social and cultural change. Prerequisite: departmental consent. A 25 820 9 2208

822. Seminar in Deviant Behavior. (3). In-depth examination of recent theory, methods and research in the area of deviance. Implications of future theory development are included. Prerequisite: Departmental consent. A 25 822 9 2208

825. Seminar in Organizational Analysis. (3). Exploration of selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: departmental consent. A 25 825 9 2208

830. Seminar in Stratification and Power Structure. (3). Analysis of the forms and dynamics of social inequality as a socio-political phenomenon. Class, status and power segment contemporary urban society are examined, with reference to their influence and social persistence and/or change. Prerequisite: Soc. 526 or departmental consent. A 25 830 9 2208

834. Seminar in Urban Sociology. (3). Independent research projects in urban sociology. Prerequisite: departmental consent. A 25 834 9 2208

839. Seminar in Juvenile Delinquency. (3). A study of juvenile delinquency from a number of theoretical frameworks, accentuating the contemporary context of the subject matter. The course covers topics of academic and practical interest related to delinquency, i.e., causes of delinquency, recent research, delinquency vs-va this justice system, delinquency and juvenile corrections. Special interest is given to the changing face of delinquency in America today. Student research through utilization of community resources, is encouraged. Prerequisite: Soc. 539 or departmental consent. A 25 839 9 2208

841. Advanced Seminar on Theories of Correctional Treatment. (3). Evaluation of the range of contemporary theories of individual and group techniques of correctional treatments, with special emphasis upon the literature related to process, rationale and outcome research. Prerequisite: Soc. 541 or departmental consent. A 25 841 9 2208

845. Seminar in Sociological Theory. (3). A course emphasizing continuing between European and American social theory. The perspective is both historical and analytical, spanning the 18th, 19th and 20th centuries, and concluding with the works of representative contemporary theorists. Prerequisites: 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 exceeding 6 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. 500 and instructor's consent. A 25 851 4 2208

860. Proseminar—Teaching Sociology. (1). This course focuses on the teaching of sociology. Emphasis is placed on teaching techniques, course organization, and evaluation. Prerequisite: graduate student status. A 25 860 0 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 exceeding 6 hours. Prerequisite: departmental consent. A 25 870 3 2208

875-876. Thesis. (3-3). A 25 875 4 2208; A 25 876 4 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.

Major. A major in social work requires at least 42 hours (33 hours in social work courses and 9 hours in related departments) as follows: SW 2000, 500, 501,
1. Prerequisites: SW methods of meeting needs are included.

500. Social Welfare Policy and Services I. (3). Descriptive approach to the social welfare system, emphasizing its structural and value base. The course focuses on the service component with special attention to the local community service-delivery system. Prerequisites: SW 200Q and Soc. 212. A 25 501 0 2104

501. Social Work Practice I. (3). Focus on social work helping methods including: historical development of the social work profession; identification of basic social work theory and introduction to social work practice methodologies. Prerequisites: SW 200Q and Soc. 212. A 25 501 0 2104

502. Practicum I. (4). Placement in community social welfare agencies for supervised periods of observation and direct service assignment with special emphasis on performance of basic practice skills and understanding of the social welfare agency and its role in the community service network. This course is to be taken concurrently with SW 601 except by departmental consent. Prerequisites: SW 501 and departmental consent. A 25 602 2 2104

503. Topics in Social Work. (2-3). Selected topics in practice, research, administration, social policy and human behavior in the social environment. Prerequisites: SW 200Q and instructor's consent. A 25 603 2 2104

504. Seminar on Practice Issues. (3). A critical look at professional practice issues, including social work research. The course analyzes current social work practice, as well as its future directions. SW 605 is to be taken concurrently except by departmental consent. Prerequisite: SW 601. A 25 604 0 2104

505. Practicum II. (5). Placement in community social welfare agencies for supervised direct service assignments, with emphasis on formulation of appropriate goals. The selection of various social work roles and in-depth development of basic practice skills common to practice in the social welfare field are included. SW 604 is to be taken concurrently except by departmental consent. Prerequisite: SW 602. A 25 605 2 2104

510. Aging: Personal, Social and Professional Perspectives. (3). Cross-listed as Ger 610. An intensive look at the comprehensive role of social work practice and the helping professions in work with the aging. Provides a focus on work with individuals, groups, and communities. Links social with economic and political factors. Highlights current and future developments in social policy, human service practice, and demography as the total life cycle is conceptualized. Prerequisite: departmental consent. 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 26 750 2 2104

Spanish (See Modern and Classical Languages and Literatures)

Speech Communication
A major in the Department of Speech Communication requires a minimum of 30-39 hours with a specialization in one of the following areas:

1. Rhetoric and Communication (36 hours)—Speech 111, 112, 211, 213Q, 216Q or 222, 225Q, and at least 12 hours of electives chosen with the area adviser's consent from rhetoric and communication courses. Majors in rhetoric and communication are encouraged to participate in forensic activities.

2. Theater (39 hours)—Speech 180, 221Q, 243Q, 244, 253, 254, 259, 380, 623Q, 624, 628, plus at least 12 hours of electives chosen with the area adviser's consent from other theater courses. All theater majors are expected to participate in some area in the production of the University Theatre plays after consultation with the staff.

3. Radio-Television Film (35 hours)—Speech 114Q, 214, 215, 220Q or 320, 221Q or 222, 304, 332, 607, and at least 12 hours of electives. Six of the 12 hours of electives must be in courses at the 600 level or above. Six of the 12 elective hours may be taken in other areas related to radio, television, or film with permission of adviser: the remaining 6 must be taken in radio-television-film courses.

Students specializing in speech and/or theater who intend to teach at the secondary level must meet the following requirements for their area of specialization:

1. Rhetoric and Communication (36 hours)—Speech 111, 112, 114Q, 211, 213Q, 221Q, 222, 228Q, 650, 661, plus 6 hours elected with the area adviser’s
consent from rhetoric and communication courses.

2. Theater (39 hours)—Speech 180, 221Q, 243Q, 244, 253, 254, 259, 380, 623Q, 624, 628, 650, 661; plus 6 hours elected with the area advisor’s consent from theater courses.

3. Combined Theater and Rhetoric and Communication (39 hours)—Speech 111, 112, 211, 213Q, 221Q, 228Q, 243Q, 244, 259, 650, 661; plus 6 hours of electives with the area advisor’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 or 222, 304, 322, 322Q, 506, and Joun. 200 and 500, plus 6 hours of electives. The 6 elective hours must be taken in upper division speech or journalism courses. Students must also have a concentration (or minor) of at least 15 hours in one additional field of study with the consent of their advisor.

Minor. A minimum of 15 hours must be selected with the approval of the speech communication department. At least 6 of the 15 hours must be upper division courses. Students interested in a radio-television-film minor are required a minimum of 18 hours and must take Speech 114Q, 214, 304, and 332, plus 6 hours of electives with the area advisor’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. Speech 112 is course major. (The University’s requirements in interpersonal 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 advisors. May be repeated once for credit. Prerequisite: departmental consent. Credit/No Credit. 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 advisors. May be repeated once for credit. Prerequisite: departmental consent. Credit/No Credit. 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 instructional 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 educational levels as well as in most professional and training settings. A 27 650 0 1599

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 0 1599

661. Directing the Forensics Program. (3). A study of the methods and procedures in planning and supervising forensics 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 1599

665. Communicative Disorders. (3). Communicative disorders as ODS 705. A survey of speech, language, and hearing disorders, their identification and treatment, and consideration of the roles of health and educational specialists in total rehabilitative processes. Basic knowledge in normal communicative structures, processes and acquisition is provided for under-standing communicative disorders. Areas introduced include language disabilities in children, adult aphasia, articulation disorders, voice disorders, cleft palate, laryngeotomy, stuttering, cerebral palsy, and hearing impairment. A 27 665 0 1220

675. Directed Study. (2-4). Individual study or projects. Repeatable for credit with departmental consent. Prerequisite: departmental consent. A 27 675 3 1599

750. Workshops in Speech. (2-4). A 27 750 2 1599

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 and techniques of sound blending and reproduction. A 27 214 1 0603

215. Radio Practicum. (2). Application of theory to practice by performing assigned activities at KMUW for 4 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 will be shown in class. A 27 220Q 0 0603

Upper-Division Courses

304. Television Production. (3). Basic principles, procedures and techniques of television production including operation of studio equipment and direction of television 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 KMUW for 6 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). 3R; 3L. Cross-listed as Joun. 322. Theory and technique of preparing news for the broadcast media. Students prepare newscasts and news reports for public radio station KMUW. Prerequisite: Speech 224. A 27 322 0 0602

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 6 hours per week in campus television exercises. Prerequisites: Speech 506 or Instructor's consent. A 27 508 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 actual work in radio and television newsrooms. Prerequisite: Speech 322 or Journ. 322. A 27 522 1 0603

604. Advanced Television Production and Direction. (3). Application of television equipment and techniques for expression of ideas and concepts. Emphasis on visual and auditory presentation to effect 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 administration, 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 broadcasting industry emanating from laws, rules and regulations of various federal agencies, industry self-regulation and citizen action. Emphasis is placed on the underlying philosophy and trends in influencing various segments in broadcast regulatory history. A 27 606 0 0603

607. Radio and TV Programming. (3). Planning, developing and scheduling based upon audience and market analysis, program ratings, principles of evaluation and criticism. A 27 607 0 0603

609. Educational and Instructional Broadcasting. (3). Investigation and application of production techniques for educational and instructional broadcasting, with emphasis on television. Prerequisite: Speech 504. A 27 609 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 clinics. Prerequisite: departmental consent. A 27 011 0 0506

Lower-Division Courses

150A. Debate Workshop. (2). Instruction in theory and techniques of debate and preparation for debating the national high school debate topic. Not repeatable for credit. Prerequisite: departmental consent. A 27 150A 5 0506

190G. Crises in Communication. (3). An exploration of several alternative frameworks by which man copes with and controls the communication environment. The student will have to achieve involved and productive opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other and entire cultures. Multilevel 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 forensic competition, and debate and forensics squad meetings. Repeatable for a maximum of 4 hours credit. May not be counted toward a major. Prerequisite: departmental consent. A 27 202 5 0506

211. Persuasive Speaking. (3). Training in influencing human behavior in socially acceptable ways via the spoken word. A 27 211 0 0506

213Q. Argumentation and Advocacy. (3). A study of the principles of effective rational discourse, oral and written. Dealing with controversial issues in public deliberation, forensic and educational areas. Includes valid and fallacious reasoning as well as tests of evidence. A 27 213Q 0 0506

222. Improving Voice and Diction. (3). 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 anatomy of the vocal mechanism and the International Phonetic Alphabet are studied for practical application in the improvement of voice and diction. A 27 222 0 0506

226. Parliamentary Law and Procedure. (1). The parliamentary rules governing the order and conduct of meetings and the methods of keeping and writing minutes and resolutions. A 27 226 0 0506

228Q. 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 small group situations. A 27 228Q 0 0506

Upper-Division Courses

312Q. Nonverbal Communication. (3). A study of research and theory 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 0506

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 0506

335. Development of Rhetorical Theory. (3). Review of the rhetorical foundations of contemporary communication theory from the perspective of oracular works and works encompassing Graeco-Roman, Medieval English and American rhetorical thought. A 27 335 0 0506

402. Debate and Forensics. (2). Research and preparation for debate and individual speaking events, participation in intercollegiate debate and/or forensic competition, and debate and forensics squad meetings. Repeatable for a maximum of 4 hours credit. May not be counted toward a major. Prerequisite: departmental consent. A 27 402 5 0506

Courses for Graduate/Undergraduate Credit

612. Contemporary Theories of Oral Communication. (3). Conceptual models useful in the study of communication and the application from selected areas of psychology, sociology, anthropology and other related fields. A 27 612 0 0506

613. Advanced Theories of Argumentation. (3). Intensive examination of the principles of reasoned discourse. A 27 613 0 0506

615. Language and Symbolic Processes. (3). Application of the theoretical framework of general semantics, linguistics and psychodynamics to the analysis of oral language behavior. Knowledge of language usage that leads to conflict, confusion, and direction and development of methods of accuracy and precision in language usage. A 27 615 0 0506

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 0506

635. Leadership Techniques for Women. 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 exercise in group dynamics. A 27 635 0 0506

636. Advanced Public Speaking. (3). Theory and practice in the various forms of platform speaking for the academically mature student. Course includes such special topics as: the super-charged speech, speeches of goodwill, tribute, keynote and courtesy. A 27 636 0 0506

637. Theories and Effects of Mass Persuasion. (3). An analysis of the classical, contemporary and homogenetic theories of mass persuasion. Mass-communicated persuasion compared to persuasion in other audience settings. Conceptual models, typological effects and contributory agents of mass persuasion. Differential persuasive powers and advantages attributed to the several media. Effects of message content on mass audiences are explored. A 27 637 0 0506

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 770 or departmental consent. A 27 672 5 0506

712. Advanced Interpersonal Communication. (3). Advanced exploration of concepts and variables in interpersonal communication through the study of different theories and as well as practical experiences in dyadic and small group communication. Prerequisite:
Theater

Lower-Division Courses

143G. 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 27 390 2 1007

Courses for Graduate/Undergraduate Credit

518 & 517. Playwriting I and II. (3 & 3). Cross-listed as Eng. 517 and 518. The writing of scripts for performance. Emphasis is on both verbal and visual aspects of playwriting. If possible, the scripts will be performed. Prerequisite: instructor's consent. A 27 516 0 1007 & A 27 517 0 1007

542. Advanced Acting. (3). Continued development of methods established in Speech 243Q, with additional emphasis on contemporary vocal and movement techniques. Prerequisites: Speech 243Q and sophomore standing. A 27 542 0 1007

544. Advanced Stagecraft. (3); R; L arr. A study of the principles of scale perspective and foreshortening applied to the stage with consideration of the elements of design and composition, light and shadow, as employed in scene design. All elements of advanced stagecraft: new materials and scenic techniques are considered in this study. Students conduct practical projects in the design of settings for a variety of productions. They must complete at least one project design including elevation drawing, water-color perspective, scaled model and a complete set of working drawings. Prerequisite: Speech 244. A 27 544 0 1007

221Q. Oral Interpretation. (3). The development of the mental, vocal and analytical techniques essential to oral interpretation of literature. A 27 221Q 0 1007

243Q. Acting I. (3). Emphasis on the internal techniques of acting, on characterization and on the actor's analysis of 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 1 1007

253. Costuming for the Stage. (3); R; L arr. Basic principles of costume design and construction, pattern making, material 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

262. Academic Theater Practicum. (2). The investigation and exploration of the theatrical arts in the classroom with the student as a participant in the university community. This course is designed to reinforce the research, writing, directing and performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable once for credit. A 27 662 2 1007

263Q. Development of the Theater I. (3). The history of theatrical activity as a social institution and an art form, from its beginning to the 17th century. Representative plays, methods of staging and theatrical architecture of various periods are included. A 27 623Q 0 1007

264Q. Development of the Theater II. (3). From the 17th century to the present. A 27 624Q 0 1007

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 4 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 27 390 2 1007

Courses for Graduate Students Only

820. Investigation and Conference. (2-3). Directed research and experimentation for graduate students in some phase of (a) production, (b) theater history and production, (c) radio-television or (d) the teaching of speech. Repeatable for credit up to a total of 6 hours. A 27 820 3 1007

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 plays. A 27 824 0 1007

830. Theories of Rhetoric: Classical. (3). Cross-listed as Eng. 825. An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Principal emphasis is on Ovid, Terence, Plato, Aristotle, Quintillian, Cicero and Long. A 27 830 3 1006

831. Theories of Rhetoric: Medieval, Renaissance and 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 system associated with such figures as August.

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 27 860 9 1599

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 and comparative study of speech curricula today and projected to the future. A 27 867 0 1599

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 ways of increasing her capacity to function as a full human being 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, 388Q, and 589. 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 in one field in another field may not be included. The minor consists of 15 hours, including WS 387Q and 388Q. 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 (Honrs. 301E), Discovering Regional Women (Wom. St. 539), Issues in Gender Role Counseling (CSP 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 will focus on the needs and interests of currently employed women and those returning to the world of work. A 10 180B 0 4903

180C. Women's Sexuality. (1). This course will present information on women's sexuality from physiological, psychological, and sociocultural perspective. A 10 180C 0 4903

180D. Domestic Violence. (1). This course will deal 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 will explore the cultural myths and stereotypes about rape. A 10 180E 0 4903

180F. Sex and Spirituality. (1). This course will explore the influence of religious images and doctrines on the sexuality of women and men. A 10 180F 0 4903

Advanced Assertion Training for Women (1). This course is for women with a field placement who have already taken Assertion Training for Women. A 10 180G 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 10 325 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. An exploration of philosophical issues raised by the feminism movement, with emphasis on conceptual and ethical questions. A 10 338 0 4902


380. Special Topics. (1-3). This course will focus on special topics of interest to women’s studies. A 10 380 0 4903

382. Women in the Administration of Justice. (3). Cross-listed as AJ 382. A 10 382 0 2105

387Q. Women in Society: Cultural Images. (3). This course examines the roles, relationships and functions of women in our society as reflected in such areas as art, literature, music, religion, psychology, education and politics. Women in other cultures and other times will also be considered, as well feminist visions of the future. (Course not available for credit to students who have taken Humanities 389.) A 10 387Q 0 4903

3880. Women in Society: Social Issues. (3). This course examines women’s efforts to claim their identity from historical, legal and social perspectives. Included for consideration are recent laws relating to women's rights, contemporary issues (such as rape, day care, women’s work, the future of marriage), and the relationship of women’s rights to human rights. (Not available for credit to students who have taken Humanities 389.) A 10 388Q 0 4903

390Q. Motherhood: Myths and Realities. (3). This course focuses on the nature of motherhood as idea, myth and experience. Stereotypes about motherhood, approaches to motherhood in historical settings and time periods, religious attitudes toward motherhood, the adult "child" and her/relationships with mother, the experience of childbirth, motherhood as related to economic and political realities, and the future of motherhood are some of the topics explored in the course. A 10 390Q 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 a professional and/or experiential experience designed to complement and enhance the student’s academic program. Offered Cr/nc only. A 10 481 0 4999

499B. Women in American Film. (3). (Cross-listed as Amer. Stud. 499B) The changing role of women in 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 Victorian prissies, flappers and vamps of the twenties, chorus girls and fortune-hunters of the thirties, patriotic housewives, professionals, and “Rosie the Riveter” of the forties. The sex objects 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

530. The American Woman in History. (3). Cross-listed as Hist. 530. A 10 530 0 2205

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 will also be given to women in the field of law, such as lawyers and legislators. A 10 533 0 4903


535. Images of Women in Literature (3). Cross-listed as Engl. 535. Women characters as stereotypes, archetypes and fully developed human beings in the works of various authors. A 10 535 0 1502

5360. Writing by Women. (3). Cross-listed as Engl. 536. The work of major women writers, both British and American, in poetry and prose. A 10 5360 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 will focus on advanced levels of interest to women's studies. A 10 580 0 4903

580B. History of Women's Culture. (3). This course will survey 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 writing. To be offered as a seminar in advanced topics in women's studies. 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 skills in 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

University Faculty—Fall, 1984

Date or dates following title refer to time of initial and successive appointments. Faculty listed have academic rank.


Ackerman, Paul D., Assistant Professor of Psychology (1966). BA, University of Kansas, 1964; MA, 1966; PhD, 1968.

Adams, Carl L., Assistant Professor of German (1965). BA, Wichita State University, 1963; MA, Washington University, 1967; PhD, 1975.


Adkins, Russell F., Assistant Professor of Educational Technology and Associate Dean for Media Resources Center (1974). BA, University of Kentucky, 1966; MS, Clarion State College, 1973; PhD, 1977.


Aizuca America-Joquin, Carlos, Assistant Professor of Finance (1983). BBA, National University of Mexico, 1971; MBA, 1975.

Alexander, David R., Associate Professor of Physics and Director of Lake Alton Public Observatory (1971). BS, Kansas State University, 1967; MA, Indiana University, 1968; PhD, 1977.


Allegretti, Robert L., Assistant Professor of Sociology (1967). BS, Pittsburg State University, 1959; MA, 1960; PhD, University of Missouri, 1969.

Allen, Anneke S., Associate Professor of Chemistry (1964). Candidate Ryukyu University Groningen Netherlands, 1952; PhD, Tulane University, 1965.


Alley, Robert D., Professor of Secondary Education and Associate Dean of Education (1967). BS, Iowa State University, 1957; ME, University of Montana, 1960; EdD, Arizona State University, 1967.

Anderson, Lana, Assistant Professor and Supervising Director of Dental Hygiene (1964). Dental Hygiene Certificate, Wichita State University, 1972; DOD, Boyne-Creighton School of Dentistry, 1982; Periodontist, University of Missouri-Kansas City, 1984.


Anderson, Robert E., Professor of Educational Administration (1967). BA, University of Iowa, 1952; MA, 1953; EdD, University of Nebraska, 1963.


Astert, ira, Assistant Professor of Mathematics and Statistics (1966). BA, University of Zaragoza, Spain, 1942; MS, Dalhousie University, 1959; PhD, University of Saskatchewan, 1963.


Babich, Judith, Assistant Professor of Speech Communication (1984). BA, Edgefield College, 1974; MA, University of Cincinnati, 1976; PhD, University of California, 1981.

Bair, Sue F., Assistant Professor of Physical Education (1966). BA, Wichita State University, 1961; MA, 1967.

Bajaj, Prem N., Associate Professor of Mathematics and Statistics (1968). BA, Punjab University, 1951; MA, 1954; MS, Case Western Reserve University, 1967; PhD, 1968.


Ballenger, Marcus T., Associate Professor of Elementary Education (1970). BS in Ed, North Texas State University, 1959; MED, Texas Tech University, 1963; EdD, 1970.

Barnes, Arlos K., Assistant Professor of Physical Therapy (1982). BS, Wichita State University, 1977; MS, University of Kansas, 1983.


Bastida, Elena M., Assistant Professor of Sociology (1981). BA, Kansas State University, 1971; PhD, University of Kansas, 1979.

Bateman, Morita M., Associate Professor of Decision Sciences (1966). BSME, University of South Carolina, 1946; MS, University of North Carolina, 1950; PhD, Oklahoma State University, 1967.


Beckman, Steven, Assistant Professor of Economics (1982). BA, University of California, 1966; MS, University of Wisconsin, 1976.

Benedict, Richard Alan, Associate Professor of Management (1971). BA, University of Southern California, 1966; PhD, Texas Tech University, 1971.


Benningfield, Lloyd M., Professor of Electrical Engineering and Dean for Graduate Studies and Research (1967). BSEE, Oklahoma State University, 1951; MSEE, University of Missouri, 1957; PhD, Purdue University, 1965.

Benson, Fred W., Assistant Professor of Administration of Justice (1976). BA, Earlham College, 1952; MBA, University of Michigan, 1954; JD, 1957.

Berg, J. Robert, Professor of Geology (1946). BA, Augustana College, 1938; MS, University of Iowa, 1940; PhD, 1942.

Bernhardt, Walter D., Professor of Aeronautical Engineering (1954, 1964). BSEE, Kansas State University, 1956; BS, Wichita State University, 1965; PhD, Oklahoma State University, 1964; Licensed Professional Engineer—Kansas.


Biller, Ernest F., Assistant Professor of


Gibson, George, Professor of Opera Theatre and Voice (1967, 1980). BM, University of Miami, 1956; MM, University of Texas, 1959; DMA, University of Southern California, 1971.


Gladhart, Stephen C., Chairperson of the Department of Health Science, Director of the Master of Health Career Program. Acting Director of the Physician Assistant Program, and Assistant Professor (1974). BA, Wichita State University, 1969; MA, 1972; EdD, University of Kansas, 1977.

Glasier, Mark A., Assistant Professor of Center for Urban Studies (1981). BA, Wichita State University, 1970; MA, 1974; PhD, University of Southern California, 1981.

Gleson, Kenneth G., Professor of Educational Administration and Director of the Bureau of Educational Placement (1965). BA, Wichita State University, 1952; EdD, 1964.


Graham, Archie Richard, Professor of Mechanical Engineering and Associate Director of Undergraduate Program (1965). BSME, Kansas State University, 1957; MS, 1960; PhD, University of Iowa, 1966.


Graham, Gerald H., R. P. Clifton Distinguished Professor of Management (1967). BS, Northwestern State College, 1959; MSBA, 1960; PhD, Louisiana State University, 1968.

Graham, J. Kevin, Chairperson of Department of Communicative Disorders and Sciences (1966). BS, Wayne State University, 1948; MA, 1951; PhD, Northwestern University, 1955.

Gray, James, Associate Professor of History (1963). AB, University of California at Los Angeles, 1954; PhD, 1966.

Gray, Margaret Ann, Instructor of Management and Director of the Center for Entrepreneurship (1981). BA, Pittsburgh State University, 1972; MBA, Wichita State University, 1981.

Greenberg, Gary, Associate Professor of Psychology (1966, 1970). BS, Brooklyn College, 1962; MA, Wichita State University, 1964; PhD, Kansas State University, 1970.

Gregg, Alvin L., Assistant Professor of English (1968). BA, Texas Tech University, 1965; MA, 1967; PhD, University of Texas, 1969.

Grewal, Mahesh S., Professor of Mechanical Engineering (1969). BSCE, University of Allahabad, India, 1953; BS, University of California at Berkeley, 1957; MS, 1959; PhD, 1962.


Griego, Viola M., Assistant Professor of Biological Sciences (1983). BS, New Mexico Highlands University, 1971; MS, 1973; PhD, Washington State University, 1976.

Gries, John C., Associate Professor of Geology (1971). BS, University of Wyoming, 1962; MS, 1965; PhD, University of Texas, 1968.

Griffith, Kathryn, Professor of Political Science (1954). BA, Wichita State University, 1947; MPA, Syracuse University, 1954; PhD, University of Chicago, 1967.

Grotius, William G., Associate Professor of Chemistry (1980). BS, American University of Beirut, 1969; PhD, University of Kentucky, 1971.


Gunderson, James N., Professor of Geology (1980). BS, University of Wisconsin, 1949; MA, University of California at Los Angeles, 1955; PhD, University of Minnesota, 1960.


Hahn, Jennifer A., Assistant Instructor of Guitar (1973).

Halstead, Helen L., Assistant Professor of Nursing (1970). BS, University of Kansas, 1955; MEd, University of Minnesota, 1959; PhD, Kansas State University, 1962.


Hardy, James Lynn, Professor and Chairperson of Department of Music Education (1965). BS in Ed, Southwest Missouri State University, 1949; MME, University of Kansas, 1956; PhD, University of Oregon, 1963.

Harmon, Dorothy A., Instructor and Assistant Director, Marcus Center for Continuing Education (1974). BA, Wichita State University, 1946.

Harmon, William W., Assistant Professor of Physics (1980) and Assistant Professor of Health Administration and Education (1982). BS, Johnson C. Smith University, 1968; MA, Seton Hall University, 1974; PhD, Kansas State University, 1984.


Hawley, Donna J., Associate Professor of Nursing and Director of Graduate Nursing (1981). BSN, College of St. Mary, 1968; MA, University of Missouri at Kansas City, 1971; MN, University of Kansas, 1980; EdD, 1983.

Hayden, Bryan S., Associate Professor of English (1965). BS, University of Rochester, 1958; PhD, 1969.


Headley, Esther L., Instructor of Marketing and Associate Director of MBA Program (1980). BBA, Wichita State University, 1979; MA, 1983.

Heilman, Charles E., Assistant Professor of Sociology (1965). BA, Washburn University, 1936; JD, 1939; MA, Wichita State University, 1964.

Heilman, Jim, Assistant Professor of Graphic Design and Publications Designer, Office of University Relations (1981). BA, Wichita State University, 1972; MA, 1975.

Henderson, Jane S., Assistant Professor of Nursing (1980). BS, University of Missouri at Columbia, 1967; MN, Wichita State University, 1980.


Hersch, Philip, Assistant Professor of Economics, Queens College (1974). BA, Ohio State University, 1978; PhD, 1982.

Hershey, Myrliss A., Associate Professor of Psychology (1949). AB, Indiana University, 1940; MA, 1942; PhD, 1947.

Hartman, John J., Professor of Sociology (1968). BS, Southwest Missouri State University, 1961; MS, University of Missouri, 1963; PhD, 1966.


Vartabedian, Robert A., Assistant Professor of Speech Communication and Director of Forensics (1961). BA, California State University, Fresno, 1974; MA, Wichita State University, 1980; PhD, University of Oklahoma, 1981.


Vickery, W. Dean, Assistant Professor of Administration and Admissions Dean for Student Affairs in College of Business Administration (1971). BA, Wichita State University, 1964; MS, 1968.

Vincent, Michael, Assistant Professor of French (1980). BA, St. John's University, 1972; Diplome de langues et de civilisation francaise, Universite de Paris, 1973; MA, University of Minnesota, 1974; PhD, 1980.

Waddell, Mina Jean, Assistant Professor and Education Librarian, Library (1965). BA, Wichita State University, 1936; MS, Emporia State University, 1950; PhD, University of Illinois, 1961.

Wahlbeck, Phillip G., Professor of Chemistry (1972). BS, University of Illinois, 1954; PhD, 1968.

Wheaton, 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, 1967.


Washburn, John L., Assistant Professor of Nursing (1983). BSN, Wichita State University, 1973; MS, Texas Women's University, 1975.


Watson, Linda Anne, Assistant Instructor of Nursing (1979). BA, Wichita State University, 1973; MS, University of Northern Colorado, 1977; PhD, 1981.


Webber, Carolyn, Coordinator of Speech Communication Laboratory (1980). Diploma, St. Francis Hospital School of Nursing, 1954; BS, University of Colorado, 1960; MSN, Catholic University of America, 1969.

Wellbrock, Mildred, Instructor and Coordinator of Health Science (1978). BS, Marion College; 1941; MS, Creighton University, 1962.


Welshbacher, Richard C., Professor of Speech Communication and Theater and Director of Theater (1958). AB, Denison University, 1948; MA, University of Denver, 1950; PhD, Ohio State University, 1954.


Wentworth, C. Russell, Associate Professor of Administration, Dean of College of Business and Continuing Education (1971). BA, Michigan State University, 1943; MA, 1946; PhD, 1951.

Wentz, Walter J., Associate Professor and Chairperson of Health Administration and Education (1978). BA, University of Iowa, 1949; MA, 1950; PhD, 1963.

West, Thomas J., Jr., Associate Professor of Aeronautical Engineering (1957, 1963). BS, Wichita State University, 1955; MS, 1961; PhD, University of Kansas, 1969; Licensed Professional Engineer—Kansas.


Whitfield, William R., Associate Professor of Mathematics and Statistics (1962). BS, Tulane University, 1965; MS, 1961; PhD, New Mexico State University, 1971.

Williams, Brian W., Assistant Professor and Business Librarian, Library (1983). BA, Ball State University, 1975; MBA, 1981; MLS, Indiana University, 1984.

Williamson, L. Keith, Assistant Professor of Speech Communication and Coordinator of MA Program in Communication (1977). BA, Wichita State University, 1965; MTh, Southern Methodist University, 1968; PhD, Temple University, 1974.

Williams, John H., Professor of Elementary Education (1968). BA, Wichita State University, 1958; MEd, 1964; EdD, University of Oklahoma, 1970.

Williams, Donald R., Associate Professor of English and Coordinator of General Education (1971). BA, University of Washington, 1960; MA, Pennsylvania State University, 1963; PhD, Indiana University, 1971.

Winget, Lynn W., Professor of Spanish (1961). BA, Wichita State University, 1943; MA, University of Wisconsin, 1949; PhD, 1953.


Woo, Trong, Assistant Professor of Computer Science (1984). BS, National Taiwan Normal University, 1967; MS, Southern Illinois University, 1976; PhD, University of Southern Louisiana, 1982.


Yeolis, Catherine G., Assistant Professor of Secondary Education (1979). BS, Michigan State University, 1963; MS, Purdue University, 1973; PhD, 1978.


Youngman, Arthur L., Assistant Professor of Biological Sciences (1966). BA, Montana State University, 1959; MS, Case Western Reserve University, 1961; PhD, University of Texas, 1965.

Zander, Melvin E., Associate Professor of Chemistry (1966). BA, Friends University, 1960; MS, Wichita State University, 1963; PhD, Arizona State University, 1965.


Zoller, Peter T., Associate Professor of English (1973). BA, University of San Francisco, 1969; Master of Claremont Graduate School, 1966; PhD, 1970.

Zumwalt, Glen W., Distinguished Professor of Aeronautical Engineering (1968). BS, University of Texas, 1948; BSME, 1949; MSME, 1953; PhD, University of Illinois, 1959; Licensed Professional Engineer—Kansas.

Adjunct Faculty—Fall, 1984

Abshire, Patsy—Dental Hygiene
Adams, Christina J.—Respiratory Therapy
Aguilera, David—Medical Technology and Cytotechnology
Ahrens, Jackie—Medical Technology and Cytotechnology
Alexander, Holly—Medical Technology and Cytotechnology
Allison, Stephen—Physical Therapy
Altenhofen, Marilyn—Physical Therapy
Ambrose, Gayle—Physical Therapy
Anderson, James E.—Marketing and Small Business
Anderson, Mary R.—Medical Technology and Cytotechnology
Armstrong, Janet—Medical Technology and Cytotechnology
Aronett, Debra J.—Finance, Real Estate, and Decision Sciences
Arterburn, Joan S.—Physical Therapy
Aumack, Pat—Physical Therapy
Balduin, Ronald L.—School of Accountancy
Barboza, Jose—Physical Therapy
Barden, Bobbi K.—Respiratory Therapy
Barrett, William J.—Physical Therapy
Barrett, Jane L.—Respiratory Therapy
Barrett, Elizabeth—Physical Therapy
Barlow, Beth—Nursing
Barney, Nancy—Nursing
Bays, Sylvia—Medical Technology and Cytotechnology
Beachy, Ruth—Physical Therapy
Bedard, Kathy—Medical Technology and Cytotechnology
Becker, Alice—Medical Technology and Cytotechnology
Becker, D. Wayne—Industrial Education
Benedict, Esther E.—Mathematics and Statistics
Benedetti, Beverly—Nursing
Bitterman, Jennifer—Physical Therapy
Blackwell, Mark J.—Physical Therapy
Blasser, Patricia Ann—Physical Therapy
Blomhoff, Carole—Physical Therapy
Blum, Shelly—Respiratory Therapy
Boehm, Marjorie B.—Medical Technology and Cytotechnology
Bowles, Diane—Physical Therapy
Bowles, Mary—Physical Therapy
Broberg, L. Eileen—Medical Technology and Cytotechnology
Brown, Gary—Physical Therapy
Brown, Ron—Medical Technology and Cytotechnology
Brunsgard, Rosie—Medical Technology and Cytotechnology
Bue, Gary D.—Respiratory Therapy
Bugg, Gary—Health Administration and Education
Burger, Dave—Medical Technology and Cytotechnology
Burger, Pamela A.—Respiratory Therapy
Bulman, J. Walker—Physician Assistant
Byrne, Robert—Physician Assistant
Caliendo, Daniel J.—Health Administration and Education
Calvert, Kathryn—Medical Technology and Cytotechnology
Campuzano, Mary K.—Nursing
Cannon, Susan—Physical Therapy
Carey, Carol—Physical Therapy
Carmony, John—Religion
Cavanaugh, Kim A.—Respiratory Therapy
Chambers, Barbara—Medical Technology and Cytotechnology
Chard, Frederick—Physician Assistant
Chattlin, Ann L. Harris—Medical Technology and Cytotechnology
Chenault, Diane—Medical Technology and Cytotechnology
Cho, Sechin—Medical Technology and Cytotechnology
Coats, Linda J.—Physical Therapy
Colby, Linda—Physical Therapy
Colby, Charles Chris—Physical Therapy
Colby, Jennifer A.—Physical Therapy
Collier, H. William—Health Administration and Education
Collins, Ronald—Medical Technology and Cytotechnology
Corrigan, Dianne M.—Physical Therapy
Corrigan, Margaret—Medical Technology and Cytotechnology
Cook, Beverly J.—Dental Hygiene
Cook, Everett L.—Aeronautical Engineering
Cook, Lloyd—Respiratory Therapy
Cosman, P. Price—Physician Assistant
Couey, Donna—Medical Technology and Cytotechnology
Covert, Michael H.—Health Administration and Education
Crock, Charles L.—Respiratory Therapy
Dahl, David L.—Marketing and Small Business
Davidson, Vicky L.—Physical Therapy
Davis, A. B.—Health Administration and Education
Davis, William—Physical Therapy
Decker, Colleen—Medical Technology and Cytotechnology
DeLamar, Arthur—Health Administration and Education
Denger, Sue—Nursing
Denton, Eugene H.—Hugo Wall Center for Urban Studies
Dewbre, Joan—Nursing
Dexter, Norma Jean—Marketing and Small Business
Diamond, Patricia—Nursing
Dietz, Fred M.—Electrical Engineering
Diener, Clayton H.—Respiratory Therapy
Dinsmore, Ann E.—Physical Therapy
Doll, Janet—Medical Technology and Cytotechnology
Donnelly, Paula—Physical Therapy
Downing, Kathy—Medical Technology and Cytotechnology
Drapor, David—Communicative Disorders and Sciences
Eagleton, Beth—Nursing
Elliott, David R.—Aeronautical Engineering
Emberger, Thomas H.—Respiratory Therapy
Engel, David—Medical Technology and Cytotechnology
Farmer, Mike—Physical Therapy
Felter, John—Physical Therapy
Fisher, Randall E.—Finance, Real Estate, and Decision Sciences
Flenting, Forney W.—Health Administration and Education
Fohrschutz, Joy—Respiratory Therapy
Ford, Peggy—Respiratory Therapy
Fox, Debra J.—Respiratory Therapy
Frazier-Clark, Janet L.—Physical Therapy
Fry, Cindy D.—Respiratory Therapy
Fry, Velma J.—Medical Technology and Cytotechnology
Furke, Judy—Respiratory Therapy
Furman, Nancy J.—Finance, Real Estate, and Decision Sciences
Furst, Janet—Physical Therapy
Gabbert, M. Jane—Physical Therapy
Gagliardi, Joseph P.—Health Administration and Education
Ganesan, Uma—Medical Technology and Cytotechnology
Gaudreau, Pamela C.—Dental Hygiene
Gavin, William J.—Communicative Disorders and Sciences
Geren, Stephen L.—Physical Therapy
Giblin, Richard—Respiratory Therapy
Gibler, Barbara M.—Dental Hygiene
Gililland, Michelle J.—Physical Therapy
Gilpin, Karen Lynn—Nursing
Glick, Karl R.—Physical Therapy
Griffiths, John C.—Geology
Guthrie, Diana W.—Nursing
Hahn, Douglas R.—Biological Sciences
Hampton, David—Respiratory Therapy
Hardwick, Cosette M.R.—Physical Therapy
Harms, Paul—Mathematics and Statistics
Harms, Edward—Physical Therapy
Harris, Rochelle—Counseling
Hart, Dillie—Respiratory Therapy
Hartman, Fannie D.—Respiratory Therapy
Hartley, Jim—Medical Technology and Cytotechnology
Heeb, Joseph A.—Health Administration and Education
Hennings, Vicki—Physical Therapy
Herold, Cathy—Physical Therapy
Hicks, Carol—Physical Therapy
Hinnen, Deborah—Nursing
Hiskett, Evelyn—Respiratory Therapy
Hollman, Martha G.—Physical Therapy
Holmgren, John H.—Health Administration and Education
Holling, Nancy—Respiratory Therapy
Hoye, Joyce L.—Dental Hygiene
Hoyer, Diane—Nursing
Hudson, Terri E.—Physical Therapy
Hurt, Christopher M.—Finance, Real Estate, and Decision Sciences
Jackson, Bill—Graphic Design
Johnson, Donna J.—Respiratory Therapy
Johnson, Doug—Medical Technology and Cytotechnology
Johnson, Kenneth F.—Political Science
Johnson, Leland—Electrical Engineering
Johnson, Marilyn—Respiratory Therapy
Johnson, Roseann—Physical Therapy
Jonas, Jack—Industrial Engineering
Joinville, Milan K.—Mechanical Engineering
Joyner, H. Saion—Mechanical Engineering
Justice, Beth—Medical Technology and Cytotechnology
Kaiser, Charles P.—Geology
Kamermayer, Doug—Physical Therapy
Keller, Jan—Respiratory Therapy
Keller, Carol—Physical Therapy
Kenneally, J. Michael—Finance, Real Estate, and Decision Sciences
Kinchaird, Julie—Medical Technology and Cytotechnology
Kilphelke, Kathleen C.—Physical Therapy
Kleffner, Frank R.—Communicative Disorders and Sciences
Klebeck, Susan V.M.—Nursing
Klingenberg, Myra—Physical Therapy
Klutzov, Friedrich—Medical Technology and Cytotechnology
Knapp, Roberta—Physical Therapy
Knight, Rosell—Nursing
Knohl, Thomas J.—Physical Therapy
Koehn, Dixie L.—Physical Therapy
Krobs, Julie—Physician Assistant
Kust, Randall J.—Studio Arts
Ladone, Mary S.—Respiratory Therapy
Lammert, Baro—Physical Therapy
Lavalle, Michael G.—Marketing and Small Business
Lee, Lawrence—Health Administration and Education
Leslie, John H.—Industrial Engineering
Lewis, Cindy Hamilton—Physical Therapy
Lewis, Jenn—Physical Therapy
Lies, Michael—Dental Hygiene
Lileance, Gaye Lynn—Respiratory Therapy
Littell, James—Health Administration and Education
Little, Carolyn—Medical Technology and Cytotechnology
Little, Nancy J.—Dental Hygiene
Lockette, Doris—Physical Therapy
Loehr, Kathleen A.—Physical Therapy
Logan, Vinene Mevy—Physical Therapy
Lorenz, Hollis—Physical Therapy
Love, Gary W.—Medical Technology and Cytotechnology
Lowman, Douglas—Dental Hygiene
MacBain, Mary R.—School of Accountancy
MacDonald, Patricia L.—Health Administration and Education
Mainzer, Linda—Respiratory Therapy
Malory, Sharon L.—Nursing
Manley, Bill G.—Graphic Design
Manson, Beth—Physical Therapy
Mark, Kathaleen—Nursing
Marks, Jana—Physical Therapy
Marsh, Henry O.—Physician Assistant
Marin, Sandy—Physical Therapy
Matlock, Bonnie—Nursing
Matthews, Jana—Medical Technology and Cytotechnology
McBoyle, Marilee—Health Administration and Education
McEnroe, Paul—Physical Therapy
McKinney, Jeffrey—Physical Therapy
McNutt, Paula—Medical Technology and Cytotechnology
McReynolds, Patsy—Medical Technology and Cytotechnology
Meister, Michael L.—Graphic Design
Mesker, Karen—Medical Technology and Cytotechnology
Meyers, Mary—Medical Technology and Cytotechnology
Minard, Barbara J.—Medical Technology and Cytotechnology
Mitchell, Kathy—Physical Therapy
Moeller, Elisa C.—Physical Therapy
Mooney, Richard M.—Finance, Real Estate, and Decision Sciences
Moore, Stephen P.—Dental Hygiene
Muchmore, Lynn R.—Hugo Wall Center for Urban Studies
Nance, M Louise—Medical Technology and Cytotechnology
Nelson, Keith—Medical Technology and Cytotechnology
Newton, Diane E.—Studio Arts
Nigg, Mary Joan—Dental Hygiene
Norton, Susan B.—Physical Therapy
Oehm, John S.—Studio Arts
Olson, Marcene—Physical Therapy
Paterno, Marlene A.—Physical Therapy
Payne, Aletha—Medical Technology and Cytotechnology
Penner, Maurice J.—Hugo Wall Center for Urban Studies
Pennington, Katherine—Physician Assistant
Perry, Jack L.—Medical Technology and Cytotechnology
Peterson, Wayne C.—Physical Therapy
Peterson, Susan S.—Physical Therapy
Pickton, Thomas—Counseling
Pitzen, Violet G.—Graphic Design
Plummer, Stephanie—Finance, Real Estate, and Decision Sciences
Pollard, Stephen—Respiratory Therapy
Postlethwaite, Dorothy—Medical Technology and Cytotechnology
Powers, Diana B.—Marketing and Small Business
Puthoff, Molly—Nursing
Purvis, J.—Health Administration and Education
Raina, Martha J.—Physical Therapy
Randall, George R.—Communicative Disorders and Sciences
Repp, Reva J.—Medical Technology and Cytotechnology
Rathmel, John B.—Health Administration and Cytotechnology
Rawlings, Alice Leslie—Finance, Real Estate, and Decision Sciences
Rawlings, Jacqueline—Physical Therapy
Ray, Sheila—Respiratory Therapy
Reay, Jan L.—Physical Therapy
Reis, William J.—Medical Technology and Cytotechnology
Reed, D. Cramer—Health Administration and Education
Reger, Jerry—Respiratory Therapy
Rego, William M.—Physician Assistant
Renner, Kathy—Physical Therapy
Rentz, Judy—Physical Therapy
Resnick, Linda—Physical Therapy
Reynold, Jor Jean—Medical Technology and Cytotechnology
Richard, Deborah—Medical Technology and Cytotechnology
Richards, Don—Respiratory Therapy
Richardson, C.—Physical Therapy
Riley, Ronald Ray—Dental Hygiene
Rindt, Mark—Medical Technology and Cytotechnology
Roberts, Dorothy K.—Physician Assistant
Robinson, Charlene H.—Nursing
Robson, Kristin Kirby—Dental Hygiene
Roetter, Richard—Physical Therapy
Romman, B.—Respiratory Therapy
Rose, Shelby—Medical Technology and Cytotechnology
Ross, Cheryl Lynn—Medical Technology and Cytotechnology
Ross, James—Medical Technology and Cytotechnology
Ross, Ruth Joanne—Medical Technology and Cytotechnology
Rudebusch, Virginia L.—Hugo Wall Center for Urban Studies
Sanders-West, Karen—Finance, Real Estate, and Decision Sciences
Sannier, Julianne—Medical Technology and Cytotechnology
Schechter, Rex—Medical Technology and Cytotechnology
Schickling, Kelly—Nursing
Schild, Royce D.—Physical Therapy
Schniefer, Lynn D.—Nursing
Selby, Jan—Respiratory Therapy
Shoemaker, Margaret E.—Physical Therapy
Silver, Sheri—Physical Therapy
Simonsen, Kathy—Physical Therapy
Singleton, Mary—Physical Therapy
Skinner, Terry—Medical Technology and Cytotechnology
Stama, Beth—Physical Therapy
Small, Rita Maxine—Respiratory Therapy
Smart, John—Physical Therapy
Smith, John—Medical Technology and Cytotechnology
Smith, Juanita—Physical Therapy
Smith, Melinda—Physical Therapy
Smith, Timothy—Respiratory Therapy
Smith, Wilbur L.—Health Administration and Education
Sonn, Richard—Respiratory Therapy
Sonn, E. Ray—Physical Therapy
Squire, Charles—Dental Hygiene
Staehle, Joseph F.—Physical Therapy
Stalfer, Charles—Physical Therapy
Steiz, Dale E.—Geology
Stephenson, Joan E.—Physical Therapy
Street, Theodore—Medical Technology and Cytotechnology
Strickland, Jacqueline J.—Respiratory Therapy
Strunk, Carolyn—Medical Technology and Cytotechnology
Stuever, Jane—Medical Technology and Cytotechnology
Swafford, Bonnie B.—Physical Therapy
Swanson, Janis—Medical Technology and Cytotechnology
Taylor, Mary L.—Physical Therapy
Taylor, Richard—Medical Technology and Cytotechnology
Taylor, Ruth S.—Medical Technology and Cytotechnology
Thompson, Bill—Physical Therapy
Thummel, Judith Rowan—Nursing
Travers, Henry—Medical Technology and Cytotechnology
Trezvant, Keith A.—Respiratory Therapy
Turnbridge, R.—Medical Technology and Cytotechnology
Trower, Joyce—Physical Therapy
Twist, Kevin—Respiratory Therapy
Umansky, Martin—Journalism
Urban, Janet—Medical Technology and Cytotechnology
Urban, Debra S.—Physical Therapy
Ureym, Beverly J.—Respiratory Therapy
Antrim, Edward L.-Industrial Education
Argent, Jonathan P.-Industrial Education
Avi, Ojas J.-Aeronautical Engineering
Bailey, Bruce G.-Electrical Engineering
Barber, Mary Patricia-Intensive English
Bastani, Lizzie M.-Mathematics and Statistics
Betts, Steven-Credit Free Programs
Betzen, Angela A.-Mathematics and Statistics
Blankenship, Etmer T.-Journalism
Bobula, John-Instructional Services
Brown, Russell S.-Computer Science
Brueck, Sylvia-Women's Studies
Buchan, Tanya E.-Sociology
Carlisle, L. Wayne-Telecourses
Colitti, Patricia L.-Instructional Services
Cleverger, Richard S.-Computer Science
Cooper, Ralph Charles-Industrial Education
Cowan, Hugh A.-Personnel Services
Curzyno, Beverly A.-Reading and Study Skills Center
Dare, Edward David-Health Science
Davis, Andrew K.-Speech Communication
Dewees, James A.-Industrial Engineering
Dickey, Fred M.-Physics
Dyer, Jimmie K.-Instructional Services
Elli, David R.-Aeronautical Engineering
Farmer, Shelly D.-Modern and Classical Languages and Literatures
Fear, Judith A.-Reading and Study Skills Center
Flann, Lynnette M.-Geology and Telecourses
Fordham, Craig P.-Health Science
Frank, Richard E.-Engineering Technology
Gear, David H.-Health Science
Gibson, Gary P.-Music Performance
Gibson, Ian W.-Instructional Services
Gililand, William J.-Geology
Goodman, Linnea M.-Sociology
Goodwin, William M.-Instructional Services
Goudy, Robert S.-Aeronautical Engineering
Gray, Gene Del-Credit Free Programs
Hampton, Nancy J.-Music Performance
Harder, Thomas L.-Music Performance
Harris, Margo M.-Women's Studies
Harris, Marianne J.-Women's Studies
Hawley, Frances C.-Continuing Education
Held, Alan J.-Music Performance
Henderson, Roy B.-Physician Assistant
Henderson, Terri A.-Dance
Henry, Michael D.-Instructional Services
Hill, August W.-Computer Science
Hilliard-Lysen, Jena K.-Sociology
Hodges, Dennis E.-Electrical Engineering
Howell, James G.-Instructional Services
Hull, Heather L.-Center for Continuing Education
Huley, Frances C.-Continuing Education
Kauf, Hugh Wall Center for Urban Studies
Kelley, Marjorie J.-Dance
Kim, Joon Y.-Physical Education
Klaus, Marilyn E.-Women's Studies and Continuing Education
Klein, Mary L.-Credit Free Programs and Continuing Education
Lal, Chun Chien-Computer Science
Larson, Jack A.-Electrical Engineering
Lawing, Karin C.-Women's Studies
Linhardt, Karen-Instructional Services
Ludwick, Harvey L.-Personnel Services
Luttrell, Terri A.-Speech Communication
Lyra, Naomi L.-Instructional English
MacDonald, Patricia L.-Health Science
MacKenzie, Linda C.-Instructional Services
Matson, Joyce A.-Instructional Services
Mazza, Barbara A.-Instructional Services
McConaughy, Allen D.-Instructional Services
McEwen, Billie L.-Communicative Disorders
McDavid, Thomas B.-Engineering Technology
Minard, Barbara J.-Medical and Cybernetics
Moore, Theodore A.-Psychology
Moreno, C. Rodger-Computer Science
Mont, John H.-Persnlal Services
Mould, Douglas E.-Instructional Services
Naccarato, David F.-Computer Science
Nathan, C. Henry-Journalism
Nordyke, Rebecca S.-Speech Communication
O'Neill, Bill W.-Speech Communication
Nicholas, Kirk W.-Engineering Technology
O'Rear, Charles W.-Instructional Services
Owens, J. Craig-Music Performance
Pajor, Joseph T.-Physics
Patterson, Sandra M.-Personnel Services
Plummer, Leann-Personnel Services
Pratt, Maurice R.-Instructional Services
Racunas, Thomas K.-Instructional Services
Radcliff, Paul V.-Computer Science
Redfern, Philip W.-Mathematics and Statistics
Riedinger, Larry E.-Administration of Justice
Rogers, Gloria A.-Instructional Services
Roesser, Betty-Instructional Services
Ruhl, Tony M.-Continuing Education
Rues, Gerald A.-Engineering Technology
Sadig, Mohammad Golam-Mathematics and Statistics
Savage, Roger L.-Instructional Services
Schlegel, Neil R.-Mathematics and Statistics
Seagraves, George E.-Engineering Technology
Shaab, Teresa M.-Business Education
Sharp, Larry-Continuing Education
Shilling, William L.-Engineering Technology
Singh, Douglas P.-Continuing Education
Sowers, Mattie Chair-Instructional Services
Spangler, Darryl L.-Mathematics and Statistics
Sperr, J. Craig-Hugo Wall Center for Urban Studies
Stein, J. Craig-Hugo Wall Center for Urban Studies
Steadman, Victoria A.-Modern and Classical Languages and Literatures
Stephens, Kenneth F.-Journalism
Stephenson, George E.-Physical Education
Stoltz, James E.-Engineering Technology
Strawder, Vicki S.-Dance
Swanson, Kjersti-Mathematics and Statistics
Sweeney, Virginia A.-Psychology
Taggart, Ernest A.-Mathematics and Statistics
Taylor, Michael G.-Journalism
Terry, Dale R.-Administration of Justice
Thai, Linda V.-Instructional English
Thomas, Leslie S.-Speech Communication
Tinterow, Maurice M.-Credit Free Programs
Vollmer, George E.-Musicology-Composition
Westmoreland, Wanda J.-Reading and Study Skills Center
Wheeler, Nancy H.-Continuing Education
Widner, Allen R.-Computer Science
Widner, Karl C.-Instructional Services
Wrightson, Jody H.-Speech Communication
Yannay, Brigitte R.-Modern and Classical Languages and Literatures
INDEX

A

A/Pass-Fail option 9
Abbreviations, departmental 27
Abiah Library 24
Absence letters 14
Academic achievement, exemptions for superior 12
Academic Appeals, Court of Student 14
Academic calendar 46
Academic honesty 5
Academic information 8
A/Pass-Fail option 9
Auditor 10
change of grades 11
classification of students 9
Commencement 16
Court of Student Academic Appeals 14
Credit/No Credit courses 9
credit by examination 11
date of degree, requirements 16
examinations 9
exemptions for superior achievement 12
General Education Program 15
General Studies courses 15
g grading system 10
graduate study for seniors 12
graduation requirements 14
Honors Program, Emory Lindquist 12
independent study 13
meaning of course numbers 9
probation and dismissal 14
progress reports 14
recognition, academic regulation 8
second bacheior's degree 16
transfer of credits 9
transition semester 11
withdrawal 14
Academic recognition 13
Access to student records 5
Accident or injury 5
Accounting 33, 35, 37
Academic achievement, exemptions for superior 12
Activities and organizations, student 25
Address, reporting change of 8
Adjunct faculty 201
Administration and supervision, educational 48, 66
Administration of justice 130, 132
Administrative officers 4
Admission information 6
degree bound 6
freshmen 6
graduate study for seniors 7
international students 7
special admissions 7
transfers 6
nondegree bound 8
guest students 8
open admission student requirements for each college 8
See individual colleges residence defined 8
Admission to University 9, 10, 29
Advising, academic 28
Aeronautical engineering 73
American studies 135
Anthropology 136
Application for degree card 5, 14
Applied music 96, 14
Applied music instructors 203
Army ROTC 83
Art collection, University 25
Art, commercial (graphic design) 89
Art, Division of. See also Fine Arts, College of 86
Arts education 87
Art history 88, 131
Arts, studio 90
Associate degrees, See Degrees 173
Attendance, class 5
Auditory 52, 54
Audit courses, fees for 13
Audit grades of 10
Auditor 10
Aviation management 33, 38
A B
Bachelor of General Studies 129
Bachelor's degree, second 16
Bachelor's degree, See Degrees 173
Basic emergency medical care training 124
Beach Wind Tunnel, Walter H. 25
Biotechnology 130, 139, 142
Biological sciences 139
Biomedical/Premedical engineering 72
Bureau of Educational Placement 204
Business Administration, College of accounting 33, 35, 37
accreditation 30
admission 31
advising 30
aviation management 33, 38
business education 34, 39
business law 39
degree 30
Associate of Science, legal assistant 36
Associate of Science, secretarial training 37
Bachelor of Business Administration 32
business teacher education degree 31, 34
career counseling 35
career services 40
computer science 40
counseling center 34, 40
courses required for graduation 30
General Education Program 14
course symbols, key to 27
court of student academic appeals 14
creative writing 150, 151
credit, advanced placement 10, 29
credit by examination 10, 29
credit, graduate for seniors 12
credit hours earned 11
credit/No Credit courses 9
credit points and grade point average 10
credits, transfer of 9
cum laude 13
Cybotechnology 107

D

Dance, Division of 94
date of catalog requirements 16
deadline, graduation 52, 55
dean's Honor Roll 13
debt Sciences 40
degrees
Associate of Arts 130
graphology 130, 157
humanities 130
social sciences 130
natural sciences and mathematics 130
Associate of Science 130
administration of justice 130, 133
dental hygiene 123
legal assistant 36
respiratory therapy 123
secretarial training 3
Bachelor of Art Education 21
Bachelor of Arts, Bachelor of Business Administration 32