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Inquiries should be directed to:
Office of Admissions and Records
Wichita State University
Wichita, Kansas 67208

CONTENTS

General Information
Academic Calendar for 1973-1974 .................................................. 6
Administrative Officers ................................................................. 7
Kansas Board of Regents ............................................................. 7
Profile of Wichita State University .............................................. 8
Admission to Wichita State ........................................................ 10
Academic Information ............................................................... 14
Financial Information ............................................................... 30
Student Services ................................................................. 35
Continuing Education and Summer Session .................................. 38
Special Programs .................................................................. 41
Special Facilities .................................................................. 43
Student Activities and Organizations ........................................... 46
Key to Course Descriptions .................................................. 48

University College
High School Preparation and Admission to University College ........ 52
Student Responsibility ............................................................ 52
Orientation ............................................................. 53
<table>
<thead>
<tr>
<th>Academic Advising</th>
<th>53</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Opportunities</td>
<td>53</td>
</tr>
<tr>
<td>Transferring to a Degree-Granting College</td>
<td>55</td>
</tr>
<tr>
<td>Academic Progress, Probation and Dismissal</td>
<td>56</td>
</tr>
<tr>
<td>Preprofessional Programs</td>
<td>57</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>59</td>
</tr>
<tr>
<td>University College Courses</td>
<td>59</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td></td>
</tr>
<tr>
<td>Programs</td>
<td>63</td>
</tr>
<tr>
<td>Regulations</td>
<td>64</td>
</tr>
<tr>
<td>Bachelor of Business Administration Degree</td>
<td>66</td>
</tr>
<tr>
<td>Certificate of Applied Science in Secretarial Training</td>
<td>69</td>
</tr>
<tr>
<td>Business Teacher Education Degree</td>
<td>69</td>
</tr>
<tr>
<td>Accounting</td>
<td>69</td>
</tr>
<tr>
<td>Administration</td>
<td>73</td>
</tr>
<tr>
<td>Business Education</td>
<td>79</td>
</tr>
<tr>
<td>Economics</td>
<td>81</td>
</tr>
<tr>
<td>College of Education</td>
<td></td>
</tr>
<tr>
<td>Accreditation and Certification</td>
<td>88</td>
</tr>
<tr>
<td>Degrees Offered</td>
<td>88</td>
</tr>
<tr>
<td>Requirements</td>
<td>90</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>91</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>93</td>
</tr>
<tr>
<td>Aerospace Studies</td>
<td>99</td>
</tr>
<tr>
<td>Art Education</td>
<td>101</td>
</tr>
<tr>
<td>Educational Administration and Supervision</td>
<td>102</td>
</tr>
<tr>
<td>Educational Psychology</td>
<td>104</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>107</td>
</tr>
<tr>
<td>Industrial Education</td>
<td>110</td>
</tr>
<tr>
<td>Library Science</td>
<td>114</td>
</tr>
<tr>
<td>Logopedics (Speech, Language and Hearing Disorders)</td>
<td>115</td>
</tr>
<tr>
<td>Military Science</td>
<td>122</td>
</tr>
<tr>
<td>Music Education</td>
<td>124</td>
</tr>
<tr>
<td>Physical Education, Health and Recreation</td>
<td>124</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>130</td>
</tr>
<tr>
<td>Student Personnel and Guidance</td>
<td>134</td>
</tr>
<tr>
<td>College of Engineering</td>
<td></td>
</tr>
<tr>
<td>Entrance Requirements</td>
<td>138</td>
</tr>
<tr>
<td>Probation and Dismissal Standards</td>
<td>138</td>
</tr>
<tr>
<td>Core Curriculum</td>
<td>140</td>
</tr>
<tr>
<td>Interdisciplinary Fields</td>
<td>141</td>
</tr>
</tbody>
</table>

Wichita State University 3
Sequence of Courses ........................................ 142
Graduate Work ........................................... 150
General Engineering .................................... 150
Aeronautical Engineering .............................. 151
Electrical Engineering .................................. 155
Industrial Engineering .................................. 158
Mechanical Engineering ............................... 163

College of Fine Arts
Admission ................................................. 167
Probation and Dismissal ............................... 168
Degree Requirements ................................. 168
Division of Art ......................................... 168
Requirements ........................................... 169
General Policies ....................................... 169
Graduate Art Studies ................................. 169
Art Collections of the University .................. 170
Art Major or Minor for Students in the College of Liberal Arts and Sciences .......................... 170
Art Minor for Students in the College of Education ........................................... 170
Graduation Requirements ........................... 171
Art Education ........................................... 171
Art History ............................................. 174
Graphic Design—Commercial Art .................. 175
Studio Arts ............................................. 177
Division of Music ....................................... 191
Requirements .......................................... 191
Graduate Music Studies ............................. 194
Graduation Requirements ........................... 194
Musicology-Composition ............................. 199
Music Education ....................................... 203
Performance ............................................ 207

College of Health Related Professions
Policies .................................................... 211
Degree Requirements .................................. 212
Financial Aid ............................................ 212
Health Professions ..................................... 213
Baccalaureate Programs ............................... 213
  Dental Hygiene ....................................... 213
Health Care Administration ........................ 215
Medical Record Administration .................... 218
Medical Technology ................................... 219
GENERAL INFORMATION

Academic Calendar for 1973-1974

FALL SEMESTER 1973

August 21-25, Tuesday-Saturday  Fall semester registration
August 27, Monday  Classes begin
September 3, Monday  Labor Day, holiday
October 19, Friday  Midterm reports
October 22, Monday  Veterans Day, holiday
November 2, Friday  Final day for nonpenalty grades
November 5, Monday  Advising for preregistration for spring semester
November 7, Wednesday  Preregistration for spring semester
November 20, Tuesday  Preregistration closes
November 21-24, Wednesday-Saturday  Thanksgiving recess
December 11, Tuesday  Classes close
December 12-18, Wednesday through Tuesday  Fall semester final examinations

SPRING SEMESTER 1974

January 8-12, Tuesday-Saturday  Spring semester registration
January 14, Monday  Classes begin
March 8, Friday  Midterm reports
March 15-23, Thursday-Saturday  Spring recess begins at close of classes
March 25, Monday  Classes resume
March 29, Friday  Final date for nonpenalty grades
April 12-15, Friday through Monday  Easter recess
April 16, Tuesday  Classes resume
April 16, Tuesday  Advising for preregistration for fall semester
April 22, Monday  Preregistration for fall semester
May 3, Friday  Preregistration closes
May 9, Thursday  Classes close
May 10-16, Friday through Thursday  Spring semester final examinations
May 19, Sunday  Commencement

SUMMER SESSION 1974

June 6-8, Thursday-Saturday  Summer Session registration
June 10, Monday  Classes begin
July 4, Thursday  Holiday
August 2, Friday  Summer Session closes
Administrative Officers

Clark D. Ahlberg   President of the University
John B. Breazeale   Vice President for Academic Affairs
                     and Dean of Faculties
Bobbeye J. Humphrey Assistant Dean of Faculties for Personnel
Martin H. Bush      Assistant Vice President for Academic
                     Resource Development
James J. Rhatigan   Vice President for Student Affairs
                     and Dean of Students
H. R. Reidenbaugh  Executive Vice President of the Board of Trustees
                     and Executive Secretary to the Endowment Association
Roger D. Lowe       Assistant to the President for Finance
                     and Business Manager
Lloyd M. Benningfield Dean of Graduate Studies and Research
Lawrence E. McKibbin Dean of the College of Business Administration
Leonard M. Chaffee   Dean of the College of Education
Charles V. Jakowatz  Dean of the College of Engineering
Appointment pending  Dean of the College of Fine Arts
Donald D. Christenson Interim Dean of the College of Health Related Professions
D. Cramer Reed      Dean of the Wichita State Branch of the University of Kansas School of Medicine
Paul J. Magelli      Dean of the Fairmount College of Liberal Arts and Sciences
Walter S. Friesen    Dean of University College
Gordon B. Terwilliger Director of Summer Session
James H. Petree      Dean of the Division of Continuing Education
C. Russell Wentworth Dean of Admissions and Records
Laura M. Cross       Associate Dean of Admissions and Records
Jasper G. Schad      Director of Libraries and Audiovisual Services
Max A. Schaible      Director of Information and Public Events
George M. Platt      Director of Planning
Frederick Sudermann  Director of Research and Sponsored Programs
Armin L. Brandhorst  Director of Physical Plant
Theodore C. Bredehoft Director of Athletics
Ethel Jane King      Executive Director of the Alumni Association

Kansas Board of Regents

Jess Stewert, Chairman
James J. Basham, M. D.
Henry A. Bubb
Carl L. Courter
William F. Danenbarger
Robert W. Helman
M. Prudence Hutton
Elmer C. Jackson, Jr.
Paul R. Wunsch
Max Bickford, Executive Officer

Wamego
Fort Scott
Topeka
Wichita
Concordia
Goodland
Newton
Kansas City
Kingman
Topeka
Profile of Wichita State University

An urban campus, Wichita State University is located in the northeast section of Kansas' largest metropolitan area, Wichita, a city of about 280,000 people, located along the Arkansas River.

Since 1964, the University's enrollment and budget have nearly doubled. More than 13,000 students of varying ages, races and nationalities are enrolled in both daytime and evening courses offered by the various schools and colleges of the University. Its faculty, keeping pace with the rest of the University, now totals more than 700 members.

Wichita State enrolled more minority students and employed more minority faculty during the 1969-70 biennium than any predominantly Anglo institution in the neighboring 12-state area constituting Regions VI and VII of the Department of Health, Education, and Welfare.

Students at Wichita State can choose from more than 100 areas of academic concentration within the University's eight schools and colleges. The College of Business Administration, College of Education, College of Engineering, College of Fine Arts, College of Health Related Professions, Fairmount College of Liberal Arts and Sciences, University College and the Graduate School all offer complete programs in their areas.

The academic programs at Wichita State culminate in bachelor's, master's, specialist and, in some cases, doctoral degrees. Wichita State offers a doctoral degree in logopedics, and, in conjunction with the University of Kansas, doctoral degrees may be earned in aeronautical engineering and chemistry. More than 1,800 students are enrolled on the G. I. Bill, and more than 1,800 students are enrolled in the University's graduate programs.

In addition, Wichita State offers an eight-week Summer Session with an enrollment larger than any other college or university in Kansas.

Wichita State strives to attain four basic objectives, as described below.

The University provides general education through the core curriculum and University College, a general college in which all entering freshmen are enrolled.

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 or colleges.

The University, through the Division of Continuing Education, provides continuing educational opportunities for adults through special seminars, workshops, classes and related University programs and activities.

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 ongoing programs of University research and research sponsored by outside organizations.

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

Wichita State University began as Fairmount College in 1895 with 12 students and five instructors. The college, founded by the Congregational Church, 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 the Board of Trustees.

After 38 years as a municipal institution, the University again changed its status and on July 1, 1964, officially entered the state system of higher education through an act of the 1963 session of the state legislature. 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

Programs at Wichita State are accredited by the following professional organizations: American Assembly of Collegiate Schools of Business, American Chemical Society Committee for the Professional Training of Chemists, American Medical Association Board of Schools, Council on Dental Education, Council on Social Work Education, Engineers' Council for Professional Development (Aeronautical, Electrical and Mechanical), National Association of Schools of Music, National Council for the Accreditation of Teacher Education, and North Central Association of Colleges and Secondary Schools.

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

HUMAN RELATIONS

Wichita State University, in pursuit of its educational goals, welcomes students of all races, nations and creeds. It is guided by the principle that equal opportunity and access to facilities, programs and services shall be available to all. The University accepts, as a primary responsibility, the implementation of this principle in its own affairs and in its relations with the broader community of which it is a part.

STUDENT RESPONSIBILITY

The student at Wichita State has six major responsibilities:
1. To consult his adviser on all matters pertaining to his academic career, including any change in his program;
2. To observe all regulations of his college and select courses according to the requirements of that college;
3. To attend all meetings of each class in which he is enrolled (the instructor will announce at the beginning of the semester whether he considers attendance in computing final grades);
4. To fulfill all requirements for graduation;
5. To be personally responsible for fulfillment of all requirements and the observation of all regulations at Wichita State;
6. To answer promptly to all written notices from advisers, faculty, deans and other University officers.

Admission to Wichita State

All students entering Wichita State University for the first time must file an application for admission with the Office of Admissions and Records and submit transcripts of all high school and/or college work (failure to report all schools attended may result in dismissal). Both the application and transcripts of previous work must 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 they have completed their junior year and are expected by early in their senior year.

Transcripts received in the Office of Admissions and Records will not be returned to the applicant.

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

Admission of a student to Wichita State University is independent of sex, race, nationality or creed.

FRESHMEN

The following guidelines should be used by students wishing to be admitted to Wichita State as freshmen.

1. Any graduate of an accredited Kansas high school who has not previously attended a college will be admitted to Wichita State upon receipt of an application and a transcript showing his date of graduation. He must also submit scores from the American College Test (ACT).

2. A prospective freshman still in high school should submit an application with a sixth-semester transcript attached and make arrangements with his high school counselor to take the ACT.

3. An out-of-state student who will graduate or has graduated from a non-Kansas high school or preparatory school should follow the same procedures outlined above and is eligible for admission if he ranks in the upper one-half of his high school graduating class. 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.

4. An applicant without a secondary school diploma who wishes to
be considered for admission to freshman standing should present his case to the Office of Admissions and Records.

All entering freshmen are enrolled in University College and must submit transcripts and scores from the ACT program as conditions of their enrollment in University College. A health certificate is optional. The dean of University College will send all freshmen complete information about orientation and enrollment. See the University College section of the *Catalog* for more information.

**TRANSFER STUDENTS**

A student who has been enrolled in another college or university may be admitted to undergraduate study at Wichita State University, if he is eligible to return to the college or university he last attended and is able to meet the required scholastic standards of Wichita State.

A transfer student with fewer than 24 college semester hours of credit or an undeclared major will be considered for admission to University College. To be admitted, the student must submit an application with an official transcript from each high school and college attended to the admissions office. Before enrollment, the student must also submit scores from the American College Test (ACT). For further details, see the discussion of University College in the *Catalog*.

A student who has declared a major and has 24 or more college semester hours of credit is eligible to apply for admission to one of the six undergraduate degree-granting colleges at Wichita State. The student must submit an application and official transcript from each college or university attended to the admissions office.

A student transferring from a two-year college must complete at least 60 hours of four-year college 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 will accept college-level courses from other recognized colleges and universities for transfer credit as defined by *Report of Credit Given by Educational Institutions*, published annually by the American Association of Collegiate Registrars and Admissions Officers. This publication divides schools into three categories, and credit is given according to the type of institution as follows: courses taken at A schools are transferred to Wichita State with full credit; courses taken at B schools may be transferred to Wichita State only if it is determined that they are equivalent to Wichita State courses; and courses taken at C schools may be transferred to Wichita State only after the student involved has completed 30 semester hours of 2.00 (C) or better work at Wichita State and if courses are determined to be equivalent to Wichita State courses.

Courses completed at other institutions but not acceptable for credit toward a degree at Wichita State are listed in parentheses on the tran-
script and 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 the University for 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 head of the department concerned. Regardless of the credit granted to transfer students, the requirement of additional work is at the discretion of the department chairman or chairmen.

INTERNATIONAL STUDENTS

Wichita State University welcomes international students. A caution, however, must be given to all students from abroad interested in undergraduate study. No scholarships or grants are available to the newly entering undergraduate international student, and it is imperative that he have sufficient funds to cover his expenses while in the United States.

International students who qualify for admission to the Graduate School may apply to their department head or the dean of their college for information on graduate fellowships and assistantships.

The admission requirements for an international student are as follows:
1. He must graduate from an accredited high school or college.
2. He must present a certificate of proficiency in the English language.
3. He must have a notarized statement of financial responsibility in an amount of $3,250 or more to cover expenses for 12 months.
4. He must enroll in at least 12 hours at the undergraduate level or in at least nine hours at the graduate level.

For further information, write to the director of the International Program.

STUDENTS FROM OTHER UNIVERSITIES

A student attending another college or university but wishing to attend Wichita State on a temporary basis should submit an application and a transcript or letter of good standing from his current school to the Office of Admissions and Records prior to his enrollment. Provisional admission is usually granted for one term only, and a student who plans to continue at Wichita State beyond that time must submit complete credentials. Students from other universities are usually enrolled in the Division of Continuing Education.

GRADUATE STUDENTS

Wichita State University offers graduate degrees in administration of justice, accounting, aeronautical engineering, anthropology, art, biology, business administration, chemistry, creative writing, economics, educational administration and supervision, educational psychology, electrical
engineering, elementary education, engineering mechanics, English, geology, history, logopedics, mathematics, mechanical engineering, music, physical education, physics, political science, psychology, secondary education, sociology, Spanish, student personnel and guidance, and urban affairs. Nondegree work is offered in a few additional areas, as described in the *Wichita State University Graduate Bulletin*.

For admission to full graduate standing, an applicant must have a minimum grade average of 2.50 in his last 60 hours of work and a minimum average of 2.50 in his major and minor work. Individual departments may require higher admission standards than the minimum Graduate School requirements.

Application for admission to graduate standing must be filed with the Graduate School three weeks in advance of the day the student registers. An application must also be accompanied by two complete, official transcripts of all college work.

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. A student who wishes to receive graduate credit for work taken must be admitted to the Graduate School at the time of enrollment.

A student may submit an application for admission to candidacy for a master's or doctoral degree in the Graduate School upon the completion of 15 graduate hours; however, he may not file his application later than the semester prior to the semester in which he plans to graduate.

Specific requirements vary from department to department and are listed in the *Wichita State University Graduate School Bulletin*. The Graduate School office should be consulted for information about the requirements of a particular program.

**CONTINUING EDUCATION STUDENTS—OPEN ADMISSION**

Wichita State University encourages students to pursue lifelong education. To expedite admission for adult students who have not participated in formal education for some time, the office of admissions can provide simplified admission procedures.

Students who have not attended high school or college during the past three years and who have earned a high school diploma or its equivalent or who are at least 25 years of age will be admitted to the continuing education program by submitting an application for admission. Test scores and transcripts are not required. (Students seeking graduate credit should write or call the Graduate School office.)

Students admitted in this category will be considered nondegree bound for the first 15 semester hours. In order to pursue work beyond the semester in which the fifteenth hour is completed, students must apply for admission as a degree-bound student in University College or in one
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 (Kansas Statutes Annotated, Supplement '71, 76-729, 76-730).

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 six (6) 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 regulations 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 and their dependents, (3) other classes of persons having special domestic relation 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.

The responsibility of registering under proper residence is placed on the student. If there is any possible question of residence classification, it is the duty of the student when registering and paying fees to raise the question with the Office of Admissions and Records. A student who disagrees with his residency classification is entitled to an appeal, provided he files a written appeal with the registrar within 30 days from the date of the enrollment in question and pays 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.

Each student must report his correct address at the time of registration each semester. The address given must be the student's actual place of residence since it will be the one to which all correspondence from Wichita State is sent. If any change in residence is made during the semester, the new address must be reported within three days to the Enrollment Office.

Academic Information

REGISTRATION

Specific information regarding registration is set forth in the Wichita State University Schedule of Courses published each semester and Sum-
mer Session. Registration is not permitted after the second week of classes. Falsification of information or withholding of information pertinent to the records of the University is grounds for dismissal.

CLASSIFICATION OF STUDENTS

Students are classified according to the following semester hours earned:

- Freshmen: under 30 semester hours earned.
- Sophomores: 30 semester hours earned.
- Juniors: 60 semester hours earned.
- Seniors: 90 semester hours earned.

MEANING OF COURSE NUMBERS

Courses numbered 99 or below are not acceptable for credit in a baccalaureate college.

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

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

Courses numbered 500 to 699 are aimed primarily at juniors and seniors, but graduate students may also receive credit for these courses. Courses numbered 700 to 799 are structured primarily for graduate students, but undergraduate students may be admitted if they meet course prerequisites.

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

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

CREDIT/NO CREDIT COURSES

Courses numbered below 100 do not carry credit toward a Wichita State 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. Grades in such courses are excluded from grade point average calculations.

In addition, certain credit courses are graded only Cr/NCR. Any department of 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 a student withdraws from a Cr/NCR course before the end of the tenth week of the semester (or the fifth week of Summer Session), a grade of W is recorded. If he withdraws from such a course after the tenth week of a semester (fifth week of Summer Session), he receives a grade of NCR, subject to the right of petition to the University's Committee on Admissions and Exceptions.

Cr/NCR may also be granted to a freshman for his first semester of work during the Transition Period, as discussed in that section of the Catalog.

A/PASS/FAIL OPTION

A student in good standing with at least one semester (not a Summer Session) of completed course credit and an overall grade point average of at least 2.50 may elect to enroll under the A/Pass/Fail option (A/P/F) in a total of three regularly graded courses outside his 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 F assigned to an A/P/F course and an F assigned to a regularly graded course. No credit points are assigned for the grade of P; the grade point average is based only on the grades A, B, C, D and F.

The A/P/F option must be declared and approved by the student's dean at the time of his enrollment in the course. If a student withdraws from an A/P/F course before the end of the tenth week of the semester (or the fifth week of Summer Session), a grade of W is recorded. If he withdraws from such a course after the end of the tenth week (fifth week of Summer Session), he receives a grade of F, subject to the right of petition to the University's Committee on Admissions and Exceptions. In the case of withdrawal from an A/P/F course, the course will count as one of the three allowable A/P/F option courses.

A course completed under the A/P/F option can be repeated only if a grade of F is issued. A course being repeated may not be taken under the A/P/F option but must be taken for a letter grade.

TRANSFER OF CREDITS WITHIN THE UNIVERSITY

From University College. A student is normally expected to transfer from University College to one of the six undergraduate degree-granting colleges at the end of the semester in which he earns his twenty-fourth credit hour. A student who has declared an academic major and whose grade point average at the end of his twenty-fourth semester hour satisfies the requirements of the degree-granting college of his major is automatically transferred to that college. A student who at the end of his
twenty-fourth semester hour has not decided on a major or whose grade point average does not satisfy the entrance requirements of the college of his major is given formal notice that his program must undergo academic review by University College. (See the University College section of the Catalog for procedures for this review.)

No student may continue in University College after the semester in which he earns his forty-eighth semester hour of credit unless he petitions for an exception and the exception is granted by both the University College Exceptions Committee and the University Committee on Admissions and Exceptions.

No student may be retained in University College after the semester in which he earns his sixtieth semester hour of credit.

Other Transfers Within the University. A student may transfer from any undergraduate degree-granting college to another provided he meets, 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 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

No reexamination shall be given. The grade received on a regular quiz or examination shall be final.

Special examinations, when requested, will be given only with the dean's consent.

A student who misses an assigned examination should arrange with his instructor to take a make-up examination. The dean of the college will serve as arbitrator only when he deems it necessary.

GRADING SYSTEM

Wichita State grades include A, B, C, D, P, F, W, Au, Cr, NCR, I, R and CRE, as explained below.
A Distinguished achievement. Credit given; 4 credit points per semester hour.
B Superior achievement. Credit given; 3 credit points per semester hour.
C Average achievement. Credit given; 2 credit points per semester hour.
D Below average achievement. Credit given; 1 credit point per semester hour.
P Passing work (with a B, C or D). Credit given; no credit points assigned.
F  Failing work. No credit hours earned toward graduation. Count in final hours attempted; 0 credit points per semester hour.

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

Au Audit. No credit given; no credit points. Does not affect grade point average. The student may do all, part or none of the required work. Course may not subsequently be taken for credit. Fees are the same as those for regular credit. For the record, attendance and failure to do the required work will be reported to the respective deans.

Cr Credit (A, B or C). Used only in the transition period and for courses defined as Cr/NCR in the Catalog. Credit given; no credit points. See Credit/No Credit Courses.

NCR No credit (D, F). Used only in the transition period and for courses defined as Cr/NCR in the Catalog. No credit given; no credit points. See Credit/No Credit Courses.

I Incomplete. Temporarily recorded as a grade when a student is granted an extension of time to complete course work. Credit is postponed, and the course is not included in computing grade point average until it is completed and a regular letter grade is assigned. An I 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.

The following conditions govern incompletes:

1. If the student does not enroll at Wichita State within one calendar year following the issuance of the incomplete and if the work is not completed within that calendar year, he must enroll in that course as a repeat during his next semester of enrollment, or the grade will be changed to F. If he does 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 the student resumes his academic work, the student must request that an exception be made by the chairman of the department offering the course. The department chairman may authorize a substitute course, postpone action for a semester or authorize a grade of W.)

2. An incomplete on the third enrollment in the same course means that a student 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 a student receives a grade of incomplete, he is informed of the policies and procedures governing the removal of incompletes.
R Repeat. A prefix to other grading symbols indicating that the course is a repeat of one taken earlier, such as RA, RB, RC, RD, RF, RW or RI. The R prefix has no evaluative function but is used for information only. Any course may be repeated if the grade of record is D, F, W or NCR. The following provisions concern repeats:

1. The symbol R is to be prefixed to grades issued for all repeated courses.
2. No course may be attempted more than three times, and for this policy, a W counts as an enrollment. Exceptions may be made through petition to the University Committee on Admissions and Exceptions.
3. A course completed under the A/Pass/Fail option can be repeated only if a grade of F is issued. (See Catalog section on A/Pass/Fail option.)
4. 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.)
5. A student may audit the same course any number of times. However, once a student has audited a course, he may not take that course for credit.
6. The grade point average computation includes all grades earned in all completions of the same course.

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 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 and CRE are always excluded from grade point average computations. (Note: The practice of counting only the last grade earned in a repeated course in GPA computation is discontinued for courses taken for the first time during or after the fall semester 1973. For additional information see Interim Grading Practices in the Catalog.)
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 he may have completed the course, been granted an incomplete or withdrawn. Attempts include A, B, C, D, P, F, W, Cr, NCR and I, but exclude Au and CRE.

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

Credit Hours Earned. Credit hours earned means that credit is given: A, B, C, D, P, Cr 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 may be repeated for credit.

INTERIM GRADING PRACTICES

Several grading practices have been introduced to facilitate the changes in grading procedures that become effective as of the fall semester 1973.

Cr/NCR and A/P/F. Students enrolled before fall 1973, who have not used up the maximum number of 24 semester hours on the Credit/No Credit (Cr/NCR) option, may enroll under the A/Pass/Fail (A/P/F) option. They can take a maximum of three courses under the A/P/F option, provided that the total hours they receive under the combined Cr/NCR and A/P/F options does not exceed 24 semester hours.

Parenthesizing of Grades. No courses taken after August 1973 may be parenthesized in the future. Former students who received a D, F or WF in courses taken before August 1973 may repeat—only once—those courses after August 1973. The old provision of parenthesizing the grade of the first attempt and counting only the grade and credit points of the last attempt is followed.

Students who transfer to Wichita State from another institution may repeat—only once—D, F or WF courses taken at their former institutions before August 1973 under the old provision of parenthesizing the grade of the previous attempt and counting only the last attempt in the computation of the grade point average. Courses taken for the first time after August 1973 may not be parenthesized, regardless of where the courses were taken. All work done after August 1973 is counted in the grade point average.

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 be initiated by
the chairman of the department that offered the course if, and only if, the instructor is not in residence. With the approval of the dean of the college of the department concerned, the change in grade is entered on the student’s transcript. The dean must then notify the chairman of the department concerned that the grade was changed.

An instructor who wishes to request a change in a grade that he assigned more than one year earlier may petition the University Committee on Admissions and Exceptions. If this committee approves a change in grade, the instructor, department chairman 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.

The policy does not affect the right of a 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.

TRANSITION PERIOD

To accommodate students in their adjustment to collegiate level academic standards, all freshmen are allowed a special transition semester. The transition semester is the student’s first regular semester at Wichita State regardless of the number of hours attempted (Summer Session excluded). However, a student who has enrolled at another institution of higher learning in a regular term (summer term excluded) before enrolling at Wichita State is not entitled to a transition semester at the University.

When the student receives his graded report (A, B, C, D or F), he may request that all his work in the transition semester be translated into credit/no credit (Cr/NCR) on his official records, with Cr applying to letter grades A, B and C, and NCR applying to letter grades D and F. (No grade point average is computed.) He may also elect to take no action and have the letter grades recorded on his official record. (Grade point average is computed.)

The decision to have letter grades translated into Cr/NCR must be declared and approved by the dean of the college in which the student is enrolled between the posting of the semester grades and one day before the beginning of the University’s next enrollment period, including Summer Session, whether or not the student enrolls.

CREDIT BY EXAMINATION

Advanced standing credit may be obtained by examination. The credit-by-examination program at Wichita State University 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 achieve-
ment and use the test results to gain college credit. There are four means by which such credit may be earned:

1. Credit earned by 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 the 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 University in the areas of biology, chemistry, English, French, German, history, Latin, mathematics, physics, Russian and Spanish. Under the AP program, credit at Wichita State University 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 Center.

2. Credit earned by examination through the College Board's College-Level Examination Program (CLEP). CLEP examinations are administered through the Wichita State Testing Center. Students who pass CLEP examinations with sixty-fifth percentile scores or better will be given three hours of credit in the respective core curriculum area for which the test is presented. Information about the dates and times at which CLEP examinations are given is available from the Testing Center.

3. Credit for certain specified core curriculum courses earned by examinations administered by the Wichita State Testing Center. Information concerning the specific courses for which these tests are available and the standards applied in granting credit are available from the Testing Center.

4. Credit earned by departmental examination. In general, a student may also earn credit by examination for any course not covered in the areas given above. The student should apply directly to the chairman of the department offering the course. The chairman will make the examination available to the student unless the Academic Standards and Practices Committee has excepted the course in question from credit by examination.

The grade recorded for credit earned by examination is CRE, and it is recorded on the student's transcript after he has enrolled in the University. No student may take a credit-by-examination test for credit in a course in which he has previously enrolled, unless he received a W. He may not retake any such examination. No student may request an examination for course credit in a course for which he does not have the stated prerequisite credit. Credit earned by examination is treated for purposes internal to Wichita State (class standing, completion of course prerequisites, college requirements, etc.) exactly like that earned by class enrollment.

A fee is assessed to cover the costs of administering examinations. This fee must be paid prior to taking any examination. A schedule of fees
for the various examinations is available from the Testing Center. The standard for awarding credit by examination will be determined by the department having jurisdiction over the specific courses involved in consultation with the Committee of Academic Standards and Practices, except in the case of credit earned by departmental examination, in which case the department will have sole jurisdiction.

EXEMPTIONS FOR SUPERIOR ACHIEVEMENT

A student who has completed a minimum of 12 hours at Wichita State and has 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.

The student is exempt from regulations governing the maximum number of hours allowed a student during a semester or Summer Session. He is also exempt from college regulations, if any, governing the maximum number of hours a student can take during a semester in one department. Finally, the student has permission to have course prerequisites waived with the consent of the instructor of the course and the head of the department in which the course is taken.

GRADUATE CREDIT FOR SENIORS

A Wichita State University senior with an overall grade point average of 3.00 or above in his major and in upper division courses who is 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 a student's undergraduate degree, and his degree must be completed within the semester in which he takes the graduate courses. In addition, he must apply for the Senior Rule to the Graduate School and have his application approved by the Graduate School, his undergraduate dean and his major adviser before he may take the course(s) for graduate credit. The student must also be admitted to the Graduate School.

UNIVERSITY HONORS PROGRAM

The University Honors Program is established to help outstanding students find a more challenging and enriched intellectual life through smaller classes, seminar situations and independent study. The program consists of honors sections of regular classes, specially designed courses and related activities.

General program policies are established by the University's Honors Committee and administered by the honors coordinator, who is administratively accountable to the vice president for academic affairs.

Any student who has completed 30 semester hours at Wichita State with a grade point average of 3.25 may enroll in any honors course or section for which he is eligible. A student may enter the program at any time he and the honors coordinator believe he may profit from such work.
Prospective Wichita State students or those already enrolled should contact the honors coordinator for honors program information.

Honors students are expected to perform at a B level, equivalent to a 3.00 grade point average, but no student will be dropped from the program until his performance falls below this level for at least two consecutive semesters—and then only after he has had an opportunity for consultation and appeals.

INDEPENDENT STUDY LEADING TO A DEGREE WITH DEPARTMENTAL HONORS

Outstanding students may enroll in their junior and senior years in independent study, which may lead to a degree with departmental honors if the work is satisfactorily completed. Any student with junior standing and a cumulative grade point average of at least 3.00 is eligible to conduct a project in his major area of study. A student desiring to undertake independent study must consult with the honors coordinator and obtain the approval of the instructor under whom the work will be performed, his departmental chairman and the dean of his college. The application for independent study must be filed with the honors coordinator and be approved by the Honors Committee no later than the registration time for the student's last semester at Wichita State or the semester for which he desires credit for the work, whichever comes earlier.

An independent study project should consist of original research or creative work. To graduate with departmental honors the student must complete his project and write up the results according to specifications established by the honors coordinator. He must then be examined on his project and other aspects of his major field of study. A three-member faculty committee, appointed by the honors coordinator in consultation with the student's instructor, conducts the examination and determines the student's eligibility for graduation with departmental honors. If the student does not secure such a degree either because of failure to complete his project or failure in the examination, he will receive academic credit toward the regular degree for the credit hours completed, with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than six hours of credit for independent study.

ACADEMIC RECOGNITION

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 those students enrolled in 12 or more semester hours of graded work who achieve a grade point average of 3.25 or higher for that semester. Degrees are conferred with distinction upon those students who have shown excellence in scholarship. The minimum standard for graduation...
summa cum laude is both an overall grade point average of 3.90 and a grade average of 3.90 on Wichita State course work. The minimum standard for graduation magna cum laude is both an overall grade point average of 3.55 and a grade point average of 3.55 on Wichita State course work. The minimum standard for graduation cum laude is both an overall grade point average of 3.25 and a grade point average of 3.25 on Wichita State course work.

Those students enrolling in Independent Study and meeting the appropriate requirements may graduate with departmental honors as described in the Independent Study section of the Catalog.

WITHDRAWAL

Voluntary Withdrawal

When a student encounters special problems during the course of a semester, he may protect his record through voluntary academic withdrawal, based on the following procedures.

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

After the tenth week of a semester or the fifth week of Summer Session, the student may withdraw from one or more courses with a W only if he petitions the dean and the Committee on Admissions and Exceptions approves his petition. (The alternative to a W is an F.)

When a student wishes to withdraw, he must consult an adviser, obtain drop slip(s) for every course (line number) and have his adviser sign in the appropriate place. He must then take the drop slip(s) to the instructor of each dropped course and obtain his signature. After receiving the instructor’s signature for each dropped course, the student must take the drop slip(s) and his certificate of registration to the office of the dean of the appropriate college for his signature and final approval. The completed drop slip(s) and certificate of registration must then be taken to the Enrollment Office. Refund, if any, will be made according to the schedule published in the Wichita State Schedule of Courses.

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

Administrative Withdrawal

Administrative withdrawal may be initiated by the dean’s office of the college in which a student is enrolled during the following instances.

1. The student’s class attendance is so irregular that in the instructor’s opinion, full benefit cannot be derived from the course.

2. The student has consecutive unexcused absences for two weeks or more.
3. The student fails to withdraw from one or more classes by the official procedure given in the Wichita State University Catalog.

4. The student fails to make complete withdrawal from the University by the official procedure given in the Wichita State University Catalog.

5. The student fails to be accepted by a baccalaureate college before the completion of 60 credit hours.

6. The student's behavior is prejudicial to Wichita State.

When it is determined that a student should be put on administrative withdrawal, the student is notified by the dean's office before final action is taken so that he is given a chance to explain his position. 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 still take place. A grade of W or F will be officially recorded on the student's permanent record for a course or courses from which he 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 a student doing below average work and to his academic adviser as an indication that his grades need to be improved. The student should meet with his instructors and/or college adviser to discuss the problem.

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

*Informal Warning.* If a student's overall grade point average is above the level required by his college for graduation (or above 2.00 for University College and the Division of Continuing Education) but below this level for one semester, his dean may send him a letter warning him of the consequences of continued substandard performance. No indication of such warnings shall appear on the student's transcript.

**ACADEMIC PROBATION AND DISMISSAL STANDARDS**

Below are stated the University's minimum probation and dismissal standards. Other specific regulations governing probation and dismissal standards are established by each college at Wichita State and are given in the introductory statement for each college. The student 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, a student is formally placed (or con-
continued) on probation at the conclusion of every semester in which his overall grade point average falls below 2.00. If the college in which a student is enrolled has a higher graduation requirement, the student may be placed on probation whenever his overall grade point average falls below the college's specified level.

A student is continued on probation as long as his overall grade point average is below the minimum University or college graduation standard and as long as his semester grade point average meets the minimum University or college standard. A student is therefore not dismissed if either his overall grade point average or his last semester's grade point average equals the minimum graduation level of his college.

A transfer student admitted on probation must complete at least 12 semester hours with at least a 2.00 average on his work at Wichita State before probation may be lifted. In addition, for transfer students, the above probation standards refer to both the student's Wichita State grade point average and his overall grade point average (all work).

A student on academic probation is limited to a 12 semester-hour load. Dismissal standards are set by the various colleges of Wichita State in conformance with the following policy:

A student is not academically dismissed at the end of a semester unless he began that semester on academic probation. Moreover, a student is in no case academically dismissed from Wichita State before he has completed a total of at least 12 semester hours at the University.

THE COURT OF STUDENT ACADEMIC APPEALS

The faculty at Wichita State has established a procedure to adjudicate disputes arising out of the classroom through the Court of Student Academic Appeals. The jurisdiction of the court encompasses appeals from students who feel they have been treated unfairly either as to the course grade they receive or in countering instructor's charges of plagiarism, cheating and similar offenses. The court is regarded as an agency to resolve differences that cannot be settled within the framework of the student-faculty classroom relationship and offers an important safeguard for students.

Any student may use the appeal procedure. Forms are available in the office of the vice president for student affairs. The general procedure will be explained to students when they pick up the form.

REQUIREMENTS FOR GRADUATION

Below are stated the University's minimum graduation requirements. The student should consult the appropriate section of the Catalog for additional graduation requirements imposed by the department and college of his major.

A student must have credit for 124 semester hours acceptable toward
the degree for which he is working, including no more than three courses taken under the A/Pass/Fail option (or during the interim, no more than a total of 24 semester hours under the combined Credit/No Credit and A/Pass/Fail options). Hours of credit earned toward a degree do not include courses with grades of F, W, Au, NCR or I.

An overall grade point average of 2.00 (transfer work included) must be maintained. The student must also have a grade point average of 2.00 for all work taken at Wichita State that can be applied to the degree sought. Furthermore, the student must maintain a grade point average of 2.00 in the courses in his major field of study.

No student shall be allowed credit toward graduation for D grade work in excess of one-quarter of the total hours.

A student must have a minimum of 40 semester hours of credit in courses numbered 300 or above.

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

With the approval of the dean of the student’s college, credit earned in correspondence or extension courses may be transferred to Wichita State. However, no more than 30 semester hours of such credit may apply toward a baccalaureate degree, and no more than six hours of such credit may be among the last 30 semester hours required for the degree.

**Prescribed Fields of Study (Core Curriculum)**

I. Mathematics and Natural Sciences (9 hours): Courses must be taken in at least two of the four subdivisions; a minimum of one four- or five-hour laboratory science course is required.

1. Mathematics. Math. 331 (121), 3 hours; 332 (122), 3 hours; 111 (140), 3 hours; 340 (245), 3 hours; 111 (140), 3 hours; 123 (139), 2 hours, or 112 (141), 5 hours.

2. Physical Sciences. Chem. 103 (103), 5 hours; 111 (111), 5 hours; 112 (112), 5 hours; and all other courses except 201 (201). Geol. 101 (101), 5 hours; 302 (102), 4 hours; 111 (111), 5 hours; 312 (112), 4 hours; Geog. 201 (201), 3 hours. Phys. 111 (103), 5 hours; 195 (110), 4 hours; 196 (111), 1 hour; 213 (123), 5 hours; 214 (124), 5 hours; 311 (243), 5 hours; 312 (244), 5 hours.

3. Biological Sciences. Biol. 100 (100), 4 hours; 111 (111), 4 hours; 112 (112), 4 hours; and Biol. 102 (102), 5 hours, nonlaboratory.

4. Engineering. Engr. 125 (125), 2 hours; 127 (127), 3 hours; 199 (199), 3 hours; 300 (300), 3 hours.

II. Communications (9 hours): Six hours must be in English composition and three hours in Speech 111 (111) or 112.
1. English. Eng. 101 (111), 3 hours; and either 102 (211), 3 hours, or 300 (225), 3 hours.

2. Speech. Speech 111 (111), 3 hours, or 112, 3 hours.

III. Humanities (12 to 15 hours): Courses must be taken in at least three of the seven subdivisions.*

1. Art, Music and Theater. Art Hist. 121 (101), 3 hours; 122 (102), 3 hours; and all other art history courses except 520 (501g), 3 hours, and 426 (463), 3 hours. Music 113 (113), 2 hours; 114 (114), 2 hours; 161 (161), 2 hours; 162 (162), 2 hours; music performance courses; and applied music courses. Speech (Theater) 143 (143), 3 hours.

2. History. Hist. 101 (101), 4 hours; 102 (102), 4 hours; 113 (113), 3 hours; 114 (114), 3 hours; 131 (131), 4 hours; 132 (132), 4 hours; and all other history courses except 300 (300) and 699 (498).

3. Literature. Eng. 103 (103), 3 hours; 104 (104), 3 hours; 223 (223), 3 hours; 224 (224), 3 hours; 340 (240), 3 hours; 252 (252), 3 hours; 280 (280), 3 hours; 360 (260), 3 hours; 361 (261), 3 hours; 362 (262), 3 hours; plus all other literature courses and foreign language literature courses.

4. Philosophy and Religion. Phil. 121 (121), 3 hours, and all other philosophy courses. Rel. 150 (125), 3 hours; 130 (130), 3 hours; and all other religion courses.

5. American Studies. All courses.

6. Humanities. Hum. 102 (102), 3 hours, and Hum. 389 (289), 3 hours.

7. Minority Studies. Min. Stud. 100 (100), 3 hours.

IV. Social Sciences (9 to 12 hours): Courses must be taken in at least three of the five subdivisions.*

1. Anthropology. Anthro. 124 (124), 3 hours; 201 (201), 3 hours; 202 (202), 3 hours; and all other anthropology courses.

2. Economics. Econ. 201 (221), 3 hours-202 (222), 3 hours; and all upper division courses.

3. Political Science. Pol. Sci. 121 (121), 3 hours; 319 (219), 3 hours; and all 200-level courses.

4. Sociology and Psychology. Soc. 211 (211), 3 hours; 220, 3 hours; and all other sociology courses after completing Soc. 211 (211). Psych. 111 (111), 3 hours; and all other psychology courses.

V. Electives (4 hours)

Four hours of electives in courses offered by any department except the student's major department must be taken. (Exceptions: music majors may take marching band, and physical education majors may take physical education in the activities series, 101-108 (101-108), under this section.) These electives may include courses in aerospace studies, military science, physical education and marching band.

* The selection from areas III and IV must total 24 hours, with a minimum of 12 hours in area III and a minimum of nine hours in area IV.
Additional Requirements

A student whose college program has not been interrupted by more than two consecutive calendar years may graduate under the requirements in effect at Wichita State on the date he first entered any college or university or the requirements of any subsequent Wichita State University Catalog provided, however, that in no case will he be allowed to graduate under the requirements of a Wichita State University Catalog in effect earlier than two years preceding his matriculation at Wichita State. If his college program has been interrupted by more than two consecutive years, a student will be subject to the requirements of a later Catalog.

The student's financial obligations to Wichita State must be paid in full before a diploma or transcript of record will be issued.

A SECOND BACHELOR'S DEGREE FROM WICHITA STATE

Students with a degree from another institution may be granted a second bachelor's degree from Wichita State University upon completion of 30 hours in residence and provided all Wichita State graduation requirements are met.

Financial Information

FEES

The current fees, listed below, are subject to change by the action of the Kansas Board of Regents or the state legislature.

General Academic Fees

<table>
<thead>
<tr>
<th>Type</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident (graduate and undergraduate)</td>
<td>$13.65 per credit hour</td>
</tr>
<tr>
<td>Nonresident (graduate and undergraduate)</td>
<td>40.00 per credit hour</td>
</tr>
</tbody>
</table>

Campus Privilege Fee

The campus privilege fee is required of every student enrolled for work on or off the Wichita State University campus at the rate of $3.90 per credit or clock hour during the regular semesters and Summer Session, in accordance with Wichita State University policy. The fee is distributed to pay revenue bonds for parking, the Campus Activities Center, the Cessna Stadium addition, the Life Sciences Building, the new power plant, and Ablah Library and for certain services and organizations, including student health services, athletic admissions, forensics, Student Government Association, University Forum Board, student publications, concerts, and drama and opera productions.

Campus Activities Center Operations Fee

Each student is charged a Campus Activities Center operations fee each
semester and Summer Session, depending on the number of hours he is enrolled in:

1 through 8 hours ........................................ $2.25
9 through 17 hours ........................................ 2.50
18 hours and above ........................................ 2.75

**Library Revenue Bond Fee**

A library revenue bond fee of $2.50 per student per semester and Summer Session is charged to support the library revenue bond issue.

**Audit Courses**

The charge per semester hour for courses audited is the same as for courses taken for credit. The charge for noncredit courses, unless otherwise specified, is the same as for credit courses.

**Extension Courses**

Courses offered by Wichita State at locations outside the city of Wichita may carry extension credit. The following fee schedule is used for such courses.

- Graduate credit ........................................ $18.00 per hour
- Undergraduate credit ................................. 14.00 per hour
- No credit .................................................. 14.00 per hour
- Noncredit courses ........................................ based on actual operating costs

**Workshop Fees**

Special workshops may be held throughout the year. The following fee schedule is used for such programs.

1 hour ......................................................... $27.75
2 hours ....................................................... 49.50
3 hours ....................................................... 72.25
4 hours ....................................................... 95.00

**Contracts and Compensatory Charges**

This schedule does not limit the charges that may be collected under arrangements with other governmental or private agencies, except that such arrangements may not provide for lesser charges. Compensatory or other charges that help to more nearly cover actual costs of instruction are specifically authorized.

**Departmental Fees**

Several special departmental fees are charged, as indicated below.

1. Music. During the academic school year, undergraduates enrolled in six or more hours will be charged no fees for the following ensembles: orchestra, Music 111A (111A) through 811A (511A); band, Music 111B
(111B) through 811B (511B); University Singers and A Capella Choir, 111F (111F) through 811F (512F); marching band, Music 111M (111M) through 811M (511M); and Brass Ensemble and Jazz Arts Ensemble, Music 111H (112H) through 811H (511H). No fees will be charged graduate students enrolled in these courses. During Summer Session no fees for these ensembles will be charged to undergraduate or graduate students enrolled in two or more credit hours in addition to these courses.

2. Facilities and Instruments Service Fee. A fee of $5.00 per semester or Summer Session is assessed each student enrolled in applied music.

3. Aerospace Studies Fee. $3.50 per semester.

4. Military Science Fee. $3.50 per semester.

5. Laboratory Fees. The following fees will be assessed to recover the costs of supplies and breakage. (Additional fees will be assessed when breakage is excessive.)

| Fee per Course |  
|----------------|---
| Chemistry laboratories | $10.00  
| Biology laboratories | 10.00  
| Geology laboratories | 10.00  
| Ceramics laboratories | 10.00  
| Sculpture laboratories | 10.00  
| Photo-Journalism laboratories | 5.00  
| Physics laboratories | 5.00  
| Reading laboratories, PD 160 (60) | 5.00  

**Miscellaneous Fees**

Various other fees are charged by the University as indicated below.

**Late registration fees:**

- 1 through 3 hours ........................................ $ 5.00
- 4 through 6 hours ........................................ 10.00
- 7 or more hours ........................................... 15.00

This fee is charged for registration after the beginning of classes.

**Credit by examination fee** ............................... 5.00

**Identification card fee—permanent card** ............... 1.00

**Orientation, new University student fee** ............... 7.00

**Transcript per copy charge (after first copy)** ......... 1.00

**College of Health Related Professions equivalency examination fee** ................................. 7.00

**Teacher placement fee** .................................. 2.00

**ACT residual testing fee** ............................... 8.00

**CLEP fee** .................................................. 15.00

**Physician's assistant application fee** ................... 10.00

**Drop and Add Fee**

*Drops.* Preregistered students may drop courses during registration without charge. After registration and before the end of the second week of classes (first week in Summer Session) students will receive a full refund
of general academic and special fees minus a $15.00 transaction fee for each course dropped. There will be no refund on partial withdrawal after the second week of classes (first week in Summer Session).

**Adds.** During the first week of classes a student may add courses to his schedule with the approval of the dean of the college in which he is enrolled. During the second week of classes, he may add courses, but he needs the approval of both the dean of the college in which he is enrolled and the instructor of the class. Students who wish to add courses after the second week of classes must have the approval of the University Committee on Admissions and Exceptions.

**Drops and Adds.** When an approved change of schedule involves a drop and add, the fees already paid for the course dropped will apply to the fees for the course being added. A $15.00 service charge will be assessed for each drop/add transaction.

**Effective Date.** All changes in enrollment become effective on the day the add and/or drop card is received in the Enrollment Office.

**Special Note.** In cases where the schedule change is required because of University regulations, clerical errors, misadvising or change made in the schedule by Wichita State, the dean of the student's college may waive the $15.00 transaction fee.

**Unpaid Fees**

Records of students who leave Wichita State with uncleared obligations may be impounded in the Office of Admissions and Records, and no transcript of record will be issued unless the account is cleared. A student will not be permitted to enroll unless all fees are paid.

**Assessment and Collection**

The University's controller is responsible for the assessment and collection of student fees. A committee consisting of the assistant to the president for finance and business manager, the director of Summer Session and a faculty member from the College of Business Administration constitutes the Board of Appeals for students who believe their fees have been incorrectly assessed. The decision of this committee is final.

**Period of Payment**

All semester fees, including the laboratory fees, are due and payable in full at the time of enrollment. Students whose fees are not paid in full will not be permitted to attend class. (Fees of students sponsored by recognized foundations or loan funds are presumed to be paid once a written statement of the recognition of the responsibility for such fees has been presented to the controller.)

**Refund Policy**

Students withdrawing from all courses should expect to have the follow-
ing percentages of their general academic, campus privilege and private lessons fees returned to them. A $15.00 transaction fee ($5.00 for students carrying seven hours or fewer) is charged.

<table>
<thead>
<tr>
<th>Date of Withdrawal</th>
<th>Percentage Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 13 days after the first day of classes</td>
<td>100</td>
</tr>
<tr>
<td>After the thirteenth day after the first day of classes and during the first one-third of the semester of Summer Session</td>
<td>50</td>
</tr>
<tr>
<td>After the first one-third of the semester or Summer Session</td>
<td>0</td>
</tr>
</tbody>
</table>

In order to receive the refund, the student must obtain drop cards from his respective dean's office, obtain the necessary signatures on the drop cards and present the drop cards and his certificate of registration to the Business Office or the Enrollment Office, depending upon the date of withdrawal.

**HOUSING EXPENSES**

Contract costs for University-owned residence halls, both room and board, total $950.00 per year, or $475.00 per semester. Installment payments may be arranged.

*All housing contracts, whether for University-owned or privately owned housing, are made on a nine-month basis, unless specific arrangements are made to the contrary.*

For information concerning housing regulations and types of housing available to students, see the Student Services section of the Catalog.

**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 to see what aid is available for their specific needs.

*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. Over 200 such scholarships and loans are available.

*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 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, including the Educational Opportunity Grants Program, National Direct Student Loans Fund and the Federal Guaranteed
Loan Program. Students interested in law enforcement or nursing may also take advantage of two other federal programs, the Law Enforcement Education Program and the Nursing Scholarship and Loans Programs.

**Student Services**

The Division of Student Services assumes the major responsibility for student personnel programs at Wichita State. The division cooperates and works with all offices, divisions and departments of the University to help students put their talents to the best possible use.

Students who need or desire assistance connected with any phase of University life are encouraged to contact the Division of Student Services. The division serves as a focal point for the interest and concern of students about matters related to Wichita State's people and programs.

**VICE PRESIDENT FOR STUDENT AFFAIRS**

The vice president for student affairs and dean of students is responsible for the coordination and supervision of student services. He is directly responsible to the University's president, and his purpose is to encourage communication concerning student life, problems and activities between the division and students, faculty and department heads at Wichita State.

**ASSOCIATE DEANS**

The offices of the associate deans of student services are responsible for the residence halls, off-campus housing concerns and orientation programs. They also serve fraternities and sororities, help social organizations, counsel students with problems or concerns and encourage scholastic achievement.

**ORIENTATION**

**Advance Registration Period**

Special orientation programs are presented in the summer through small-group interaction and discussions, led by trained student leaders, to acquaint new students with Wichita State college life, faculty and other new students. Personal goals, objectives and expectations are discussed during these summer programs.

**Shocker Week**

Shocker Week is held at the beginning of school and features numerous educational and social activities that help to acquaint new students with the campus. Library and campus tours are arranged, and an activities...
open house is presented. Special programs for residence hall students are planned, and entertaining films are shown.

COUNSELING

Professional counseling is available on a voluntary basis for students seeking such services. Areas specifically served include emotional and adjustment difficulties, vocational and professional planning, marital counseling and educational counseling relating to all these areas.

TESTING CENTER

The Testing Center offers a variety of measurement-related services to students and faculty. Information regarding the entrance examination (American College Test) for Wichita State and an interpretation of the results are available on request. Credit by examination programs (such as College-Level Examination Program) are administered through the center, and special tests measuring interest, abilities and personality are offered in conjunction with the services of the Counseling Center. The Testing Center also provides graduate and professional school testing services. Additional service areas include educational research, institutional studies and faculty classroom testing and scoring.

INTERNATIONAL PROGRAM

Students from other countries are welcome at Wichita State. In addition to the services offered to all students by the Division of Student Services, international students may find needed assistance in adjusting to their new surroundings through the International Program office, located in the Campus Activities Center.

The University's World Student Forum, composed of both international and American students, also helps students from other countries enjoy a full program of cultural and social activities. Membership in the club, which meets twice a month, is open to all students.

For Wichita State admission requirements for international students, see the section entitled Admission to Wichita State.

CAREER PLANNING AND PLACEMENT CENTER

The Career Planning and Placement Center assists undergraduate students, graduating seniors, graduate students and alumni.

Placement services cover all types of employment (except teaching positions, which are covered by the Bureau of Educational Placement), including part-time school jobs, summer employment and permanent career positions for graduates and alumni.

The center also places considerable emphasis on career guidance and counseling. Occupational and career information, employer directories, information on employment trends and opportunities, employer recruiting literature, annual salary survey reports and information on graduate
school and professional school opportunities are all available at the Career Planning and Placement Center.

**BUREAU OF EDUCATIONAL PLACEMENT**

Through the Bureau of Educational Placement, Wichita State provides job placement assistance for those students and alumni desiring teaching or administrative positions in education. A total of 15 semester hours and an overall average of C are required to apply. A registration fee of $2.00 must be paid to the Wichita State cashier. Application forms are obtained from the Bureau of Educational Placement.

**VETERANS AFFAIRS AND SELECTIVE SERVICE**

More than 1,800 Wichita State students are enrolled on the GI Bill. Those students and others with problems or questions regarding veterans' benefits or selective service should contact the dean of admissions and records.

**HOUSING**

The Wichita State housing policy for 1973-74 classifies the various units into the following two categories:

1. University-approved housing, including University-owned residence halls (Grace Wilkie and Brennan Halls are required for freshmen to the extent of their capacity), a privately owned residence hall (Fairmount Towers) and fraternity houses.

2. University-registered housing, including 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 nine or more credit hours who are not living with a relative or guardian 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 Division of Student Services.

   Special exceptions to these regulations will be reviewed by the housing officials in the Division of Student Services.

   Admission to Wichita State does not mean automatic room reservation. Each student admitted will receive a card from the admissions office to be filled in and returned to the Division of Student Services, which will send the proper information. For information, students may write:

   Director of Housing
   101 Morrison Hall
   Wichita State University
   Wichita, Kansas 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.

**STUDENT HEALTH AND HOSPITALIZATION**

Wichita State maintains the Student Health Service through a staff of professional nurses and community physicians. The health service endeavors to provide guidance and education in health matters, to promote good health, to prevent disease and to care for ill and injured students.

All new students, transfer students or students registering after an interruption in their program are encouraged to submit a medical history and physical examination form signed by a licensed physician (M.D.) to the Student Health Service. The appropriate form is mailed to all new students who apply for admission to Wichita State, or if needed, it may be obtained from the Student Health Service.

The nurse may be seen at the Student Health Service for first aid, illness or counseling regarding personal health problems. Services of the staff physicians are available by appointment during scheduled clinic hours as posted in the Student Health Service office. Students may receive immunization for tetanus, influenza and other diseases, and summaries of medical health records are prepared for students upon request.

The Wichita State student body has chosen to participate in the Blue Cross-Blue Shield group plan for accident and sickness coverage. Opportunities to enroll in the program are offered at the beginning of each regular semester. Information is available at the Student Health Service.

**Continuing Education and Summer Session**

**DIVISION OF CONTINUING EDUCATION**

The Division of Continuing Education was established to meet the educational needs of those citizens in the community who are not regularly enrolled students in another college of the University. The continuing education program is directed to the adults of the community, and the division strives to meet their needs through academic work that is of a cultural, vocational or semiprofessional nature. The functions of the program are:

1. To provide continuing education in a variety of fields for those who wish to study for their own personal enrichment;
2. To cooperate with business and industry in providing specialized courses (with or without credit) for groups of employees;
3. To sponsor lectures, conferences and institutes for the benefit of students and the general public;
4. To afford, through cooperation with degree-granting colleges, courses during evening hours leading to a degree in one of the colleges of the University;

5. To maintain administrative facilities for students who have matriculated for special programs or for an unspecified degree and who are not enrolled in another college of the University.

**Admission of Special Nondegree Students**

Students may be admitted to the Division of Continuing Education as special nondegree students for a maximum cumulative total of 15 hours if they have not attended high school or college during the past three years and have earned the high school diploma, or its equivalent, or are at least 25 years of age.

In order to pursue work beyond the semester in which the fifteenth hour is completed, special nondegree students must apply for admission as degree-bound students in University College or in one of the degree-granting colleges of the University or as regular nondegree students in the Division of Continuing Education. Students interested in graduate study should contact the Graduate School office.

**Academic Probation and Dismissal Standards**

Since the probation level for the Division of Continuing Education is 2.00, a student is placed on academic probation whenever his cumulative grade point average falls below 2.00. The division's dismissal level is 1.50.

A student is continued on probation when his cumulative grade point average remains below 2.00 but is higher than the 1.50 dismissal level. The student is also continued on probation if his semester grade point average is at least a 2.00, but his cumulative grade point average has not been raised above the dismissal level.

A student will not be academically dismissed at the end of a semester unless he began that semester on academic probation. Moreover, a student is in no case academically dismissed from the University before he has completed a total of at least 12 semester hours at Wichita State.

A student on academic probation is limited to 12 hours per semester.

**Transition Semester**

Entering college students enrolled in the Division of Continuing Education may elect to have their first semester grades translated into credit/no credit grades, as outlined in the Transition Period section of the Catalog.

**Transferring Credit From Continuing Education**

Students who accumulate credits in the Division of Continuing Education and who subsequently wish to work toward a degree must transfer to University College or to one of the degree-granting colleges. In making
that transfer, the student must meet all of the requirements for registering set by that college.

**Residence and Extension Credit**

All credit courses offered by Wichita State University within the City of Wichita carry residence credit; credit courses offered at locations outside the city may carry extension credit. Correspondence work is offered by Wichita State through the University of Kansas.

**Bulletin**

Prior to each semester a bulletin is prepared by the Division of Continuing Education announcing registration dates, courses offered, schedule of classes and other pertinent information. The bulletin is available upon request.

**SUMMER SESSION**

Wichita State maintains its Summer Session as an extension of the regular scholastic year. All work is offered by regularly qualified instructors, 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 or in which it has membership.

All the colleges and divisions of the University function during the Summer Session. Credit toward both undergraduate and graduate degrees may be earned during the summer. In addition, a wide variety of short-term workshops and special institutes is held during the Summer Session. Students interested in workshops should contact the Summer Session office, Room 222, Jardine Hall, for enrollment procedure.

**Summer Session Bulletin**

The Summer Session Bulletin gives the dates of enrollment, housing information, fees and the availability of cultural and recreational opportunities. Copies of the bulletin are mailed on request.

For the bulletin or information not covered here, please write to Director of the Summer Session, Wichita State University, Wichita, Kansas 67208.

**Admission Requirements and Enrollment**

The rules governing admission to the Summer Session are the same as those for the regular session.

A student may enroll in as many credit hours as the number of weeks for which he is enrolled. In general, a student may obtain up to eight hours of credit. Dates for registration are published in the Summer Session Bulletin.
Fees
For information regarding fees, see the Financial Information section in the Catalog.

Summer Program in Puebla, Mexico
Established in the summer of 1966, the summer program in Puebla, Mexico, offers students and teachers of Spanish an academic program designed to broaden and deepen their comprehension of the language, customs, history and culture of Mexico. Since all classes are taught in Spanish, only students who have had a minimum of two years of college Spanish or the equivalent are eligible to attend. Six hours of undergraduate or graduate credit may be earned by those who complete the six-week course.

To give students two distinct types of living experiences, embracing both the Mexican family life and community activities, students attending the Puebla program for the first time live in a private home for three weeks and in the Hotel Colonial for three weeks. Native Mexicans serve as escorts and as conversation leaders. During their stay in Puebla, students have a four-day break from class work for travel.

For more information concerning the summer program in Puebla, consult the Summer Session Bulletin or contact the WSU Department of Romance Languages, 220 Jardine Hall.

Special Programs

PROJECT TOGETHER
Project TOGETHER is a program that gives comprehensive, intensive, flexible tutorial help, personal counseling, career guidance and assistance in the development of study skills for low-income and/or minority students.

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 programs, coordinates the preparation and submission of project proposals and is responsible for the general administration and reporting of sponsored grants and contracts.

CENTER FOR BUSINESS AND ECONOMIC RESEARCH
The Center for Business and Economic Research, a service of the College of Business Administration, is committed to economic research, the col-
lection of economic data and the distribution of economic data to business, industry and individuals interested in the state's economic standing. Among the publications produced by the center are *Kansas Economic Indicators*, *Technical Data User's Report* and *Business Indicators Report*.

**CENTER FOR EDUCATIONAL DEVELOPMENT**

The Center for Educational Development in the College of Health Related Professions provides continuing adult educational opportunities for all members of health related professions in Kansas. Through workshops and seminars, the center's goal is to find effective methods for providing all health professionals with the latest information in their field in relation to their working environment. The center cooperates with a variety of professional health agencies in Kansas and neighboring states.

**CENTER FOR HUMAN APPRAISAL AND COMMUNICATION RESEARCH**

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

**CENTER FOR MANAGEMENT DEVELOPMENT**

The College of Business Administration's Center for Management Development is designed to provide continuing business education, professional development, specialized information and direct assistance in management development for the state's businesses, industries, and governmental and social agencies. The center conducts ongoing educational programs, such as workshops, institutes and seminars, to help organizational managers upgrade and improve their professional management skills.

**CENTER FOR URBAN STUDIES**

The Center for Urban Studies is an interdisciplinary organization established to give special attention to the problems of metropolitanism through independent and contract research. The role of the center is to stimulate and assist Wichita State faculty members, graduate students and informed and interested citizens to investigate, analyze and report on these problems. Through their efforts, it is hoped that explanatory hypotheses about urban problems, alternative solutions to them and probable consequences of such proposals are developed.

The center's staff works with faculty and graduate students in making
studies of economic, sociological and cultural problems, as well as governmental issues. The staff also helps to conduct seminars, workshops and conferences dealing with these areas for officials and interested citizens. A central library of specialized materials on urban and regional problems is maintained at the center to assist researchers.

Special Facilities

The 290-acre Wichita State campus is equipped for year-round use and comfort. Instructional facilities are in use for educational purposes more hours per day than at any other Kansas college or university. Among notable campus facilities is the Corbin Education Center, one of the last architectural structures designed by the late Frank Lloyd Wright and occupied by the College of Education.

The new five-story, 118,000 square-foot Life Sciences Building will be completed by the fall of 1973 and will house biology and other sciences as well as the College of Health Related Professions.

In October 1972, construction began on the $2 million McKnight Fine Arts Center, a 40,000 square-foot addition to the present art facility. The new building, scheduled for completion in 1974, will provide the most contemporary and best-equipped facility for teaching and the exhibition of student art in the state. An adjoining public gallery will offer first quality exhibition and storage facilities for the University's growing collections.

Also under way is the creation of a mall near the center of campus. The mall has necessitated the closing of Yale Avenue in front of the Campus Activities Center and, when completed, will add a large section of landscaped grounds to the campus.

Several other notable facilities are found on the Wichita State campus, as described below.

LIBRARY AND AUDIOVISUAL SERVICES

The University Library, primarily located in Ablah Library, provides information resources and services to support course offerings and to foster independent study and research. A comprehensive collection of approximately 1½ million items has been selected to meet the expanding needs of students and faculty. In addition to books and periodicals, University Library provides materials such as microforms, corporate reports, college catalogs, pamphlets, pictures and art reproductions, filmstrips, records and tapes.

University Library serves as a depository for selected official publications of the United States and the State of Kansas, with the Department of Special Collections housing a rapidly growing manuscript collection of more than 150,000 pieces. A number of other special collections in-
clude collections of the writings of William Shakespeare, the papers of William Lloyd Garrison and material on regional and local history.

An open stack arrangement allows easy access to nearly all of the material in the library collections. Reference service is provided to help students and faculty identify appropriate sources of information and use the card catalog and other bibliographic tools.

Facilities in Ablah Library include individual study carrels, electronic carrels equipped with listening and viewing equipment, group study rooms, microform reading equipment, copying services and typewriters.

The University Library's membership in the Center for Research Libraries allows Wichita State students to have access to the center's extensive holdings of research material.

The Audiovisual Center, located on the lower level of Ablah Library, provides information and assistance on problems dealing with communication and the selection, production and use of audiovisual materials and equipment. The center helps to individualize learning and improve the quality of instruction and learning through the use of audiovisual materials and equipment.

The center's facilities include a television studio, audio-recording room, graphic and photographic production area, multimedia classroom, seminar room and a media laboratory equipped for students and faculty engaged in the design and production of instructional materials.

**CAMPUS ACTIVITIES CENTER**

The Campus Activities Center (CAC) is Wichita State's community center for students, faculty, staff, administrators, alumni and guests of the University. The CAC provides recreation areas, lounges, meeting rooms and dining facilities for breakfast and lunch. The University Bookstore sells textbooks, trade books and supplies to meet the daily needs of the campus community. The CAC Activities Council, made up of a representative group of students, plans an extensive and varied program of activities.

A share of the campus privilege fee and revenues from food services, recreation facilities and the University Bookstore pay for the CAC building plus all CAC operating costs and the activities program. No tax money was used in the construction of the building, and tax money is not used to maintain and operate the center and its programs.

**DIGITAL COMPUTING CENTER**

The Digital Computing Center provides the use of modern computing facilities for instructional use, research projects and administrative processing at Wichita State. The University's IBM System/360 Model 44H computer is supported by a comprehensive staff.
READING AND WRITING IMPROVEMENT LABORATORIES

Special aid for students wishing to improve their reading skills and study habits is provided at Wichita State through courses aimed primarily at reading and writing improvement. Through testing and individual conferences, an attempt is made to identify a student's particular weaknesses and find ways to overcome them. For a further description of available courses, see the Catalog section on University College.

In addition to providing special courses, the University offers the voluntary Writing Laboratory program, which is designed to provide help to students enrolled in other University courses.

INSTITUTE OF LOGOPEDICS

The Institute of Logopedics is a private, nonprofit residential and outpatient facility located on 40 acres near the Wichita State campus. The institute is the largest residential facility in the world specializing in habilitation and/or rehabilitation of adults and children with speech and language disorders. The institute is University-related through its affiliation with the College of Education's Department of Logopedics, which offers academic preparation for Wichita State students desiring to work with communicatively handicapped children and adults. Observation and practicum opportunities are provided at the institute as part of the professional preparation of students in speech pathology and audiology.

Graduate programs in logopedics offered through Wichita State's Graduate School culminate in either a master's or doctoral degree. The PhD in logopedics is the only doctoral degree awarded in the name of Wichita State University.

WALTER H. BEECH AND SUPERSONIC WIND TUNNELS

Three wind tunnels are available at Wichita State for faculty and student use in aerodynamic studies. The Walter H. Beech Wind Tunnel, donated to Wichita State by the Beech Aircraft Corporation, is a 200 mph closed return tunnel with a $7 \times 10$-foot test section. Two supersonic wind tunnels, capable of producing wind velocities from two to four times the speed of sound, were given to Wichita State in 1963 by The Boeing Company.

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.
KMUW-FM RADIO STATION

KMUW-FM radio broadcasts at 89.1 megacycles on the FM radio dial. The 10,000-watt stereo station is one of more than 150 public radio stations that make up the Corporation for Public Broadcasting network. In addition to a full-time staff, students are employed in major positions and are involved in the total operation of the radio station. KMUW-FM programming includes live coverage of virtually all major speeches, concerts and other special events held at Wichita State.

SPORTS AND RECREATION

Sports and recreation facilities available to students at Wichita State include a regulation 18-hole golf course and a year-round swimming pool. The 10,200-seat Henry Levitt Arena is used for intercollegiate basketball games and major entertainment events, and Cessna Stadium, a 31,500-seat stadium, is used for football games and track meets. The stadium is complete with artificial turf and running track and was one of the first sports facilities in the nation to have both.

Student Activities and Organizations

Student organizations may be granted the privileges of using names in which the name of Wichita State is embodied or suggested and of using University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration forms furnishing the Student Government Association with lists of officers and other executive members, statements of purposes and copies of constitutions and bylaws.

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 that the Student Government Association (SGA) plays on the campus.

The SGA, under its present constitution, is divided into three organs of student government. The Cabinet, Senate and Courts carry out the executive, legislative and judicial functions, respectively.

In addition to sponsoring such student activities as Homecoming, Hippodrome and Parents Day, the Senate, which is completely student elected, charters and registers all other student organizations subordinate to it. It appoints students to University committees and advises the University administration on the student views about policy.
FRATERNITIES AND SORORITIES

Eight national sororities are active at the University: Alpha Chi Omega, Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Gamma Phi Beta and Sigma Gamma Rho. Nine national fraternities are also on campus: Alpha Phi Alpha, Beta Theta Pi, Delta Upsilon, Kappa Sigma, Phi Delta Theta, Sigma Alpha Epsilon, Alpha Kappa Lambda, Sigma Phi Epsilon and Omega Psi Phi.

RELIGIOUS ACTIVITIES

Wichita State welcomes the participation of a number of campus religious groups. Their programs are developed through campus organizations and/or centers and directors. Programs include informal discussion groups, counseling, worship, service projects and off-campus conferences. The Wichita State registration packet includes an optional religious preference card, which is made available to campus religious advisers.

ORGANIZATIONS

Honorary and Professional

Alpha Kappa Delta sociology
Alpha Kappa Psi business fraternity
Beta Gamma Sigma business administration
Delta Sigma Rho—Tau Kappa Alpha forensics
Eta Kappa Nu electrical engineering
Honors Society honor students
Kappa Delta Pi education
Kappa Kappa Psi band (men)
Kappa Mu Psi broadcasting
Kappa Pi art
Lambda Alpha anthropology
Mortar Board leadership, service and scholastic (senior women)
Mu Phi Epsilon music (women)
Omicron Delta Kappa leadership, service and scholastic (junior and senior men)
Phi Alpha Theta history
Phi Delta Kappa education
Phi Eta Sigma scholastic (freshman men)
Phi Kappa Phi scholastic (university-wide)
Phi Mu Alpha-Sinfonia music (men)
Phi Sigma Tau philosophy
Pi Delta Phi French
Pi Epsilon Delta drama (National Collegiate Players)
Pi Sigma Alpha political science
Pi Tau Sigma mechanical engineering
Psi Chi psychology
Senior Honor Men leadership and scholarship
Sigma Alpha Eta logopedics and speech therapy
Sigma Alpha Iota music (women)
Sigma Delta Pi Spanish
Sigma Gamma Epsilon geology
Sigma Gamma Tau aeronautical engineering
Sigma Pi Sigma physics
Spurs service (sophomore women)
Tau Beta Pi engineering
Tau Beta Sigma band (women)
Zeta Phi Eta speech arts

Departmental

Accounting Club
Administrative Management Society
American Chemical Society
American Institute of Aeronautics and Astronautics
American Institute for Mining, Metallurgical and Petroleum Engineers
American Society of Mechanical Engineers
Angel Flight
Anthropology Club
Army Blues
Arnold Air Society
Art Council
Art Education
Biology Club
Chemistry Club
CHRP (health related professions organization)
Circolo Italiano
English Graduate Student Association
Geology
Industrial Education Club
Institute of Electronics and Electrical Engineers
Le Cercle Francais
Liberal Arts Council
Media Women
Music Educators National Conference
Pershing Rifles
Physical Education Majors
Political Science Club
Prelaw Club
Psychology Club
Psychology Graduate Student Organization
Rifle Club
Scabbard and Blade
Sigma Delta Chi
Spanish Club
Student Advertising Club
Student American Federation of Teachers
Student Branch of the Association for Childhood Education
Student Education Association
Student Physics Society
Women in Communications (formerly known as Theta Sigma Phi)

Special Interests
Amateur Radio Club
Ananda Marga Yoga Society
Arab Student Organization
Art and Underground Film Club
Association for Environmental Improvement
Baha’i Club
Black Student Union
Campus Crusade for Christ
Chess Club
Chinese Association of WSU
Christian Science Organization
Collegiate Veterans Association
Expansive Poetry Unit
Flying Club
Friends of Men’s Glee Club
Great Plains Mountaineering Association
Human Resources Association
Indian American Student Association
Karate Club
Latter Day Saints Student Organization
Little Sisters of Minerva
MECHA-Movimiento Estudiantil Chicano de Aztlan
Orchestis
Peace Coordination Committee
Sisters of the Golden Heart
Student International Meditation Society
Student Media Association
Student Volunteer Tutorial
University Activities Council
University Debate Society
Vietnam Vets Against War
Women’s Liberation
Women’s Physical Education Club
World Student Forum
Young Democrats
Young Life
Young Republicans
Zero Population Growth

Living Groups
Brennan Residence Hall Association
Harvard Club
The Coeds
Yale Club

Governing
Associated Women Students
Board of Student Publications
Campus Activities Center Program Board
Engineering Council
Fraternity Presidents Council
Inter-Residence Council
Panhellenic Council
Student Government Association
University Forum Board

Key to Course Descriptions

SYMBOLS

When two course numbers are joined by a hyphen (-), the first semester is prerequisite to the second; when the numbers have an ampersand
between them, the two semesters may be taken in either order. Unless specifically noted otherwise, the first course listed is offered in the fall semester and the second in the spring.

Due to a new course numbering system, two numbers are given at the beginning of each course description or reference. The first is the course’s new number. The second, in parenthesis, is the former number for the course. In the case of a new course, only one number is given.

The number of hours of credit for each course is indicated in parentheses following the course title. The number of class meetings per week is normally the same as the number of credit hours. Two hours of laboratory work are usually required for one hour of credit. In courses involving meetings other than lectures, the following symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration; and P, practicum, with the hours of practicum per week given in front of the letter (6-8P means six to eight hours of practicum per week).

**ABBREVIATIONS**

The following abbreviations of academic departments are used in references to courses offered by those departments.

| Acctg. | Accounting |
| Admin. | Administration (business) |
| AE | Aeronautical Engineering |
| AJ | Administration of Justice |
| AM | Applied Music |
| Amer. Stud. | American Studies |
| Anthro. | Anthropology |
| Art Ed. | Art Education |
| Art Hist. | Art History |
| Biol. | Biology |
| Bus. Ed. | Business Education |
| Chem. | Chemistry |
| DH | Dental Hygiene |
| EAS | Educational Administration and Supervision |
| Econ. | Economics |
| Ed. Psych. | Educational Psychology |
| EE | Electrical Engineering |
| El. Ed. | Elementary Education |
| Eng. | English Language and Literature |
| Engr. | General Engineering |
| Fd. Ed. | Foundations of Education |
| Fr. | French |
| Geog. | Geography |
| Geol. | Geology |
| GD | Graphic Design |
| Ger. | German |
| HCA | Health Care Administration |
| Hist. | History |
| Hon. | Honors Program |
| HP | Health Professions |
| Hum. | Humanities |
| Ind. Ed. | Industrial Education |
| IE | Industrial Engineering |
| Ital. | Italian |
| IT | Inhalation Therapy |
| Journ. | Journalism |
| Lib. Sci. | Library Science |
| Ling. | Linguistics |
| Logo. | Logopedics |
| Math. | Mathematics |
| Math. (Computer Science) | Mathematics, Computer Science |
| Math. (Statistics) | Mathematics, Statistics |
| ME | Mechanical Engineering |
| Min. Stud. | Minority Studies |
| MS | Military Science |
| Mus.-Comp. | Musicology-Composition |
| Mus. Ed. | Music Education |
| Mus. Perf. | Music Performance |
| PD | Personal Development |
| PE | Physical Education, Health and Recreation |
| Phil. | Philosophy |
| Phys. | Physics |
| Pol. Sci. | Political Science |
| Psych. | Psychology |
| PT | Physical Therapy |
| Rel. | Religion |
| SA | Studio Arts |
| Sec. Ed. | Secondary Education |
| Span. | Spanish |
| SPG | Student Personnel and Guidance |
| Soc. | Sociology |
| Soc. (SW) | Sociology, Social Work |
University College exists to help new students develop a good foundation for personal development and academic success at Wichita State University. It is the first academic home for all first-semester freshmen working toward a degree at Wichita State University and for those transfer students who have not completed 24 semester hours with at least a 1.70 grade point average or who have not declared an academic major. Special students and guest students not pursuing a degree at Wichita State enroll in the Division of Continuing Education.

Academic services provided by University College include student counseling prior to orientation and enrollment; orientation and personal planning programs; registration advising and consultation; personal development courses in reading, writing and study skills; freshman seminars and occupation seminars for personal development and vocational exploration; reports to students on their academic progress; coordination with honors programs; administrative handling of emergencies and exceptions, including readmission after academic dismissal; and transfer from University College into one of Wichita State’s six undergraduate degree-granting colleges—the College of Business Administration, the College of Education, the College of Engineering, the College of Fine Arts, the College of Health Related Professions or Fairmount College of Liberal Arts and Sciences.

Students in University College are enrolled primarily in courses offered by departments in the six undergraduate degree-granting colleges and taught by faculty from those departments, with the exception of the credit or noncredit personal development courses offered by University College that are listed at the back of this section.

While enrolled in University College, students are expected to remove any high school deficiencies, develop effective study skills and habits; choose an academic major and develop a personalized academic plan, and complete part of their general education (core curriculum) requirements.
High School Preparation and Admission to University College

Students are advised to complete their high school work with at least four units of English, two units of history and social sciences, 1½ units of algebra, one unit of geometry and two units of natural science excluding general science. Students planning to work toward a degree in Fairmount College of Liberal Arts and Sciences should also consider taking at least two units of one foreign language. Students planning to earn a degree in engineering or the physical sciences should take college algebra and trigonometry in high school.

Students may be admitted to Wichita State and enroll in University College on the basis of high school equivalency test scores on the General Education Development (GED) tests.

All students admitted to University College must file official high school and college transcripts and American College Test (ACT) scores before attending orientation and registering for courses.

Students who transfer to University College from the Division of Continuing Education follow the same procedures and meet the same requirements as new freshmen: they file transcripts and ACT scores and participate in an orientation program. (For more information on general Wichita State University admission requirements see the admissions section of the Catalog.)

Student Responsibility

Every student is expected to familiarize himself with graduation requirements, course prerequisites, enrollment dates and procedures, and with all other policies stated in the Wichita State University Catalog, published annually, and in the Wichita State University Schedule of Courses, published in advance of every semester and Summer Session.

Once a student in University College has enrolled in a course, an official record is made. The student must either withdraw from the course by completing and filing an official drop card or he must complete the course. If the student fails to withdraw or to complete, he will receive an F grade on his official transcript. (See Academic Information in the Catalog for full details about grading policies, incompletes and similar policies.)

Every student enrolled in University College is expected to develop an academic plan as a basis for academic advising and course registration every semester. Students who have declared an academic major are expected to develop a graduation plan with the help of a faculty adviser from their major field. Students who have not declared a major are expected to develop an exploration plan with the help of University
College counselors. The academic plan is kept with the student's records in the Personal Plan and Record, a document which should be brought to every advising or enrollment activity.

**Orientation**

Orientation and personal planning programs are designed to help new students become a part of the learning community; to teach the requirements, expectations and procedures of that community; and to assist students in thinking through and developing a written plan for their personal development and education.

Orientation and personal planning are not a prelude to education, but are a part of college education itself. Therefore, all first-semester University College students are required to attend an academic orientation and to participate in personal planning sessions before enrolling for courses. A required, nonrefundable orientation fee is charged, which includes payment for the Wichita State University Catalog, the Wichita State University Schedule of Courses, a special guidebook and the Personal Plan and Record. 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 students who have been officially admitted.

**Academic Advising**

All full-time University College students are assigned an academic adviser. When a student declares an academic major field of study, he is assigned a faculty member in that department. If a student has not declared a major, he is assigned at random to faculty from the various departments, to a counselor in University College or to a staff person in the Division of Student Services. Part-time, evening-only students are usually not assigned to faculty advisers, but are encouraged to seek advice and counsel from University College staff members. University College is open one evening a week to assist evening-only students.

**Academic Opportunities**

**FIRST SEMESTER—TRANSITION PERIOD**

The first semester is a special period of transition and adjustment during which the student should develop the knowledge, the skills and the confidence to become self-directing.

Freshmen in their first semester of college work enjoy 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 Period heading of the *Catalog*.

**GENERAL EDUCATION (CORE CURRICULUM)**

All degree programs at Wichita State University require that 41 to 45 semester hours of general education courses (known as the core curriculum because these courses apply toward graduation in all programs) be taken. The general education requirement is typical of most colleges and universities in the United States and is based on the conviction that college graduates should be exposed to a broad sampling of knowledge about themselves and the world rather than to only a narrow discipline of knowledge and skills.

The core curriculum includes a wide variety of courses organized into several divisions, as shown in the Academic Information-Requirements for Graduation section of the *Catalog*. The student must develop his own personalized general education program by choosing courses from each of the divisions. Whenever possible, the student should select courses that meet both core requirements and major requirements. For instance, a student considering mathematics or physics as a major, may meet both a core curriculum science division requirement and a major course requirement by enrolling in a mathematics course for which he has the proper background. Failure to plan carefully keeps the student from using his electives wisely.

**PERSONAL DEVELOPMENT AND ADVANCED CREDIT**

Wichita State believes that every student should be able to continue his development and education at the level for which past experience, knowledge and skills prepare him. Toward that objective, University College provides personal development courses in reading, writing and study skills, and the department of mathematics offers high school-level algebra and geometry for those who may be poorly prepared for college study. For the exceptionally well-prepared student, Wichita State offers both advanced placement, which enables a student to begin his college study in courses beyond the introductory level, and advanced credit, which allows a student to be granted credit toward a degree (with the credit recorded on his official transcript) without enrolling in a course. Advanced placement and advanced credit are earned through performance on standardized or departmental tests and are normally negotiated prior to the student’s first enrollment. (For full details, consult with the director of the Testing Center.)

**SPECIAL PROGRAMS AND SEMINARS**

*Honors.* New University College students should acquaint themselves
with the criteria for participation in the Wichita State Honors program and with the distinct advantages offered by the program. The Honors Program is briefly explained in the Academic Information section of the Catalog and can be described in depth by the honors coordinator.

**Freshman Seminar.** Freshman Seminar is an elective one-hour credit course for new students seeking special opportunities to relate to students and faculty in fellowship, an opportunity to develop interpersonal communication skills and a chance to focus attention on their own personal development. The seminars consist of small groups (eight to 15 students) led by either faculty or selected juniors or seniors who have received special leadership training. The program was created to help new students develop education-related peer groups and to enhance the social modeling process in a university context, a framework in which many students have difficulty developing close friendships.

**Occupation Seminar.** Occupation Seminar is an elective one-hour credit course for students who have not declared an academic major and who lack a clear educational and vocational goal. Students study themselves, the world of work and the opportunities available in higher education through individual testing, group discussions, job interviews, diaries and role playing.

Approximately 50 percent of all new University College students enter their University studies quite unsure about their vocational and educational goals. Most of them do not declare an academic major and spend several semesters in courses chosen for their exploration and general education values.

### Transferring to a Degree-Granting College

A student is expected to qualify for transfer to one of the six undergraduate degree-granting colleges at Wichita State at the end of the semester in which he completes 24 semester hours. To qualify for transfer to three of the colleges, the College of Business Administration, the College of Engineering or Fairmount College of Liberal Arts and Sciences, a student must have 24 semester hours completed and an overall grade point average of 1.70. To qualify for transfer to the College of Education, a student must have 24 semester hours completed, a grade point average of 2.00 and at least a grade of C in English 101 (111). To qualify for transfer to the College of Health Related Professions, a student must have 24 semester hours completed, a grade point average of 2.00 and be formally accepted by one of the departments in the college. To qualify for transfer to the College of Fine Arts, a student must have 24 hours completed and a grade point average of 2.00.

A student who has declared a major and who qualifies for transfer into the college of his choice is transferred automatically. If a student
has not declared a major or is otherwise unqualified to transfer when he has completed 24 semester hours, he is asked to review his program with a University College counselor in order to clarify his status and confirm realistic plans for continuing academic progress.

No student may continue in University College beyond the semester in which he completes 48 semester hours unless he petitions for an exception approved by University College and the University's Committee on Admissions and Exceptions. No student may continue in University College beyond the semester in which he completes 60 semester hours.

Academic Progress, Probation and Dismissal

To graduate, a student must have a 2.00 (C) average on all course work for credit. Therefore, the University College probation level is 2.00, and a student is placed on academic probation whenever his cumulative grade point average falls below 2.00. The dismissal level is 1.50 for students with 24 or fewer semester hours and 1.70 for students with 25 or more semester hours.

A student remains on probation if his cumulative grade point average falls below 2.00 but is higher than the dismissal level. A student also remains on probation if his semester grade point average is at least a 2.00, even though his cumulative grade point average is not above the dismissal level.

A student is not dismissed at the end of a semester unless he entered the semester on probation. Moreover, a student is not dismissed before he has completed 12 semester hours of credit work at Wichita State, unless other standards are specified as a condition of his admission. Credit work excludes courses receiving grades of CRE (credit), W (withdrawal), I (incomplete), Cr/NCR (credit/no credit) or P (pass). (The grading system is explained at length in the Academic Information section of the Catalog.)

A transfer student admitted on probation must complete at least 12 semester hours of credit work and achieve a 2.00 grade point average on work at Wichita State before probation is removed.

A student on probation is normally limited to a maximum load of 12 hours per semester, although exceptions may be made by the dean of University College. A student may not use higher grades transferred from another institution to make up for a deficient grade point average on work at Wichita State. Graduation requires a 2.00 average on all work and a 2.00 average on all work at Wichita State University.

EMERGENCIES AND EXCEPTIONS

All regulations governing students at Wichita State are subject to petition.
Individual problems and emergencies may be considered by the University College Exceptions Committee and then forwarded with recommendations to the University Committee on Admissions and Exceptions if the student presents a formal, written petition.

**READMISSION AFTER ACADEMIC DISMISSAL**

A student who has been academically dismissed in accordance with the stated academic policies may seek readmission to University College by appealing in writing for an exception to the regulations. Usually University College requires the petitioner to appear for a personal interview and to prepare a detailed program of studies for the approval of the dean of University College before the written petition is forwarded to the University Committee on Admissions and Exceptions.

Because the counseling and advanced planning requires careful attention and much time, the student must initiate his readmission process at least ten days before the first day of enrollment. Interviews are not conducted during any of the scheduled registration sessions.

The case for readmission must be developed by the student himself. He should center his petition around an explanation for his failure and a presentation of evidence that success is possible and likely.

**Preprofessional Programs**

Students planning on professional graduate level studies are assigned to qualified faculty advisers in the selected preprofessional areas for the purpose of developing strong undergraduate preparation. For example, prelaw students may pursue their studies through the Department of Political Science in Fairmount College of Liberal Arts and Sciences or through the College of Business Administration. Students planning on health careers are advised by faculty from the College of Health Related Professions or Fairmount College of Liberal Arts and Sciences. They are enrolled through University College for their first 24 semester hours and then transferred to either the College of Health Related Professions or the College of Liberal Arts and Sciences for the degree program of studies.

Students should check with advisers to see what preprofessional courses should be taken while they are in University College. For example, HP 101 (101), *Introduction to Health Professions*, is a one-hour credit course that should be taken by new students who are interested in a health related profession but uncertain of their choice. (Such professions include nursing, medical technology, inhalation therapy and physical therapy.

**DIPLOMA NURSING**

Students seeking to prepare themselves for admission to a diploma-
granting hospital school of nursing are enrolled in University College for specific courses selected to meet the common admission requirements of the three affiliated hospitals: St. Francis Hospital, St. Joseph Hospital and Rehabilitation Center and Wesley Medical Center, all of Wichita. It is the student's responsibility to apply to the nursing school of his choice and obtain the specific requirements of that school. The suggested curriculum below has been developed through consultation with the schools of nursing of the three Wichita hospitals and the College of Health Related Professions at Wichita State. The suggested program, followed by two years of clinical experience and study in the hospital, qualifies the student for a diploma and prepares him for the State Registered Nurse Examination.

The prenursing student should plan on at least one summer and two full semesters of study; an additional semester may be required for students who have high school deficiencies. Certain courses also need to be taken in a special sequence in order to guarantee that prerequisites are met. Biol. 100 (100) or 112 (112) is a prerequisite to Biol. 223 (223), taken in the second semester, and Biol. 223 (223) should precede or be taken at the same time as Biol. 120 (120). Successful work in high school algebra is a necessary preparation for Chem. 103 (103).

<table>
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<tr>
<th>SUMMER SESSION</th>
<th>Course</th>
<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Chem. 103 (103), General Chemistry</td>
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<tr>
<th>FIRST SEMESTER</th>
<th>Course</th>
<th>Hrs.</th>
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<tr>
<td></td>
<td>HP 101 (101), Introduction to Health Professions (not required)</td>
<td>1</td>
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<tr>
<td></td>
<td>Biol. 100 (100) or 112 (112), Principles of Biology or Introduction to Zoology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Psych. 111 (111), General Psychology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Eng. 101 (111), College English I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Soc. 211 (211) or Anthro. 202 (202), Introduction to Sociology or Cultural Anthropology</td>
<td>3</td>
</tr>
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<table>
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<tr>
<th>SECOND SEMESTER</th>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td></td>
<td>Biol. 223 (223), Human Biology</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Biol. 120 (120), Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Psych. 361 (260), Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Speech 111 (111), Basic Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

|              | Total                                               | 34 |

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<thead>
<tr>
<th>TWO-YEAR PROGRAM IN ADMINISTRATION OF JUSTICE</th>
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University College cooperates with the Department of Administration of Justice in Fairmount College of Liberal Arts and Sciences to provide the Associate of Applied Science Certificate in Administration of Justice. A University College counselor is assigned to advise students in this program.

The student must complete at least 64 credit hours with at least a 2.00
(C) grade point average overall for all courses taken. He must also complete at least 18 credit hours of courses in the Department of Administration of Justice with a grade of C or better in every administration of justice course. Finally, the student must complete at least 24 credit hours of work outside the Department of Administration of Justice. The preferred courses outside the required 18 credit hours in administration of justice are the University's core curriculum courses that best qualify the student to pursue a baccalaureate program in administration of justice.

Continuing Education

Special and guest students not currently working toward a degree at Wichita State University are served through the division, as discussed in the Division of Continuing Education section of the Catalog.

University College Courses

HUMANITIES

398 (299). International Seminar. (4). An interdisciplinary travel seminar: a study of European culture that includes observations of art and architecture in principal European cities; lectures and discussions of European cities; lectures and discussions of European political, social and economic problems given by foreign nationals; and conducted visits to various historic places of interest. The seminar is under the direction of a member of the faculty. A 10 398 9 4903

PERSONAL DEVELOPMENT

100 (100). Freshman Seminar. (1). A study of the university as a resource for personal development and the development of an individual master plan for study and self-development in the university. J 11 100 2 0601

102 (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 2 4999

160 (PD 60). Reading Improvement Techniques. (2). 2R; 1L. A course designed for students who seek to improve reading skills. Reading and study habits are diagnosed, and results are used to design a program of self-improvement in these and other skills for each student. J 12 160 1 1501

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

PERSONAL DEVELOPMENT

050 (50). Personal Assessment and Planning Workshop. (3). Comprehensive personal evaluation and planning of educational and career programs. Use is made of biographical data, tests, inventories, interviews, occupational infor-
information, postsecondary educational information and laboratory procedures. Prerequisite: Consent of instructor, high school graduation or commencement of student's high school graduating class. J 12 050 2 4989

080 (80). Writing Improvement Techniques. (2). 2R. 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

MATHEMATICS

011 (52). Algebra. (5). The topics from high school algebra essential to the study of university level mathematics. May be used in meeting departmental prerequisites in place of 1½ units of high school algebra. A 20 011 0 1701 (See Mathematics.)

021 (60). Plane Geometry. (2). For students without high school credit in plane geometry. May be used in meeting departmental prerequisites, in place of one unit of high school geometry. Prerequisite: one unit of high school algebra or Math. 011 (52), or concurrent enrollment in Math. 011 (52). A 20 021 0 1701. (See Mathematics.)
The College of Business Administration seeks to develop professionally competent men and women for careers in business and other organizations in which organizational skills and the management of economic resources are important. Professional competence requires a broad understanding of the basic fields of administration, accounting, economics and the related social and natural sciences. Fundamental, also, is the ability to recognize, analyze and solve organizational problems and to understand the environmental systems in which organizations function. The curriculum is thus designed to:

1. Provide the individual with an understanding of his world and society and to develop an understanding of his rights and responsibilities as an active member of society;
2. Encourage in the individual the habit of orderly thinking, creativity and the art of utilizing knowledge;
3. Equip the individual with the organizational, communicative and interpersonal skills required in the administrative and decision-making processes;
4. Develop within the individual an inquisitive intellectual capacity with an understanding of and appreciation for research methodologies;
5. Allow the individual to acquire a degree of specialized knowledge in a selected area.

Programs

UNDERGRADUATE

The undergraduate curriculum of the College of Business Administration leads to the Bachelor of Business Administration (BBA) degree. An emphasis may be obtained in the departments of accounting, administration, business education and economics.

A two-year program in secretarial training, which leads to the Certificate of Applied Science in Secretarial Training, is also available.

GRADUATE

The college offers a course of study leading to the Master of Business Administration (MBA) degree. This program is designed to accommod-
date both students with undergraduate degrees in business administration and those with baccalaureate degrees in other fields of study.

The accounting and administration departments also offer programs leading to the Master of Science (MS) degree. The economics department offers courses of study leading to the Master of Arts (MA) degree.

For additional information, see the Wichita State University Graduate School Bulletin.

RESEARCH AND CONTINUING PROFESSIONAL DEVELOPMENT

The college feels a responsibility for adding to the total body of knowledge concerning business and economics. In addition to the independent research activities of individual faculty members, the college has two formalized centers to facilitate and conduct research, the Center for Business and Economic Research and the Center for Human Appraisal and Communication Research. The College of Business Administration recognizes that its urban environment offers many advantages to students and faculty interested in studying the problems in business and administration. The college is also aware that this urban setting imposes many responsibilities upon the college.

As an urban, state-supported institution, the college feels a responsibility to provide educational programs and specialized services for members of the community and the state who are not full-time students. In response to community needs, the college maintains an active program of continuing education. Through the Center for Management Development, seminars and other programs are developed to enable businessmen to keep abreast of current developments in specialized areas of the business environment.

ACCREDITATION

The college is a member of the American Assembly of Collegiate Schools of Business, and its undergraduate program is accredited by the organization.

Regulations

ADMISSION

Entering Wichita State freshmen interested in business administration are admitted to University College and must meet the general entrance requirements of the University, as shown elsewhere in the Catalog. The program of high school preparation recommended for entering students is given in the University College section of the Catalog.

Students may enter the College of Business Administration from Uni-
versity College, other degree-granting colleges within the University or other universities and colleges, provided they have completed 24 semester credit hours, have earned a grade point average of 1.70 for 24-63 hours or 2.00 for 64 or more hours, and are not on academic probation.

PROBATION
A student is placed on probation at the end of any semester in which he does not have a cumulative grade point average of 2.00. Probation is removed when his cumulative grade point average reaches the required 2.00 level. The student remains on probation even if he earns a 2.00 or better grade point average in the term during which he is on probation but his cumulative grade point average still does not meet the minimum standards. No student who enrolls in fewer than seven hours will be dismissed for failure to raise his cumulative grade point average to the required level; however, if the student has earned seven or more hours in two or more terms, he must achieve a grade point average for the semesters of 2.00 in order to be continued on probation and not dismissed.

A student on probation will be dismissed from the College of Business Administration if he fails to meet either of the requirements of his probationary status. When dismissed, students must apply to the College of Business Administration Exceptions Committee to be considered for readmittance on a final probationary status.

REQUIREMENTS AND RESTRICTIONS

Grade Point Average. A grade point average of 2.00 or better must be earned on (1) all college work, (2) all work taken at Wichita State, (3) all business and economics courses and (4) all business and economics courses taken at Wichita State that could be applied to the degree sought.

Nonbusiness Courses. Candidates for the baccalaureate degree offered by the college must complete at least 56 semester hours of courses offered outside the college. Econ. 201 (221) and 202 (222) may count as courses outside the college, but Hist. 515 (338), 516 (436) and 614 (337); Pol. Sci. 655 (479) and 687 (477); Engr. 127 (127); and Math. (Computer Science) 199 (199) may not count as courses outside the college. In addition, degree students must complete at least 50 semester hours of courses offered by the college.

Extension or Correspondence Work. Not more than six hours of the last 30 or 10 hours of the total number of hours required for graduation may be 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 duplicate courses required
for any degree granted by the college, required for any emphasis within the college or offered at the junior or senior level in the college.

*Pass/Fail.* The following restrictions pertaining to courses taken for 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 a pass/fail basis.
2. No course in the student’s area of emphasis may be taken on a pass/fail basis.
3. Except for the cases given above, a student enrolled in the College of Business Administration is subject to the pass/fail regulations of the University.

*Catalog in Effect.* A student whose college program has not been interrupted by more than two consecutive calendar years may graduate under the requirements in effect at Wichita State on the date he first entered any college or university or the requirements of any subsequent *Wichita State University Catalog*. However, in no case will a student be allowed to graduate under the requirements of a *Catalog* that was in effect earlier than two years before he matriculated at Wichita State. If his college program has been interrupted by more than two consecutive years, he is subject to the *Wichita State University Catalog* requirements in effect when he reenters, or if he elects, the requirements of a later *Catalog*.

*Second Bachelor's Degree.* A student may obtain a second bachelor’s degree in the College of Business Administration. To be eligible for a second bachelor’s degree, the student must (1) complete 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 requirements of the college core in effect at the time he embarks on a program leading to a second bachelor’s degree.

**Bachelor of Business Administration Degree**

All students in the College of Business Administration are required to take course work, as indicated, in the areas outlined below.

**GENERAL REQUIREMENTS**

I. Mathematics

II. Economic Environment of Business
   Econ. 201 (221)-202 (222). Principles of Economics I-II;
   And any one of the following:
   Econ. 304 (320). Managerial Economics.
Econ. 340 (340). Money and Banking.
Econ. 601 (424). National Income Analysis.
Econ. 602 (421). Production, Price and Distribution Analysis.

III. Legal and Social Environment of Business
Any one of the following:
Admin. 332 (332). Law and Society.
Admin. 333. Values and Ethics in Business.
Admin. 334 (334). Law and Business.

IV. Business Functions
Admin. 321 (BA 321). Business Functions;
Or any two of the following:
Admin. 300 (300). Marketing.
Admin. 343 (343). Finance.
Admin. 351 (351). Production Management.

V. Quantitative Methods and Information Systems
Econ. 231 (BA 231). Introductory Business Statistics;
And any one of the following:

VI. Accounting

VII. Administrative Processes
Admin. 341 (BA 341)-342 (BA 342). Administrative Behavior I-II;
Or Admin. 260 (260). Concepts of Administration;
And any one of the following:
Admin. 120 (120). Introduction to Business.
Admin. 364 (364). Organizational Communication.
Admin. 663 (463). Organizational Interactions.
Admin. 665. Organizational Development.
And any one of the following:
Admin. 681 (481). Administrative Policy I.
Admin. 682 (482). Administrative Policy II.

EMPHASIS
Each candidate for the BBA degree must satisfy the additional specific requirements of one of the following curricular emphases.

Accounting

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 320 (335). Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 430 (345). Income Tax and Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>Admin. 334 (334). Law and Business</td>
<td>5</td>
</tr>
</tbody>
</table>

Accounting electives (Elective courses should be based on the student's career objective in professional accounting. Consultation with a faculty adviser in the Department of Accounting is strongly recommended.) 9

College of Business Administration 67
Administration
Students must elect an additional 21 hours beyond the college core from upper division courses (300 through 600 level) in the College of Business Administration. A minimum of 15 upper division hours must be taken within the administration department, and the remaining six hours may be elected from upper division courses in accounting, administration or economics.

Economics
Beyond the college core, a minimum of 21 additional hours in economics is required, and a maximum of 31 hours in economics is allowed. The required courses are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 340 (340). Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 601 (424). National Income Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 602 (421). Production, Price and Distribution Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

Twelve hours of upper division (300 through 600 level) electives in economics—including not more than six hours from among Econ. 625 (305), 626 (406) and 627 (307)—must be selected.

Business Education
The maximum lower division credit from the Department of Business Education is 28 hours. Required courses for the secretarial emphasis are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus. Ed. 133 (133), 138 (138), 237 (237). Beginning, Advanced and Technical Typewriting</td>
<td>6-8</td>
</tr>
<tr>
<td>Bus. Ed. 201 (201). Secretarial Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 202 (202). Calculating Machines</td>
<td>1</td>
</tr>
<tr>
<td>Bus. Ed. 231 (231), 234 (234), 240 (240). Elementary, Advanced and Technical Shorthand</td>
<td>6-9</td>
</tr>
<tr>
<td>Bus. Ed. 136 (136) and 203 (203). Records Management and Office Procedures and Organization</td>
<td>4</td>
</tr>
<tr>
<td>Bus. Ed. 248 (248). Written Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 345 (345). Transcription</td>
<td>3</td>
</tr>
</tbody>
</table>

TRANSFER STUDENTS
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:

Math and Science
- College algebra (3 hours)
- Survey of calculus (3 hours)
- Laboratory science (4-5 hours)

Communications
- Composition (6 hours)
- Speech (2-3 hours)

68
Humanities (12 hours)
Social Sciences
  - Principles of economics (6 hours)
  - Psychology, sociology, anthropology, political science (6 hours)
Business
  - Introductory accounting (6 hours)
  - Principles of management (3 hours)
  - Business statistics (3 hours)
Nonbusiness electives (6 hours)

Certificate of Applied Science in Secretarial Training

The Certificate of Applied Science in secretarial training provides an opportunity for receiving secretarial preparation of a high quality in a college atmosphere with a view to attaining the status of Certified Professional Secretary.

The requirements for the certificate are as follows: Eng. 101 (111); Econ. 201 (221) and 202 (222); Acctg. 210 (213) and 220 (214); Admin. 120 (120), or 260 (260), or 332 (332); Bus. Ed. 136 (136), 138 (138), 201 (201), 202 (202), 203 (203), 231 (231), 234 (234), 237 (237), 240 (240) or 345 (345), and 248 (248)—138 (138), 231 (231) and 234 (234) may be taken in high school; science or Math. 331 (121); six hours of humanities; nine hours of general University requirements outlined earlier in the Catalog; and electives to equal 64 hours. Thirty hours and 60 credit points must be earned in residence. Twelve 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 Certificate of Applied Science in secretarial training. If high school courses cover the same material as Bus. Ed. 133 (133) or Bus. Ed. 231 (231), no credit is given; business electives must be substituted for these courses.

Business Teacher Education Degree

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

Accounting

An emphasis in accounting may be taken only in the College of Business Administration. The requirements for an emphasis in accounting are
listed under the Bachelor of Business Administration degree information. A minor in accounting may be taken in Fairmount College of Liberal Arts and Sciences. A minimum of 15 hours must be taken, including Acctg. 210 (213)-220 (214), 310 (315) and 410 (316).

CERTIFICATE OF CERTIFIED PUBLIC ACCOUNTANT

The designation certified public accountant (CPA) is available to individuals who are able to demonstrate basic competence of professional quality in the discipline of accounting. This basic competence is demonstrated by acquiring the body of knowledge common to the professional and by passing the CPA examination.

Graduates with an accounting emphasis qualify to sit for the Kansas CPA examination, provided they satisfy the requirements of Kansas law and the regulations of the Kansas State Board of Accountancy. Information pertaining to these requirements may be obtained in the Department of Accounting.

CERTIFICATE IN MANAGEMENT ACCOUNTING

Accountants planning a career in managerial accounting may desire to attempt the examination for the Certificate in Management Accounting. Unlike the CPA certificate, the Certificate in Management Accounting (CMA) is not an admission to practice. Successful completion of the CMA program represents, instead, the attainment of a level of knowledge and of professional competence in managerial accounting. Initiated in 1972 by the Institute of Management Accounting, the objectives of the program are to: (1) establish management accounting as a recognized profession, (2) foster higher educational standards in the field of management accounting and (3) establish an objective measure of an individual's knowledge and competence in the field of management accounting.

Graduates with an accounting emphasis qualify to sit for the CMA examination. Information pertaining to this program may be obtained in the Department of Accounting.

Lower Division Courses

210 (213). Introduction to Financial Accounting. (3). The study of accounting as a means of communicating financial information about the activities of business enterprises. Emphasis is placed on concepts and principles underlying the measurement of income and financial position and how this information may be used to evaluate the progress of a firm. Prerequisite: sophomore standing or departmental consent. B 11 210-0 0502

220 (214). Introduction to Managerial Accounting. (3). The study of accounting in terms of management's information requirements. Emphasis is given to the use of accounting in planning and con-

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
trolling a firm's activities. Prerequisites: Acctg. 210 (213) and sophomore standing. B 11 220 0 0502

Upper Division Courses


320 (335). Cost Accounting. (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. Prerequisites: Acctg. 220 (214) and junior standing. B 11 320 0 0502

390. Special Group Studies in Business. (1-3). May be repeated by college consent. B 11 390 3 0502


430 (345). Income Tax and Managerial Decisions. (3). An examination of the federal income tax law relating to business income taxation. Primary emphasis is upon the income tax results of alternative courses of action taken in a business. Prerequisites: Acctg. 210 (213) and junior standing. B 11 430-0 0502

491. Independent Study in Accounting. (1-3). Individual study for credit/no credit only. Prerequisites: 2.75 grade point average in accounting, junior standing and departmental consent. B 11 491 3 0502


540 (413). Principles of Auditing. (3). A study of the accountant's attest function. Emphasis is given to the role of the independent auditor, his legal responsibilities, his code of ethical conduct and auditing standards. Also emphasized are technical aspects of attesting to the reliability of financial and other data. Prerequisites: Acctg. 410 (316) and junior standing. B 11 540 0 0502

550 (433). Electronic Data Processing and Accounting Systems. (3). A study of the format and content of accounting systems, reflecting the application of electronic computers to the processing of business data. Basic computer programming is included. Prerequisites: Acctg. 220 (214) or departmental consent, and junior standing. B 11 550 0 0502

610 (520). 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. Prerequisites: Acctg. 410 (316) and junior standing. B 11-610 0 0502

620 (453). Advanced Managerial Accounting. (3). Advanced study of the use of accounting information in financial policy decisions, profit planning and control, quantitative analysis of financial data and capital budgeting. The application of selected quantitative methods in accounting is included. Prerequisites: Acctg. 220 (214) or equivalent, and junior standing. B 11 620 0 0502

630 (445). Advanced Income Tax. (3). A study of the federal income tax law and its relation to individuals and other entities. The course is designed primarily for students who wish to work with income tax as part of a career objective. Prerequisites: Acctg. 430 (345)
or departmental consent, and junior standing. B 11 630 0 0502

690. Seminar in Selected Topics. (1-3). May be repeated with departmental consent. Prerequisite: junior standing. B 11-690 9 0502

700 (501). 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. Prerequisite: no previous credit in accounting or departmental consent. B 11 700 0 0502

Graduate Courses

801 (502). Managerial Accounting. (3). An examination of the use of accounting data to analyze management problems. Concepts of cost analysis, return on investment analysis, and operations and capital budgeting are covered. Prerequisite: Acctg. 700 (501) or its equivalent. B 11 801 0 0502

810 (510). Accounting Evolution and the Social Environment. (3). Study and discussion of accounting concepts from an evolutionary point of view. Emphasis is given to the interrelationship between accounting and socioeconomic factors. Prerequisite: undergraduate emphasis in accounting or consent of instructor. B 11 810 9 0502

812 (515). 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 or consent of instructor. B 11 812-9 0502

820 (530). Advanced Cost Accounting Theory. (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 or consent of instructor. B 11-820 9 0502

825 (535). 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 (245) and either an undergraduate emphasis in accounting or consent of instructor. B 11 825 0 0502

830 (545). Seminar in Income Tax Research. (3). A research course emphasizing the utilization of 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 practice are included. Prerequisite: Acctg. 630 (445) or consent of instructor. B 11 830 9 0502

840 (540). Advanced Principles of Auditing. (3). An advanced study of auditing theory and problems relating to the accountant's attest function. Prerequisite: Acctg. 540 (413) or consent of instructor. B 11 840 9 0502

850 (525). Accounting Information Systems. (3). A study of the concepts of information systems, their design and operation, and the relationship of these concepts to the economic information requirements, information flows, decision criteria and control mechanisms in the business organization. Prerequisite: undergraduate emphasis in accounting or consent of instructor. B 11 850 0 0502

891 (501). Directed Study in Accounting. (1-3). Prerequisite: departmental consent. B 11 891 3 0502

895 (595). 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 ability for independent research and the presentation and defense of findings. Prerequisite: undergraduate emphasis in accounting or consent of instructor. B 11-895 9 0502

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

The requirements for an emphasis in administration for a Bachelor of Business Administration degree are given under the degree information discussion at the beginning of this section.

Lower Division Courses

120 (120). Introduction to Business. (3). Introduction to the current issues, concepts and functions of business and its environment. Not open to upper division students in the College of Business Administration. B 12 120 0 0501


195. Basic COBOL Programming. (3). Same as Math. (Computer Science) 195. Introduction to the logic and principles of COBOL. The course is designed for beginning students with no previous experience with programming. B 12 195 0-0701

199. Basic FORTRAN. (3). Same as Math. (Computer Science) 199 (199) and Engr. 199 (199). Automatic data processing, digital computers, flow charting, computer languages, FORTRAN IV, sorting techniques and the solution of elementary problems. Prerequisite: Math. 111 (140) or 112 (141). B 12-199 1 0704

260 (260). Concepts of Administration. (4). A study of behavioral and traditional concepts that apply to the management of organizations. An analysis of the administrator and the environment in which he operates is included. Prerequisite: sophomore standing. B 12 260 0 0506

295. Advanced COBOL Programming. (3). Same as Math. (Computer Science) 295. A course designed to provide the student with advanced skills in COBOL language programming. Prerequisites: Admin. 195, Admin. 395 or Math. 195, and sophomore standing. B 12 295 0-0701

Upper Division Courses

300 (300). Marketing. (3). A description and analysis of the U.S. marketing system and an investigation of the factors affecting management of the major policy areas of marketing in the firm. Prerequisite: junior standing. Closed to students with credit in Admin. 321 (BA 321). B 12 300 0 0509

303 (303). Marketing Research. (3). A study of the design of marketing information systems and marketing research procedures. Prerequisites: Admin. 300 (300) or 321 (BA 321), Econ. 231 (BA 231) or 238 (238), and junior standing. B 12-303 0 0509

305 (305). Consumer Behavior. (3). A study of a variety of concepts in the behavioral sciences related to specific topics in consumer behavior, including mass communications, reference groups and sociological, psychological and economic aspects of consumer behavior. Prerequisites: Admin. 300 (300) or 321 (BA 321), and junior standing. B 12 305 0 0509

321 (BA 321). Business Functions. (5). A description, analysis and integration of all the processes involved in the internal operation of a business, including manufacturing, marketing and finance. Prerequisite: junior standing. Closed to students with credit in Admin. 300 (300), 343 (343) or 351 (351). B 12 321 0 0501

332 (332). Law and Society. (3). An analysis of our legal system in operation. The nature and functions of law, legal institutions and processes, and the subject matter of law are included. The role of

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
the legal system in society is examined through the study of such topics as constitutional rights, tort liability, freedom of contract, consumer protection and environmental protection. Prerequisite: junior standing. B 12 332 0 0501

333. Values and Ethics in Business. (3). An analysis, utilizing diverse points of view, of the competing systems of values and ethics that exist within modern civilization, particularly as they relate to business ethics and the intellectual, political and social context of business enterprise. Prerequisite: junior standing. B 12 333 0 0501

334 (334). Law and Business. (5). An examination of the framework of private and public law within which business operates, including contract law, the Uniform Commercial Code, corporation law, regulatory aspects and special topics. Prerequisite: junior standing. B 12 334-0 0501

341 (BA 341)-342 (BA 342). Administrative Behavior I-II. (4-4). An analysis of behavioral concepts from the standpoint of the individual, intra- and intergroup processes, organizations (including strategies for selecting and implementing goals) and the relationships of organizations to cultural systems. Prerequisite: junior standing. Closed to students with credit in Admin. 260 (260). B 12 341-0 0506; B 12 342 0 0506

343 (343). Finance. (3). A study of corporate organization, types of securities and obtaining short- and long-term capital. Financial planning and control, forecasting and budgeting are included. Prerequisites: Acctg. 210 (213) or BA 233 (no longer available), and junior standing. Closed to students with credit in Admin. 321 (BA 321). B 12 343 0 0504

351 (351). Production Management. (3). Basic concepts and procedures of production management. Such topics as production facilities, product development, work measurement and standards, production control and materials may be included. Prerequisite: junior standing. Closed to students with credit in Admin. 321 (BA 321). B 12 351 0 0506

362 (362). 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: Admin. 260 (260) or 341 (BA 341), and junior standing. B 12 362-0 0506

364 (364). Organizational Communication. (3). An examination of the design of organizational communication systems. An introduction of communication models and the analysis of the interpersonal communication process are included. Prerequisites: Admin. 260 (260) or 341 (BA 341), and junior standing. B 12-364 0 0506

366 (462). Personnel Management. (3). An analysis of the functions of the personnel management, including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline and personnel research. Prerequisites: Admin. 260 (260) or 341 (BA 341), and junior standing. B 12-366 0 0515

370 (370). Quantitative Methods and Research. (4). A combination of quantitative tools of analysis and research methods in business. Elementary research procedures, statistics and modern quantitative methods from the point of view of management’s direction and use of these methods are stressed. Prerequisites: Econ. 231 (BA 231) or 238 (238), and junior standing. B 12 370 0 0508

372 (BA 232). Introduction to Operations Research. (3). Introduction to the use of quantitative techniques in decision making, planning and controlling an organization. The use of such tools as, payoff tables, decision trees, simulation, waiting-line theory, linear programming, statistical decision theory and network analysis is introduced. Prerequisites: Econ. 231 (BA 231), or 238 (238) or departmental consent, and junior standing. B 12 372 0 0507

390. Special Group Studies in Business. (1-3). May be repeated with college consent. B 12 390 3 0501
395. Computer Systems Design. (3). An analysis of computer systems design, including input and output devices, storage media and data representation. Prerequisites: Basic FORTRAN or COBOL and junior standing. B 12 395 0 0701

491 (491). Independent Study. (1-5). Offered for credit/no credit only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in administration. B 12 491 3 0501

601 (401). International Marketing. (3). Problems and procedures of marketing in foreign countries. The effects of foreign cultures and marketing systems on the design of marketing programs are included. Prerequisites: Admin. 300 (300) or 321 (BA 321), and junior standing. B 12 601 0 0509

604 (404). Distribution Management. (3). A study of all areas involved with the distribution of a firm’s products or services. These areas focus on such issues as the development of a firm’s marketing channels and its relationships with wholesalers and retailers, as well as the management of the firm's storage facilities, inventory control, procedures, and shipping facilities. Prerequisites: Admin. 300 (300) or 321 (BA 321), and junior standing. B 12 604 0 0509

607 (407). Promotion Management. (3). An analysis of all issues involved with the promotion of an organization and its products or services. These promotion issues deal with the development of advertising campaigns, management of the personal sales force, development of special promotional activities and management of public relations. Prerequisites: Admin. 300 (300) or 321 (BA 321), and junior standing. B 12 607 0 0509

608 (408). 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: Admin. 300 (300) or 321 (BA 321), and junior standing. B 12 608 0 0509

609 (409). Product and Price Policies. (3). An examination of the issues involved with product development, planning of product services, branding and packaging. Price policies focus on such aspects as the establishment of a firm’s basic price strategies, price alterations, credit policies and transport and handling terms. Prerequisites: Admin. 300 (300) or 321 (BA 321), and junior standing. B 12 609 0 0509

610 (410). 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: Admin. 300 (300) or 321 (BA 321), three additional hours of marketing and junior standing. B 12 610 0 0509

641 (441). Investments. (3). An analysis of investment risks, financial information and industry characteristics. Corporate, government, municipal and financial institution securities and other investment types are examined. Personal portfolio construction, supervision and management are presented. Prerequisites: Admin. 343 (343) or 321 (BA 321), and junior standing. B 12 641 0 0505

642 (442). Financial Management. (3). An exploration of the problems and operations for which the financial officer is responsible, emphasizing controversial aspects of financial analysis. Prerequisites: Admin. 343 (343) or 321 (BA 321), six hours of accounting, or departmental consent, and junior standing. B 12 642 0 0504

643 (443). Capital Markets and Financial Institutions. (3). Introduction to the capital markets system. The management and operations of financial institutions are studied. Each major type of financial institution is viewed in the context of its competitive environment with respect to both asset and liability management. Prerequisites: Admin. 343 (343) or 321 (BA 321), and junior standing. B 12 643 0 0504

644 (444). Commercial Bank Management. (3). A study of bank asset and liability management. The internal organization of commercial banks, current problems and recent innovations in commercial banking are also explored. Pre-

College of Business Administration 75
requisites: Admin. 643 (443) and junior standing. B 12 644 0 0504

645 (445). Security Analysis and Valuation. (3). Comprehensive study of methods of analyzing major types of securities. Market behavior analysis is also made. The formulation of investment objectives, the design of portfolios for classes of institutional and individual investors and portfolio theory are explored. Prerequisites: Admin. 641 (441) and junior standing. B 12 645 0 0505

663 (463). Organizational Interactions. (3). A study of interpersonal intraorganizational and interorganizational interactions. Prerequisites: Admin. 260 (260) or 341 (BA 341), and junior standing. B 12 663 0 0506

664 (464). Labor Relations. (3). A course designed to present the philosophy underlying labor legislation and the function of collective bargaining in labor-management relationships. Prerequisites: Admin. 260 (260) or 341 (BA 341), and junior standing. B 12 664 0 0516

665. Organizational Development. (3). Planned organizational change. Emphasis is upon team building in organizations. Individual, group and structural development are included. Prerequisites: Admin. 260 (260) or 341 (BA 341), and junior standing. B 12 665 0 0506

666 (466). 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. Prerequisites: Admin. 260 (260) or 341 (BA 341), and junior standing. B 12 666 0 0515

677. Management Science I. (3). The development of mathematical programming. Instruction includes such simple techniques as simplex method, transportation method and dynamic programming. Prerequisites: Admin. 372 (BA 232), basic COBOL or FORTRAN, and junior standing. B 12 677 0 0507

678. Management Science II. (3). A study of such techniques as queuing, inventory models, game theory and PERT. Prerequisites: Admin. 372 (BA 232), basic COBOL or FORTRAN, and junior standing. B 12 678 0 0507

679. Simulation. (3). An examination of concepts and procedures of simulation. Prerequisites: Admin. 677 or 678, and junior standing. B 12 679 0 0507

680. Decision Making. (3). A study of the theories of decision making, with attention directed to the factors of creativity, the quest for subjective certainty, rationality, cognitive inhibitors, problem identification, evaluation of alternatives, applications of quantitative methods to decision processes and decision implementation. Prerequisites: Admin. 260 (260) and junior standing. B 12 680 0 0506

681 (481) & 682 (482). Administrative Policy I & II. (3 & 3). An integration of all aspects of business administration in the analysis of and making decisions for policy development. Prerequisites: Admin. 321 (BA 321) or any two of the following: Admin. 300 (300), 343 (343) or 351 (351), and junior standing. B 12 681 0 0506 & B 12 682 0 0506

683. Comparative Institutional Management. (3). An examination of management problems between differing types of institutions—e.g., hospitals, nursing homes, religious organizations, governmental organizations and educational organizations. Emphasis is given to such topics as organizational structure and design, policy development, evaluating effectiveness, setting objectives, financial arrangements, reporting systems and methods of dealing with the environment. Prerequisites: Admin. 260 (260) and junior standing. B 12 683 0 0506

684. Health Administration Policy. (3). An integration of all aspects of health administration in the analysis of and making decisions for policy development. Prerequisites: a basic course in economics, accounting, finance and management or administration, and junior standing. B 12 684 0 0506

690 (490). Seminar in Selected Topics. (1-5). May be repeated with departmental consent. Prerequisite: junior standing. B 12 690 9 0501
700 (590). 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 firms is also presented. B 12 700 0 0509

732 (532). Law and Society. (3). An analysis of the U.S. legal system in operation. Topics include legal philosophy and the ends of law, the basic characteristics and subject matter of law, and legal reasoning and processes. The role of the legal system in society is examined through the study of the concept of freedom and contract. Prerequisite: departmental consent. B 12 732 0 0501

740 (540). Financial Systems. (3). An intensive analytical introduction to finance from the management viewpoint, including the theory of financial management, the financial institutional structure and an analysis of a variety of practical problems of business finance. Prerequisite: departmental consent. B 12 740 0 0504

750 (450). Workshop in Administration. (1-6). Prerequisite: junior standing. B 12 750 0 0501

760 (560). Behavioral Science in Business. (3). An analysis of the concepts and tools of psychology, social psychology, sociology and anthropology that have the greatest relevance for business administration. B 12 760 0 0500

770 (570). Survey of Statistical Methods. (3). Intensive examination of statistical methodology applicable to research and decision making. B 12 770 0 0503

**Graduate Courses**

801 (501). Marketing Management. (3). The development of marketing programs or mixes to obtain sales and profits under a variety of operating conditions. The management of specific problem areas, such as product, channels, promotion and pricing, is stressed. B 12 801 0 0509

802 (502). 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: Admin. 801 (501) or departmental consent. B 12 802 0 0509

803 (503). Marketing Analysis. (3). The application of the scientific method to the solution of marketing problems. Prerequisite: Admin. 801 (501) or departmental consent. B 12 803 0 0509

805 (505). Consumer Decision Processes. (3). An examination of different aspects of the behavior of consumers and of the factors that help explain their behavior. An analysis of current concepts and models is included. Prerequisite: Admin. 801 (501) or departmental consent. B 12 805 0 0509

809 (509). Marketing Theory. (3). A utilization of marketing research findings to analyze current marketing theory. Conceptual and theoretical frameworks for marketing analysis are developed. Prerequisites: six hours of marketing, including Admin. 801 (501). B 12 809 0 0509

833 (533). Political and Social Environment of Business. (3). An examination of the political and social environment within which business operates. Consideration is given to how business interacts with society, including the role of governmental and legal constraints, changing social patterns and forces, and competing ideas and values. Prerequisite: Admin. 752 (552) or departmental consent. B 12 833 0 0501

836 (536). International Business Administration. (3). An introduction to international business administration with particular attention being given to the development of multinational business strategies in light of the diverse economic, political, social and cultural dimensions of the environments that exist in both developed and developing areas of the world. B 12 836 0 0513

841 (541). Financial Management. (3). An integrated treatment of basic business finance, financial management, financial
statement analysis and financial institutions. Prerequisite: departmental consent. B 12 841 0 0504

842 (542). Structure and Policies of Financial Institutions. (3). The development, management and impact of policies of financial institutions, including planning, measuring and achieving financial goals. Prerequisite: Admin. 841 (541) or departmental consent. B 12 842 0-0504


845 (545). Security Analysis. (3). An analysis and valuation of investment securities issued by corporations and governmental agencies. Prerequisite: Admin. 641 (441) or departmental consent. B 12 845 0 0505

846 (546). Capital Budgeting. (3). A study of the organization and operation of the capital budgeting system. Problems in partial decentralization and in comparability of estimates of funds flow are explored. Contemporary methods of treating uncertainties and constraints and the application of programming techniques are included. The determination of appropriate discount rates is also explored. Prerequisite: departmental consent. B 12 846 0 0504

851 (550). Production Management. (3). An investigation and analysis of concepts and procedures involved in the production function. Prerequisite: departmental consent. B 12 851 0 0506

862 (562). 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 relations. Prerequisite: Admin. 760 (560) or departmental consent. B 12 862 0-0506

865 (565). Communication. (3). 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. Prerequisite: Admin. 760 (560) or departmental consent. B 12 865 0 0506

866 (566). Organizational Conflict and Stress. (3). Studies in flexibility and rigidity. A review is made of research and thinking in the areas of innovation, conflict, resolution, stress and anxiety as relevant to organizational structures and behaviors. Prerequisite: Admin. 760 (560) or consent. B 12 866 0 0506

869 (569). Research in Behavioral Science. (3). An analysis of some of the concepts and tools in behavioral science that are relevant to research in organizations. One or two areas, such as motivation, cognitive processes, attitudes and values, etc., may be analyzed in depth. Prerequisite: Admin. 862 (562) or departmental consent. B 12 869 0 0506

871 (571). Statistical Analysis and Decision Theory. (3). A study of probability concepts used in modern decision theory. Topics treated include probabilities as decision data, preposteriori analysis, estimation theory and statistical significance tests. B 12 871 0 0503

872 (572). Advanced Statistical Analysis. (3). An examination of topics such as sample design, chi square, variance analysis, and correlation and regression analysis from conceptual and decision-making points of view. Prerequisite: Admin. 871 (571). B 12 872 0 0503

874 (574). Computer Systems and Procedures. (3). A study of the planning, development and operation of business computer systems. Emphasis is given to
information handling and development of real-time management information systems. Computer applications in the areas of marketing, production and finance are also studied. Consideration is given to human factors in a man/machine communication system. Prerequisite: Admin. 395 or departmental consent. B 12-874 0 0705

875 (575). Management Science. (3). A course providing quantitative bases from which the student may develop his analytical abilities for use as a decision maker. Areas of study include mathematical programming, game theory, forecasting, queuing theory and simulation. Prerequisite: Admin. 871 (571) or departmental consent. B 12-875 0 0507

880 (580). Analysis of Behavioral Systems. (3). Concentration on theoretical and methodological contributions to the understanding of behavioral systems. Models and research methodology on individual behavior, small-group processes and organizations are critically analyzed. Prerequisite: departmental consent. B 12-880 0 0506

881 (581). The Philosophy of Management. (3). Concentrated readings and research to define the relationship of management leadership in our society. Prerequisite: departmental consent. B 12-881 0 0506


886 (586). Seminar in Research Methodology. (3). A study of concepts and procedures in the design and performance of research. B 12 886 0 0501

890 (590). Seminar in Special Topics. (1-3). May be repeated with departmental consent. B 12 890 9 0501

891 (591). Directed Studies. (1-5). Prerequisite: departmental consent. B 12-891 3 0501

893 (593). Special Project in Administration. (1-4). A special project including original case research, supervised internships or field research. Prerequisite: approval of the MS Committee. B 12-893 2 0501

895 (595)-896 (596). Thesis. (2-2). B 12-895 4 0501; B 12 896 4 0501

Business Education

Several programs are available in business education.

Major. The department offers courses of study leading to a major in business teacher education with the degree granted by the College of Education. (See College of Education section of the Catalog.) The department also provides courses in business education that count toward the secretarial emphasis in the College of Business Administration, as discussed at the beginning of this section.

Minor. Students planning to teach business education as a second subject in secondary schools are required to take 24 hours of business courses, including Acctg. 210 (213) and 310 (315); Econ. 201 (221); Bus. Ed. 138 (138) and 237 (237); and nine hours from accounting, administration, economics or shorthand, of which one course must be upper division.

Two-Year Program. A two-year secretarial program leading to the Certificate of Applied Science in secretarial training is offered by the department, as explained at the beginning of this section.

Enrollment. Students taking fewer than nine hours may not enroll in business education courses until the last day of final registration.
However, business education courses are open to all Wichita State students, with the approval of the business education department. A college graduate is permitted to enroll for shorthand and typewriting with the consent of the department. The facilities available determine the size of the enrollment, and the decision as to the availability of equipment is made by the chairman of the department. Students may audit courses in business education, but it should be remembered that the space available in the classrooms may limit the number of auditors.

No credit is given toward graduation for repetition of a first-year shorthand or typewriting course taken in high school, even though a grade is recorded in the course.

**Lower Division Courses**

133 (133). Beginning Typewriting. (2). A survey of the correct fingering and mechanical operation of a typewriter and an introduction to business forms. No credit is given to students with a unit in high school typewriting. (Credit earned in this course does not apply to the Bachelor of Business Administration degree or to the Certificate of Applied Science in secretarial training.) In enrolling for this course, preference is given to students specializing in business or pursuing a teacher-preparation program. B 14 133 1 0514

136 (136). Records Management. (2). A study of all basic filing systems. Prerequisite: Bus. Ed. 133 (133), or one year of high school typewriting or departmental consent. B 14 136 0 0514

138 (138). Advanced Typewriting. (3). A course stressing business, letter and manuscript forms; tabulation; and timed production problems. Prerequisite: Bus. Ed. 133 (133), or one year of high school typewriting or departmental consent. B 14 138 5 0514

201 (201). Secretarial Office Machines. (3). A course designed to familiarize students with office machines, including transcribing machines, executive typewriters, duplicating machines, copying machines and other secretarial office equipment. Prerequisite: Bus. Ed. 237 (237) or departmental consent. B 14-201 5 0514

202 (202). Calculating Machines. (1). A course designed to familiarize students with adding machines and rotary, printing and electronic calculators. Prerequisite: departmental consent. B 14 202-1 0514

203 (203). Office Procedures and Organization. (2). A study of the various secretarial procedures in a modern office. Prerequisite: sophomore standing or departmental consent. B 14 203 0 0514

231 (231). Elementary Shorthand. (3). A study of the theory of Gregg Diamond Jubilee Shorthand. Prerequisite: Bus. Ed. 133 (133), or one unit of high school typewriting or departmental consent. No credit given to students with one unit of high school shorthand. B 14 231 5 0514


237 (237). Technical Typewriting. (3). A study of letter forms used in business, difficult tabulating projects, legal typewriting, medical typewriting and advanced timed production problems. Emphasis is placed on accuracy at a high

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When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
rate of speed to meet office standards. Prerequisite: Bus. Ed. 138 (138), or two units secretarial training in high school, or departmental consent. B 14 237 5-0514

240 (240). Technical Shorthand. (3). Advanced dictation with emphasis on technical vocabularies. Prerequisites: Bus. Ed. 234 (234) with a grade of C or better and Bus. Ed. 237 (237), or departmental consent. B 14 240 5 0514

248 (248). Written Business Communications. (3). A study of principles and techniques of effective written business communication. Prerequisites: sophomore standing, Eng. 101 (111), Bus. Ed. 138 (138) and departmental consent. B 14 248 0 0514

Upper Division Courses

300 (300). Office Practice. (3). An exploration into advanced office duties, techniques and procedures. Also included are various methods of teaching office machines, the functional use of selected machines and a survey of available equipment. Prerequisites: business education major or minor with credit in Bus. Ed. 237 (237), or departmental consent, and junior standing. B 14 300 5-0514

345 (345). Transcription. (3). A course with emphasis on transcribing advanced shorthand notes with speed, accuracy and correct form. Prerequisites: Bus. Ed. 240 (240) with a grade of C or better, or departmental consent, and junior standing. B 14 345 5 0514

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

750 (450). Workshops in Business Education. (1-4). The selection of one major area of business education for study in terms of methods, materials, research and curricular problems. The instructor is assisted by guest lecturers. May be repeated for credit. Prerequisites: teacher certification or departmental consent, and junior standing. B 14 750 9 0514

Economics

The requirements for an emphasis in economics for a Bachelor of Business Administration degree are given under the degree information discussion 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 a prerequisite 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.

Lower Division Courses

100 (100). Business, Economics and Society. (3). A study of basic factors of business and economic changes, the role of business leaders and their relationship to the social environment. Emphasis is given to U. S. development. Not open to upper division students in the College of Business Administration. B 13-100 0 2204

102 (190). 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

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
programs for consumer protection are included. Not open to upper division students in the College of Business Administration. B 13 102 0 2204

201 (221). Principles of Economics I. (3). An introduction to determinants of national income, employment and economic growth. Prerequisite: sophomore standing. Closed to students with credit in BA 211. B 13 201 0 2204

202 (222). Principles of Economics II. (3). An introduction to price and distribution analysis. Market structure and performance, contemporary issues and public policy are also included. Prerequisite: Econ. 201 (221). Closed to students with credit in BA 212. B 13-202 0 2204

231 (BA 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 probability functions, nonparametric methods, elements of Bayesian decision theory, linear regression and correlation, and time series analysis. Prerequisite: Math. 111 (140) or 112 (141). Closed to students with credit in Econ. 238 (238) or BA 231 (Econ. 231 replaces BA 231). B 13 231 0 0503

238 (238). Introductory Business Statistics. (3). An introduction to the use of statistical methods in economics and business, including measures of distribution, elements of statistical inference, simple regression and correlation, index numbers and time series analysis. Prerequisites: Math. 331 (121), or 111 (140) or 112 (141). Closed to students with credit in BA 231 (no longer available). B 13 238 0 0503

285 (175). Economics of Environmental Quality. (3). An introduction to the scientific, engineering and economic principles needed for the enhancement of the quality of man's total environment. Also included is a discussion of air and water pollution, solid waste disposal, water resources and conservation. The course introduces various principles of economics, such as marginal analysis, cost/benefit analysis, systems approach and externalities as appropriate. B 13-285 0 2204

Upper Division Courses

304 (320). Managerial Economics. (3). An application of microeconomic theory to the solution of business problems. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 304 0 0517

340 (340). Money and Banking. (3). A study of the principles of money and credit. The evolution of modern money systems is considered, and the commercial banking system and the structure and role of the Federal Reserve System are covered. Nonbank financial institutions are also included. Prerequisites: Econ. 201 (221) or BA 211, and junior standing. B 13 340 0 0504

360 (360). Labor Economics. (3). A survey of labor economics; labor markets, trade unionism, collective bargaining; and wage determination, employment, unemployment and labor legislation. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 360 0 0516

364 (364). Economic Poverty. (3). An examination of the problem of economic poverty in the United States. The extent of poverty, its causes, problems created and methods of attacking poverty are probed. Prerequisites: Econ. 201 (221) or BA 211, or consent, and junior standing. B 13 364 0 2204

370 (370). International Economics. (3). A study of the foundations of international trade, tariffs and other barriers to trade, customs unions, balance of payments, problems and policies, the foreign exchange market and the functioning of the international monetary system. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 370 0 0513

491 (491). Directed Study. (1-3). Individual study of various aspects and problems of economics. Repeatable. Prerequisites: junior standing, departmental consent and 2.75 grade point
average in economics. For credit/no credit only. B 13 491 3 2204

601 (424). National Income Analysis. (3). Aggregate economic analysis and examination of policies affecting the level of income and employment. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. Not for graduate credit in economics. B 13 601 0 2204

602 (421). Production, Price and Distribution Analysis. (3). Analysis of production and pricing by firms and industries and the distribution of income to factors of production. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. Not for graduate credit in economics. B 13 602 0 2204

605 (425). History of Economic Thought. (3). A critical analysis of economic thought, the factors that influence this thought and its impact upon the social and economic development of the modern world. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 605 0 2204

614 (414). Government Regulation of Economic Activity. (3). A critical appraisal of the objectives and results of government policy and practice in controlling economic activity. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 614 0 2204

615 (415). Economics of Transportation. (3). Study of economic characteristics or transportation modes, problems and policies. Prerequisite: Econ. 202 (222) or BA 212, and junior standing. B 13 615 0 0510

616 (416). Economics of Air Transportation. (3). Study of economic characteristics of air transportation. Prerequisite: Econ. 202 (222) or BA 212, and junior standing. B 13 616 0 0510

617 (417). Economics of Public Utilities. (3). Study of general economic characteristics and regulation of water, gas, electric, communications and related industries, including atomic power. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 617 0 0510

622 (402). Comparative Economic Systems. (3). Comparative analysis of the evolutionary structure of capitalism, socialism and communism. Emphasis is placed on differences in pricing, resource allocation, distribution of income and economic planning. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 622 0 2204

625 (305). Economic History of Europe. (3). Same as Hist. 614 (337). An analysis of the development of economic institutions; the rise of capitalism and its influence on overseas expansion, technology, precious metals, policies and war: changes in economic ideologies; and cultural effects of economic change. Prerequisites: Econ. 201 (221) or BA 211, and junior standing. B 13 625 0 2204

626 (406). Origins of the Industrial State. (3). Same as Hist. 516 (436). 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. 201 (221) or BA 211, and junior standing. B 13 626 0 2204

627 (307). Economic History of the United States. (3). Same as Hist. 515 (338). An analysis of the basic factors in economic growth. Agriculture, trade and commerce, industrial development and the changing role of the government in economic activity are explored. Prerequisites: Econ. 201 (221) or BA 211, and junior standing. B 13 627 0 2204

631 (438). Intermediate Business Statistics. (3). A study of statistical inference, problems of estimation and tests of hypotheses, linear correlation and regression. Prerequisites: Econ. 238 (238) or Econ. 231 (BA 231), and junior standing. B 13 631 0 0503

640 (440). Monetary Problems and Policy. (3). An analysis of monetary problems and policy. Debt management policies and the structure of interest rates are included. Prerequisites: Econ. 202 (222), 340 (340) and junior standing. B 13 640 0 0504

653 (453). Public Finance. (3). Analy-
sis 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. 202 (222) or BA 212, and junior standing. B 13 653 0 2204

654 (454). Fiscal Policy. (3). A study of the economics of government spending and taxation and an analysis of the fiscal role and instruments of government and their effects on the economy. Prerequisite: Econ. 202 (222) or BA 212, Econ. 653 (453), and junior standing. B 13 654 0 2204

655 (455). Urban Government Finance. (3). Same as Pol. Sci. 655 (479). An analysis of urban government expenditures and revenue systems. Urban financial administration is introduced. Prerequisites: Econ. 202 (222) and junior standing. B 13 655 0 2214

660 (460). Labor Market and Manpower. (3). An examination of the sources of labor supply and the marketing, placement, and utilization of labor. Changing composition and trends in the labor force are included as are training and retraining programs and public policy toward manpower problems. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 660 0 0516

661 (461). 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 relationships is explored. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 661 0 0516

662 (462). Public Policy Toward Labor. (3). An examination of federal and state legislation, judicial action and administrative practice directed toward controlling or mitigating problems arising from the labor-management relationship. Regulations in the private sector and employment practices in the public sector are studied. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 662 0 0516

663 (463). Economic Insecurity and Social Insurance. (3). An examination of the impact of social insecurity and of alternative policies related thereto. Costs and benefits of security programs for the aged, unemployment compensation, workman’s compensation, nonindustrial disability compensation and other relevant public policy are explored. Prerequisites: Econ. 202 (222) or BA 212, and junior standing. B 13 663 0 2204

670 (470). International Economics. (3). A study of the foundations of international trade, trade barriers, economic integration, the balance of payments, foreign exchange rates and the functioning of the international monetary system. Prerequisite: Econ. 602 (421) or consent of instructor, and junior standing. B 13 670 0 0513

671 (471). Economic Growth and Development. (3). Survey of leading growth theories, with an emphasis on the processes of development and capital formation in developed and underdeveloped economics. Determinants of real income, resource allocation, investment criteria, balance of payment problems, national policies and related topics are analyzed within this framework. Prerequisite: Econ. 202 (222) or BA 212, and junior standing. B 13 671 0 2204

685 (475). Natural Resources and Regional Planning. (3). A study of the approaches to the optimal allocation of natural resources. Criteria for policy decisions and the evaluation of the social and economic benefits and costs of the use of resources through time are examined. Prerequisite: Econ. 202 (222) or BA 212, and junior standing. B 13 685 0 2204

687 (477). Introduction to Urban Affairs. (3). Same as Pol. Sci. 687 (477). An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 202 (222) or BA 212, a course in sociology or political science, and junior standing, or consent of instructor. 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. 201 (221) and 202 (222) or Econ. 700 (530), and junior standing. B 13 688-0 2214


700 (530). Analysis of Economic Theory. (3). An intensive analysis of micro- and macroeconomic principles. Prerequisite: departmental consent. Not for graduate credit in economics. B 13-700 0 2204

750 (450). Workshop in Economics. (1-6). Prerequisite: junior standing. B 13 750 0 2204

Graduate Courses

801 (522). Macroeconomic Analysis. (3). An intensive analysis of contemporary literature and problems of national income analysis. Prerequisites: Econ. 601 (424) and one course in calculus. B 13 801 0 2204

802 (521). Microeconomic Analysis. (3). An intensive analysis of contemporary literature and problems in the areas of production, pricing and distribution. Prerequisites: Econ. 602 (421) or 804 (534), and one course in calculus. B 13-802 0 2204

803 (531). Analysis of Business Conditions. (3). A study of economic forecasting and its relationship to macroeconomic analysis. Prerequisite: Econ. 700 (530) or equivalent. Not for graduate credit in economics. B 13 803 0 2204

804 (534). Managerial Economics. (3). A survey of theoretical and analytical tools of economics that are useful in decision making by managers. Prerequisites: Econ. 202 (222), or BA 212, or Econ. 700 (530). Not for graduate credit in economics. B 13 804 0 0517

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


815 (515). 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: Econ. 615 (415), or 616 (416), or 617 (417). B 13-815 9 0510

831 (539). Introduction to Econometrics. (3). Analysis of time series, multiple regression, multiple and partial correlation, analysis of variance and introduction to econometric techniques. Prerequisites: Econ. 631 (438) and one course in calculus. B 13 831 9 0503

836 (536). Methodology of Economics. (3). A study of what constitutes the basis of knowledge in economics. The manner in which the principles of abstract reasoning, deduction and induction, can be applied to produce knowledge in economics is explored. Prerequisites: Econ. 602 (421) and 631 (438). B 13 836 9-2204

840 (540). Seminar in Monetary Theory. (3). An examination of neoclassical and contemporary monetary theories. An analysis and an evaluation of current monetary problems are included. Prerequisite: Econ. 202 (222) and 340 (340). Repeatable with departmental consent. B 13 840 9 0504

854 (554). Seminar in Public Finance. (3). Analysis of theoretical and applied
aspects of public finance in the American and foreign economies. Selected topics of current and permanent importance are explored. Prerequisite: Econ. 653 (453) or 654 (454). Repeatable with departmental consent. B 13 854 9 2204

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

870 (570). Seminar in International Economics. (3). Intensive study of pure theory of international trade, resource allocation, balance of payments adjustments and economic integration. Considerable analysis is devoted to recent publications on selected topics. Prerequisite: Econ. 670 (470). B 13 870 9 0513

871 (571). Seminar in Economic Growth and Development. (3). A study of theories of economic growth and development. Selected topics relating to economic growth and development, such as national planning, allocation of resources, selection and evaluation of investment projects and other current issues, are included. Prerequisite: Econ. 671 (471) or 601 (424) and 602 (421). B 13 871 9-2204

885 (575). Seminar in Environmental Quality Control. (3). Examination of actual problems, projects and/or current approaches to environmental quality control. A critical look at current happenings and trends is taken. Prerequisite: Econ. 685 (475). B 13 885 9 2204

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


895 (595). Thesis Research. (2). B 13 895 4 2204

896 (596). Thesis. (2). B 13 896 4-2204
Providing professional programs appropriate for the development of broadly educated and competent school teachers, administrators, supervisors and counselors is the principal purpose of the College of Education. The college's faculty provides leadership in professional service and research designed to contribute to the improvement of both schools and teacher education at local, state and national levels.

Curricula listed in the following sections are organized to give students an opportunity for systematic study. Programs are based on the notion that understanding of self and one's world are necessary bases for professional growth and are arranged to permit the development of: (1) an understanding of the characteristics of a democratic society and education's place within it; (2) a philosophy of education consistent with living within society; (3) an adequate professional preparation and the opportunity to relate content to the problems of living; (4) a knowledge of human growth and development; and (5) skills in the application of principles of human learning and adjustment.

Accreditation and Certification

The College of Education is accredited by all appropriate agencies that accredit Wichita State. Since it is accredited by the State Board of Education, the college can recommend to the board that appropriate teacher's certificates be awarded without examination.

Degrees Offered

The college offers programs leading to the baccalaureate degree and to state teacher's certificates at either the elementary or secondary level. Course sequences through the departments within the Graduate School lead to a Master of Education (ME) or a Master of Science Education degree, as well as the Specialist in Education. The Master of Arts (MA) and Doctor of Philosophy (PhD) degrees can be earned through the Department of Logopedics.

Included in the graduate offerings are programs designed to help students meet the requirements for certification as elementary principals, secondary principals, supervisory personnel, educational administrators,
school counselors and other specialists. For specific graduate programs, see the *Wichita State University Graduate School Bulletin*.

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.

**Requirements**

**ADMISSION**

Before being admitted to the College of Education, a student must fulfill the general entrance requirements for Wichita State and the conditions for transferring from University College, including the completion of 24 hours; the achievement of a 2.00 grade point average; and a grade of C or higher in Eng. 101 (111), or a statement of proficiency from the Department of English.

**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 may ultimately be dismissed from Wichita State. A student in the College of Education is formally placed on probation at the conclusion of any semester in which his overall grade point average falls below 2.00. At the end of any semester in which a student has been on probation, he will be continued on probation if his grade point average for the semester is at least 2.00 and until he achieves a cumulative grade point average of 2.00.

A student who fails to earn at least a 2.00 for any semester on probation will be dismissed for poor scholarship. A student on probation who enrolls for fewer than seven hours may not be placed on academic dismissal for failure to raise his cumulative grade point average to the required level; however, if the student earns seven or more hours in two or more terms, he must achieve a grade point average of 2.00 or better in those hours to be continued on probation.

A student may not be academically dismissed at the end of a semester unless he began that semester on academic probation. Also, a student may in no case be academically dismissed from Wichita State before he has completed a total of at least 12 semester hours at the University.

A student dismissed for poor scholarship may enroll only with the special permission of the college's Committee on Admissions and Exceptions.

Adherence to these probation standards does not guarantee that the student may continue in the teacher education program, since a 2.25 overall grade point average and a 2.50 major grade point average are required for admission to the student teaching semester.
TEACHER EDUCATION PROGRAMS

Admission to the College of Education is tentative and not to be construed as approval for entering one of the teacher education programs.

To be admitted as a candidate for a state teacher’s certificate, a student must obtain approval from the Admissions Committee of the College of Education. Application to this committee and qualification by it must be accomplished during enrollment in the course Fd. Ed. 232 (232), Introduction to the Study of Teaching. A student’s eligibility for enrolling in subsequent courses of the professional sequences is determined in this course. *These provisions and the requirements for teaching following also apply to teacher candidates enrolled in any other college of the University.*

BACCALAUREATE REQUIREMENTS

Several sets of graduation requirements apply to undergraduates in the College of Education seeking a BA degree in education or to those seeking the institution’s recommendation for a teaching certificate. Students should carefully study the requirements for their particular area of study.

A student enrolled in the College of Education must maintain at least a 2.00 grade point average. Admission to the student teaching semester requires a grade point average of 2.25 and a 2.50 average in the major field as well as a grade of C or higher in Speech 111 (111), or its equivalent, and the recommendation of the major department. A grade of C or higher in student teaching is necessary for recommendation for a teaching certificate.

Requirements for admission to student teaching for logopedics students are listed in the department’s program description in this section.

Prospective teachers in specialized fields of art, music and special education 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.* School psychology is a 60-hour graduate program, and interested students should consult the Department of Educational Psychology for specific requirements.

**Elementary Education**

The following general program is required of all elementary education candidates. Students must meet the minimum requirements in the first five areas and obtain a total of 66 + 4 hours. A total of 124 hours must be taken, with 40 hours of upper division courses.
General Requirements

(1) Science-Mathematics—15-17 hours in two or more of the following divisions required, with a 4-hour lab required
   (a) Chemistry, geology, biology, physics
   (b) Math. 501 (373)-502 (374), six hours required
   (c) Engr. 300 (300)
   (d) Geography (physical)
   (e) Other

(2) Communications—8-12 hours required from the following
   (a) English composition (6 hours)
   (b) Speech 111 (111)
   (c) Other

(3) Humanities—15-27 hours required in four or more divisions below, including 12 hours in a field other than modern languages
   (a) Literature (6 hours required)
   (b) History (all courses applicable)
   (c) Art-music (no skill courses)
   (d) Philosophy-religion
   (e) Modern languages
   (f) American studies
   (g) Humanities
   (h) Other

(4) Social Science—15-27 hours required in four or more divisions below
   (a) Psych. 111 (111), 112 (112), 311 (211), 312 (212), 347 (246), 361 (260), 375 (275)—6 hours required
   (b) Sociology
   (c) Anthropology
   (d) Economics
   (e) Political Science
   (f) Geography (human)
   (g) Other

(5) Physical Activities (elective)—4 hours may be taken from courses below
   (a) Air or military science
   (b) Physical activities 101 (101) series
   (c) Marching band

(6) Electives—1-13 hours as approved by adviser

Professional Education Requirements

(1) Foundations of Education—8 hours total required
   (a) Fd. Ed. 232 (232)*
   (b) Ed. Psych. 233 (233)*

(2) Major in Elementary Education—28 hours required
   (a) El. Ed. 420 (320), Reading in the Elementary School*
   (b) El. Ed. 321 (321), Science in the Elementary School*
   (c) El. Ed. 406 (406), Social Studies in the Elementary School*
   (d) El. Ed. 444 (344), Mathematics in the Elementary School*
   (e) El. Ed. 319 (319), Language Arts in the Elementary School*
   (f) El. Ed. 518 (318), Methods for the Kindergarten Teacher
   (g) El. Ed. 447 (447), Student Teaching in the Elementary School*

(3) Allied Fields—15 hours required but hours taken here cannot be used to meet requirements in general education. Students must have three divisions from a, b, c, d, e and f and two divisions from g, h, i, j, k, l, m, n and o
   (a) Art Ed. 210 (240)
   (b) El. Ed. 316 (216), Children’s Literature
(c) Mus. Ed. 351 (251) and/or 352 (252), 606 (306)
(d) Eng. 315 (215)
(e) Phys. Ed. 115 (115), 117 (117), 210 (210), 225 (225)
(f) El. Ed. 490 (322), Individual Studies in Education
(g) Anthro. 124 (124), 202 (202)
(h) Econ. 201 (221), 202 (222), 627 (307)
(i) Geog. 125 (125), 510 (210), 530 (364), 542 (342), 550 (402), 572 (422)
(j) Hist. 535 (441)
(k) Pol. Sci. 121 (121), 311 (211), 319 (219)
(l) Soc. 211 (211), 226 (226), 515 (315), 520 (320), 522 (322), 534 (334)
(m) Hist. 131 (131), 132 (132), 505 (432), 506 (433), 507 (434)
(n) Logo. 705 (421)
(o) Other
(4) Related Fields of Study in Education—1 to 13 hours required (not required of elementary education majors). These areas may be used in lieu of electives in area 6 under general education.
(a) Physical education
(b) Library science
(c) Early childhood education

Secondary Education

COURSE REQUIREMENTS

All Graduates. All prospective secondary education graduates must satisfy the general requirements of the University as they are distributed in the table below and must complete one of the professional sequences as set forth in the table. In addition, they must fulfill the teaching specialty emphasis of a program as specified in the teaching field section that follows. Courses taken in the general requirements may also count toward a student’s major or minor. Only those specialties listed among the combined curricula and departmental majors and minors in the majors and minors section may be counted. Students planning to teach in the junior high school should follow the requirements listed in that section.

General Requirements

(1) Mathematics and Natural Sciences—12 hours required. A minimum of 4 hours must be in a laboratory science and courses from two of the four areas of biological science, physical science, mathematics and engineering must be completed. Engr. 127 (127), 199 (199) or 300 (300) count in this area.
(2) Communications—8 hours required
   (a) Eng. 101 (111), 102 (211), 103 (103) 300 (225), 301 (311), 302 (312), 303 (313), 304 (314)—6 hours
   (b) Speech 111 (111)—3 hours
(3) Humanities—12 hours
   (a) English or foreign literature—6 hours

College of Education 93
(b) Options (two divisions)

History—Hist. 101 (101), 102 (102), 103 (103), 104 (104), 113 (113), 114 (114), 131 (131), 132 (132), all upper division courses except 300 (300) and 699 (498)

Art and music—all art history courses except Art Hist. 520 (401g) and 526 (463) or 527 (531); Mus.-Comp. 113 (113), 114 (114), 161 (161), 315 (315), 316 (316), 331 (331), 332 (332), 693 (493); ensembles and applied music, where background justifies; and Speech 143 (143)

(c) Philosophy—all courses; religion—all courses

(d) Humanities

(e) American studies—all courses except Amer. Stud. 698 (498) and 699 (499)

Social Science—12 hours required. Courses must be taken in at least three of the five divisions and Psych. 111 (111) is required.

(a) Psych. 111 (111) and all other courses

(b) Econ. 201 (221), 202 (222), 211 (211), 212 (212) and any upper division economics course

(c) Political science—all 100 and 200 level courses except Pol. Sci. 155

(d) Soc. 211 (211) and all others after first course

(e) Anthropology—all courses

(f) History may be added for 3 hours of credit

(5) Electives—6 hours required and may include courses in the major field

(6) Electives—4 hours of electives in courses offered by any department except the student's major department. Exception: music majors may take marching band, and physical education majors may take physical education in the 101 (101)-108 (108) series under this section. These electives may include courses in aerospace studies, military science, physical education and marching band.

Secondary Teaching Certificate Requirements

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

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

(3) Professional education—the following sequence must be taken

(a) Educational Psychology—6 hours required, including Ed. Psych. 333 (333) and 433 (433) *

(b) Foundations of Education—6 hours required, including Fd. Ed. 232 (232) and 428 (428) †

(c) Secondary Education—11 hours required, including Sec. Ed. 442 (442) * and 447 (447) *

(4) Electives—to complete the minimum program of 124 hours

* Taken in the professional semester.
† May be taken during the professional semester or student may elect Fd. Ed. 727 (427) outside the professional semester.

Junior High Specialists. Those planning to teach in the junior high school qualify for the standard secondary teaching certificate by taking study in the junior high school core in lieu of a major field and minor field (points 1 and 2 in the certificate requirements). The core includes:
Group 1: The American culture—40 hours required, including ten upper division hours
- Eng. 315 (215), 252 (252), 362 (262)
- Speech 221 (221) and 228 (228)
- Hist. 102 (102)
- Soc. 211 (211)
- SA (Drawing) 145 (165) or Art Hist. 524 (303)
- Pol. Sci. 121 (121)
- Hist. 131-132 (131-132)
- Electives: Phil. 556 (356); Eng. 501 (301), 502 (302), 503 (303), 665 (461);
  Hist. 506 (433), 516 (436), 519 (437), 521 (447), 536 (444), 522 (448);
  Anthro. 501 (301), 511 (311), 523 (323), 540 (340); Pol. Sci. 558 (458)

Group 2: The Physical World—22 hours required, including intermediate algebra and geometry completed on high school or college level
- Math. 331 (121) and 332 (122) or Math. 501 (373) and 502 (374)
- Geol. 101 (101)
- Biol. 100 (100)
- One laboratory of no fewer than 4 hours—though the total must be 15 hours—from the sciences
- Phys. Ed. 212 (212) or 225 (225) and 210 (210) or 500 (400).
These may overlap area 1 above.

TEACHING FIELDS
The major is generally made up of not fewer than 30 semester hours. (For specific exceptions see mathematics, language and the combined curricula programs.) The student may elect one of the majors listed under departmental majors and minors later in this section, which are offered in Fairmount College of Liberal Arts and Sciences, College of Fine Arts, College of Business Administration or the College of Education. The student must meet the specific course requirements of the department in which the major is offered. For example, a student may elect to major in history because he wishes to become a high school history teacher. To do so he must complete the history major as prescribed by the history department in Fairmount College of Liberal Arts and Sciences. In addition, he must complete University core curriculum requirements (the same courses may be used both to develop a major and to satisfy core requirements), the professional education sequence and other requirements for the teacher’s certificate prior to graduation. Each student should work closely with a College of Education adviser to be sure he meets certification requirements. A check sheet of all requirements is available from the College of Education.

COMBINED CURRICULA
The teaching assignment after graduation often involves a combination of subjects more or less closely related. For this reason intensive study in the combined disciplines listed below is offered in lieu of a departmental major and minor. Students should work closely with advisers to insure proper course selection for certification.
Business Education

**Major.** Secondary business teachers in Kansas are required to have 24 semester hours in the field, with the equivalent of six semester hours in each subject taught, including at least two semester hours of resident college credit in courses other than the beginning course.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Business Education (College of Business Administration)</td>
<td>50</td>
</tr>
<tr>
<td>Acctg. 210 (213) and 310 (315)</td>
<td>6</td>
</tr>
<tr>
<td>Admin. 260 (260), 300 (300), 332 (332)</td>
<td>9</td>
</tr>
<tr>
<td>Econ. 201-202 (221-222)</td>
<td>6</td>
</tr>
<tr>
<td>Business Education</td>
<td>24</td>
</tr>
<tr>
<td>Typewriting</td>
<td>6</td>
</tr>
<tr>
<td>Shorthand †</td>
<td>6</td>
</tr>
<tr>
<td>Office practice</td>
<td>3</td>
</tr>
<tr>
<td>Business communications</td>
<td>3</td>
</tr>
<tr>
<td>Secretarial office machines—Admin. 201 (201)</td>
<td>3</td>
</tr>
<tr>
<td>Calculating machines—Admin. 202 (202)</td>
<td>1</td>
</tr>
<tr>
<td>Records management—Admin. 136 (136)</td>
<td>2</td>
</tr>
<tr>
<td>Electives—two upper division business courses in any area</td>
<td>6</td>
</tr>
</tbody>
</table>

* Econ. 201 (221) and 202 (222) fulfill six hours of the social sciences requirement and the business requirement as well.

† A total of 15 hours in accounting may be substituted for shorthand.

**Minor.** For a business education minor, a student must take Acctg. 210 (213), 310 (315); Econ. 201 (221); Bus. Ed. 138 (138), 237 (237); and nine hours from accounting, administration, economics or shorthand, including one upper division course.

Natural Sciences—Biological

Teachers in Kansas schools are required to have 24 hours in the field of science, with 12 hours in each subject taught. A teacher who qualifies under this provision may also teach general science. Requirements for a major listed below include the general graduation requirements in mathematics and science for the College of Education.

**Major.** Required for a natural sciences major are: Biol. 111 (111), 112 (112), 201 (201), 500 (329) or 502 (330), 520 (309), 524 (310), plus seven hours of upper division biology. Chem. 111 (111), 112 (112), 531 (331), 532 (332) or the equivalent, and either a physics or geology option consisting of Phys. 213 (123) and 214 (124) or Geol. 111 (111) and 312 (112) are needed.

**Minor.** A minor in the biological natural sciences includes Biol. 111 (111), 112 (112), 201 (201), at least four hours of upper division biology and five hours of chemistry or physics. Students should not elect this minor if they are majoring in one of the sciences. Those who do may use the same course for both major and minor requirements only if they
select additional hours equal to those taken to satisfy both the major and minor requirements.

**Natural Sciences—Physical**

The teaching requirements set forth in the biological science field apply to the physical sciences as well. Requirements for the major listed below also include general graduation requirements in mathematics and science for the College of Education.

**Major.** Required for a major in the physical natural sciences are Biol. 111 (111), 112 (112); Chem. 111 (111), 112 (112); Geol. 111 (111); Phys. 213 (123), 214 (124); and ten hours from the following, including at least five hours from one department (specific course prerequisites must be met): chemistry, geology or physics, with any of the upper division courses being applicable.

**Minor.** A minor in the physical natural sciences consists of at least 15 hours beyond the general graduation requirements, including three hours of upper division credit from chemistry, geology or physics. 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**

To teach any of the social sciences, 36 hours in the field of social studies are required for certification, with a minimum of six hours preparation in each specific subject taught, except for American history, political science and other courses in history, which require a minimum of 12 hours in the specific field taught. Requirements for a major may overlap some of the general graduation requirements for the College of Education.

**Major.** A major in social studies requires: Econ. 201 (221) and 202 (222) and three hours of upper division economics; Hist. 101 (101), 102 (102), 131 (131), 132 (132); Pol. Sci. 121 (121), 311 (211) and 336 (336); Soc. 211 (211); Anthro. 124 (124) or 202 (202); Psych. 347 (246) or Soc. 520 (320); Geog. 125 (125) and 201 (201) or 510 (210). In addition to these courses a minimum of nine semester hours must be selected from one of the four options:

1. Hist. 505 (432), 506 (433), 507 (434), 520 (438), 522 (448);
2. Hist. 501 (331), 502 (333), 504 (431), 519 (437);
3. Pol. Sci. 227 (227), 315 (315), 316 (316), 320 (420), 335 (335), 345 (345), 544 (444), 551 (451), 552 (452);
4. Courses listed in the minority studies section of the Fairmount College of Liberal Arts and Sciences portion of the Catalog.
Minor. A minor in social studies requires Econ. 201 (221) and three hours of upper division economics; Hist. 131 (131), 132 (132); Pol. Sci. 121 (121); Soc. 211 (211); Anthro. 124 (124) or 202 (202); and one course from option 1, 2 or 3 above. Students majoring in history or political science should not elect this minor. Those who do may use the same courses for both major and minor requirements only if they select additional hours equal to those taken to satisfy both major and minor requirements.

DEPARTMENTAL MAJORS AND MINORS

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 field or major should be declared no later than the beginning of the junior year.

The student who plans to teach in secondary schools may elect his major and minor from the fields given below. Only those marked with an asterisk (*) will be accepted as a major by the College of Education. The specific course requirements of the department from which the major work is taken prevail. Any of the following 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.

<table>
<thead>
<tr>
<th>Accounting</th>
<th>Journalism</th>
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<tbody>
<tr>
<td>American Studies</td>
<td>Logopedics*</td>
</tr>
<tr>
<td>Anthropology</td>
<td>Mathematics*</td>
</tr>
<tr>
<td>Art*†</td>
<td>Music†</td>
</tr>
<tr>
<td>Biology*</td>
<td>Natural Sciences—Biological *†</td>
</tr>
<tr>
<td>Business Education*†</td>
<td>Natural Sciences—Physical *†</td>
</tr>
<tr>
<td>Chemistry*</td>
<td>Philosophy</td>
</tr>
<tr>
<td>Classical Languages*</td>
<td>Physical Education*</td>
</tr>
<tr>
<td>Economics*†</td>
<td>Physics*</td>
</tr>
<tr>
<td>English Language and Literature *†</td>
<td>Political Science*</td>
</tr>
<tr>
<td>French *††</td>
<td>Psychology</td>
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<td>Geography</td>
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<tr>
<td>Geology</td>
<td>Social Studies*†</td>
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<tr>
<td>German *††</td>
<td>Sociology*†</td>
</tr>
<tr>
<td>History*</td>
<td>Spanish *††</td>
</tr>
<tr>
<td>Industrial Education*†</td>
<td>Speech*</td>
</tr>
</tbody>
</table>

* Acceptable major.
† Needs no minor if a 50-hour field major is outlined in consultation with an adviser from the College of Education.
‡ 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 semester hours in another modern language.
§ Religion must be combined with philosophy on minor—no more than eight hours religion will count toward a degree.
Aerospace Studies

AIR FORCE ROTC

The purpose of Air Force ROTC is to select and prepare qualified University students for careers as commissioned officers in the United States Air Force. The objective of all courses in aerospace studies is to strengthen the general education base of students who are to become junior commissioned officers. Following conferral of a degree and successful completion of prescribed AFROTC requirements, a cadet is commissioned as a second lieutenant in the United States Air Force. Uniforms and aerospace studies texts are provided at no expense to members enrolled in aerospace studies courses. The Department of Aerospace Studies is staffed by active duty officers and noncommissioned officers who conduct the two- and four-year AFROTC programs.

PROGRAMS

Four-Year Program

The four-year program consists of the general military course (GMC) for freshmen and sophomores and professional officer course (POC) for qualified students with two years of academic work remaining.

General Military Course. The two-year GMC consists of one lecture hour and one corps training hour per week.

Professional Officer Course. The POC consists of three lecture hours and one corps training hour per week. POC students in the four-year program must attend a four-week field training course (summer camp) at an air force base, normally between the second and third years of the AFROTC program. To qualify for acceptance into the POC a student must:

1. Have four semesters of study remaining at undergraduate or graduate level or a combination of both as a full-time student;
2. Complete the GMC, or have been granted equivalent credit;
3. Pass the Air Force Officer Qualifying Test (AFOQT);
4. Have a scholastic grade point average of 2.00 or above;
5. Be physically qualified;
6. Complete required processing;
7. Be selected by a board of officers.

Two-Year Program

The two-year program consists of only the professional officer course. Students participating in this program must successfully complete a six-week field training course (summer camp) at an air force base prior to being selected into the POC. Two-year POC students do not attend
the four-week field training course required of four-year students. Additional requirements for enrollment are identical to those listed for the four-year program except that completion of the GMC is not required.

**Flight Instruction Program**

Qualifying male POC students may participate in the flight instruction program (FIP) during the second year of the POC and receive approximately 72 hours of specialized instruction. Thirty-six hours of ground training and approximately 36 hours of flying instruction by an approved FAA school provide the student an opportunity to qualify for a private pilot's license.

**PAY AND ALLOWANCES**

POC students are entitled to receive $100 per month for a maximum of 20 months. A student in the four-year program receives approximately $250 for the four-week field training course (summer camp) attendance plus a travel allowance of 6 cents per mile to and from the encampment. A two-year applicant receives approximately $400 for the six-week field training course attendance plus a similar travel allowance to and from camp. Upon entering active duty the new officer receives a $300 uniform allowance. Total pay and allowances for students completing AFROTC normally exceed $2,000.

**AFROTC COLLEGE SCHOLARSHIP PROGRAM**

Students enrolled in the four-year program may be eligible for scholarships that provide full coverage of general academic fees, laboratory expenses, incidental fees, book allowances and $100 per month. Applicants are selected on the basis of scores on a qualifying test, quality of academic work and rating by an interview board. Applications from AFROTC freshmen, sophomores and juniors are normally submitted near the end of the fall semester. For information about additional scholarships designed for AFROTC cadets contact the Wichita State Office of Financial Aids.

**EXTRACURRICULAR ACTIVITIES**

Field trips to various air force installations and activities are scheduled throughout the year for members of AFROTC. A flight orientation program is conducted to provide flight experience for interested cadets. Arnold Air Society, an honorary cadet organization, pledges AFROTC students for membership each semester. Additional activities with the Color Guard and cadet newspaper are also available for interested students.
Lower Division Courses

113 (113) & 114 (114). U. S. Military Forces in the Contemporary World. (1&1). 1R, 1R/L. The first year general military course (GMC) and a study of the doctrine, mission and organization of the United States Air Force; strategic offensive and defensive forces; aerospace and missile defense, and general purpose and aerospace support forces. Corps training provides practical leadership experience in basic military and officer-type activities, including drill and ceremonies, customs and courtesies, air force as a career and officer environment. Prerequisite: departmental consent. D 14 113 5 1803 & D 14 114 5 1803

223 (223) & 224 (224). U. S. Military Forces in the Contemporary World. (1&1). 1R, 1R/L. The second year general military course (GMC) and study of U. S. national defense policies and the role of alliances; policies and strategies of the Soviet Union and China; Department of Defense organization and decision making; and the role of the military in U. S. national policies. Corps training provides practical leadership experience in basic military and officer-type activities, including drill and ceremonies, customs and courtesies, air force as a career and officer environment. Prerequisite: departmental consent. D 14 223 5 1803 & D 14 224 5 1803

Upper Division Courses

353 (353) & 354 (354). Growth and Development of Aerospace Power. (3&3). 3R, 1R/L. The first year professional officer course (POC) and a seminar study of the development of airpower; aerospace power today; the future of manned aircraft; the U. S. space program; the spatial environment; space orbits, trajectories, vehicle systems, operations and future developments. Corps training provides practical leadership experience in basic military and officer type activities, including drill and ceremonies, customs and courtesies, air force as a career and officer environment. Prerequisite: departmental consent. D 14 353 5 1803 & D 14 354 5 1803

453 (453) & 454 (454). The Professional Officer. (3&3). 3R, 1R/L. The second year professional officer course (POC) and a seminar study of professionalism, leadership and management as applicable to the air force officer. It includes the meaning of professionalism; officer responsibilities; the military justice system; leadership theory, functions and practices; management principles and functions; and problem-solving procedures. Corps training provides practical leadership experiences in basic military and officer type activities, including drill and ceremonies, customs and courtesies, air force as a career and officer environment. Prerequisite: departmental consent. D 14 453 5 1803 & D 14 454 5-1803

455 (455). Flight Instruction Program (FIP). (3). A course providing the student an opportunity to learn and experience the basic techniques of flying, navigation and air traffic control. It consists of 36 hours of classroom study (ground school) and 36½ hours of flight training to prepare the student for the FAA flight examination and a private pilot's license. The FIP is limited to senior AFROTC cadets qualified for pilot training or with departmental consent. D 14 455 5 1803

Art Education

See Department of Art Education, College of Fine Arts.

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 1R; 1L means one hour of lecture and one hour of lab.
Educational Administration and Supervision

Upper Division Courses

704 (504). 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. Offered in Summer Session and fall and spring semesters. D 16 704 0 0828

715 (515). The Community Junior College. (3). A course that considers educational services to a community as the basic thrust of the organization; surveys the history, scope and philosophy of the community junior college movement; emphasizes the curricula appropriate to the community; and studies the administrative organization, legal control and methods of financing. Offered in the spring semester. D 16 715 0 0827

750 (450). Experienced Administrator's Workshop. (1-2). Scheduled each summer on a variety of administrative topics. Problem-centered teaching is based upon case studies and simulated situations. D 16 750 2 0827

752. Special Studies in Educational Administration and Supervision. (1-3). Group study in a preselected specialized area of educational administration and supervision. May be repeated for credit with permission of the department. Prerequisite: departmental consent.

Graduate Level Courses

801 (501). Introduction to Administration and Supervision. (3). An examination of the major theories of administration and their application to specific problems. Emphasis is on an overview of administration of the school district, especially problems involving the community and the staff. Included is data gathering for self-evaluation of supervisory potential. Open to all College of Education graduate majors. Offered in Summer Session and fall and spring semesters. D 16 801 0 0827

806 (506). Elementary School Organization and Administration. (3). Alternate methods of organizing the elementary school and its classrooms. Also considered are the problems of administration of staff, curriculum, pupils and facilities, and community relations. Prerequisite: EAS 801 (501). Offered in Summer Session, even numbered years, and the fall semester. D 16 806 0 0827

812 (512). The Middle School. (3). A middle school offering children an education appropriate for present times, built upon human development in late childhood through the early stages of adolescence. This school evolves as an organic whole with development of programs, administrative pattern and teaching requirements creating grouping practices with a focus on transcendence. Vertical and horizontal organization patterns include taking the child from where he is educationally. Offered in the fall semester. D 16 812 0 0827

818 (518). Group Dynamics for Teachers. (2). A laboratory course in human relations and group dynamics based upon involvement in various group activities. Applications for the use of group dynamics in classroom teaching utilizing knowledge gained in personal experience in group work are included. Prerequisite: teacher's certification. Offered in Summer Session and the fall and spring semesters. D 16 818 0 0828

822 (522). Financial Support of Education. (3). Concepts of the financial support of education at local, state and national levels. Emphasis is on methods of taxation, budget preparation and efficient expenditures. Prerequisite: EAS 801 (501). Offered in Summer Session and the spring semester. D 16 822 0 0827

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
823 (523). School Law. (3). General concepts of law, interpretations of statutes and court decisions affecting education, and legal responsibilities of school personnel. Kansas school law is included. Offered in Summer Session and the fall semester. D 16 823 0 0827

824 (524). The School Plant. (3). Planning new school facilities based upon educational programs. Evaluation of existing schools, remodeling, operation and maintenance of present school plant are included. Prerequisite: master's degree or consent of instructor. Offered in Summer Session and the spring semester. D 16 824 0 0827

826 (526). Curriculum Development. (3). A study of curriculum philosophies and theories. Included are an examination of recent programs and proposals; the local school building and individual teacher as units of curriculum development; system-wide curriculum development and evaluation with kindergarten through grade 12 articulation. Prerequisite: EAS 704 (504). Offered in Summer Session and the fall semester. D 16 826-0 0828

827 (527). The Ungraded School. (3). Understanding the rationale of nongradedness. Also included are organizing and teaching the nongraded concepts centered upon individualization of instruction and continuous pupil progress and the operation of a viable, flexible program. Prerequisite: one course in curriculum or consent of instructor. Offered in the spring semester. D 16 827 0 0827

831 (531). Organization and Administration of the Secondary School. (3). Organizational plans for junior and senior highs and present trends. Problems of the administration of staff, pupil, curriculum and facilities, as well as community relationships in the modern secondary school are all included. Prerequisite: EAS 801 (501). Offered in Summer Session in odd numbered years and in the spring semester. D 16 831-0 0827

862 (562). Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psych. 560 (560). This course may be repeated for a maximum total of two hours of credit. D 16 862 4 0827

875 (575)-876 (576). Master's Thesis. (2-2). Required for Master of Arts degree. Prerequisite: Ed. Psych. 560 (560). D 16 875 4 0827; D 16 876-4 0827

890 (550). Special Problems in Administration. (1-4). Directed reading in research for master's students under the supervision of a graduate instructor. Prerequisite: approval of the instructor. D 16 890 3 0827

903 (503). The Sociology of Administration. (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. Offered in Summer Session in odd numbered years and in the fall semester in even numbered years. D 16 903 0 0827

909 (509). School-Community Relations. (3). Knowledge about and experience with the unique nature of the community school. The student studies the actions of community persons within the school community, formulates cooperative plans for community development, develops ways in which the personnel and facilities can be better utilized and promotes the school-community concept to the benefit of the school and the community. Offered in Summer Session in even numbered years and in the spring semester. D 16 909 0 0827

910 (510). Secondary School Student Activities. (3). The role of extracurricular activities in secondary school programs. Problems of organizing and administering the program are considered. Offered in Summer Session in even numbered years and in the fall semester in odd numbered years. D 16 910-0 0827

936 (536). Problems of Staff Personnel. (3). Advanced study of staff problems—selection and recruitment, certification, orientation, in-service training, evaluation, transfer and dismissal, and retire-
ment. Prerequisite: master's degree or consent of instructor. Offered in Summer Session in even numbered years and in the spring semester in odd numbered years. D 16 936 0 0827

937 (537). School Business Management. (3). School budgeting processes, salary scheduling, cost accounting and purchasing procedures and IBM programming of record systems. Prerequisites: EAS 822 (522) and consent of instructor. Offered in Summer Session in odd numbered years and in the fall semester in even numbered years. D 16-937 0 0827

938 (538). Advanced Group Dynamics. (2). A laboratory course in theories of group dynamics, with emphasis upon their application to uses in education, especially in the classroom and in faculty-administrator relationships. Prerequisites: EAS 818 (518) and consent of the instructor. Offered in Summer Session in odd numbered years and in the spring semester in even numbered years. D 16-938 0 0828

946 (546)-947 (547)-948 (548)-949 (549). The Internship. (2-3-4-5). Administrative assignment in educational institutions. Prerequisite: nine 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 16-946 2 0827; D 16 947 2 0827; D 16-948 2 0827; D 16 949 2 0827

960 (560). Seminar in the Process of Administration. (1-3). Concurrent enrollment in the internship is required. Arranged on an individual basis. D 16-960 0 0827

966 (566). Frontiers of Knowledge and the Future of Education. (3). Key concepts and discoveries in the sciences and humanities presented by experts in each field and an investigation of their possible implications in education. Offered in the fall semester in odd numbered years. D 16 966 0 0827

990 (550). Special Problems in Administration. (1-4). Directed reading in research for specialist students under supervision of a graduate instructor. Prerequisite: approval of the instructor. D 16 990 3 0827

Educational Psychology

Lower Division Courses

219 (219). Introduction to Child Growth and Development. (3). Designed to provide a systematic study of the processes involved in how children grow and develop. The interrelationship of various aspects of growth (physical, social, emotional and intellectual) and their implications are given attention. D 17 219 0 0822

220 (220). Psychological Problems of the Young Child. (3). Introduces students to (1) the types and nature of emotional and behavioral problems encountered in young children, (2) the identification of these problems, (3) the factors determining the problems (developmental, experimental and social), (4) methods of intervention to modify the problems and (5) the community resources available to assist in dealing with the problems and how to use these resources. Prerequisite: departmental consent. D 17 220 0 0822

221 (221). Interviewing and Recording for Social Service Aides. (3). To develop skills and understandings of the basic methods of interviewing and recording as related to headstart families. Prerequisite: departmental consent. D 17 221 0 0822

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
233 (233). The Elementary School Child. (4). His sociocultural context, developmental characteristics, with stress upon application to instruction. Prerequisites: Psych. 111 (111), Fd. Ed. 232 (232), or departmental consent, and sophomore standing. D 17 233 0 0822

Upper Division Courses

333 (333). The Secondary School Student. (3). Development during early and middle adolescent years and relation of theory and research to instruction. Prerequisites: Psych. 111 (111), Fd. Ed. 232 (232), or departmental consent. D 17 333 0 0822

433 (433). Psychological Aspects of the Teaching Process. (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 Ed. Psych. 534 (434). Prerequisite: secondary student teaching student. D 17 433 0 0822

461 (361). Educational Measurements. (3). Fundamental statistical methods applied to educational problems. The construction, administration and analysis of teacher-made examinations are included. Prerequisite: Ed. Psych. 233 (233) or 333 (333). D 17 461 0 0825

534 (434). Principles of Learning and Evaluation for Teachers. (3). For a description of course see Ed. Psych. 433 (433). This course is intended for those students not taking Ed. Psych. 433 in the secondary student teaching block. It may be substituted for Ed. Psych. 433 (433), but is not open to students with credit in Ed. Psych. 433 (433). Prerequisite: Ed. Psych. 333 (333). D 17 534 0 0822

601 (401). Introduction to Exceptional Children. (3). Emphasis on recognition and education of children with mental and physical handicaps. Prerequisite: Ed. Psych. 233 (233) or 333 (333). D 17-601 0 0808

602 (402). Introduction to the Gifted Child. (3). Emphasis on recognition and education of the gifted child. Prerequisite: Ed. Psych. 233 (233) or 333 (333). D 17 602 0 0811

604 (404). Understanding of the Mentally Retarded Child. (3). The current research and historical approaches to the education of the mentally retarded are examined. The literature in this field is surveyed. Prerequisite: Ed. Psych. 601 (401) or departmental consent. D 17 604 0 0810

643 (443). Programmed Instruction. (3). Study of approaches to programming and techniques of programming. Students will construct and develop a programmed unit in their own area of interest. Prerequisites: Psych. 111 (111) and Ed. Psych. 233 (233) or 333 (333), or consent of instructor. D 17 643 0 0822

704 (504). 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 17 704 0-0824

721 (421). Mental Hygiene. (3). Principles of mental hygiene in relationship to the development of wholesome personality. The interrelationships of teacher, school, home and community are examined as they affect mental health. Prerequisite: Ed. Psych. 233 (233) or 333 (333). D 17 721 0 0822

730 (419). Growth and Development I. (3). Biosocial foundations of human growth and development related to the development of behavior from birth to eight years. Prerequisite: Ed. Psych. 233 (233) or 333 (333), or departmental consent. D 17 730 0 0822

731 (420). Growth and Development II. (3). Biosocial foundations of human growth and development related to the development related to the development of behavior from middle childhood to maturity. Prerequisite: Ed. Psych. 730 (419) or departmental consent. D 17-731 0 0822

732 (519). Human Growth and Development. (3). The study of human de-
velopment (physical, mental, social and emotional) from birth to maturity. Prerequisite: Ed. Psych. 233 (233) or 333 (333), or departmental consent. D 17-732 0 0822

744 (444). Curriculum for the Mentally Retarded Child. (3). Adaptations of the standard curriculum and innovations that have proven to be beneficial for the teaching of the mentally retarded child. Prerequisite: Ed. Psych. 601 (401) or departmental consent. D 17 744 0-0810

750 (450). Workshop in Educational Psychology. (1-3). D 17 750 2 0822

751 (451). Institute in Educational Psychology. (1-4). Designed to study physical, social, emotional and psychological development of humans. Specific emphasis is on growth and development of school-age children and adolescents. D 17 751 2 0822

**Graduate Courses**

801 (501). Introduction to Educational Research. (3). An introduction to research in education. Included in the course content are: (1) a survey of current educational research; (2) the nature of research methodology; (3) the preparation of research reports; and (4) criticisms of current research. D 17 801 0 0824

811 (511). Evaluating Pupil Progress. (3). Evaluation in the cognitive, affective and psychomotor domains. Prerequisite: Ed. Psych. 801 (501) or 704 (504). D 17 811 0 0825

820 (520). Learning Theory for Teachers. (3). Major learning theories and their effectiveness and application. Prerequisites: Ed. Psych. 233 (233) or 333 (333), 801 (501) or departmental consent. D 17 820 0 0822

821 (521). Advanced Educational Psychology. (3). Review of recent research in the areas of personality and social psychology. Prerequisite: Ed. Psych. 820 (520) or departmental consent. D 17 821 0 0822

830 (530). Educating the Adolescent. (3). A study of the nature of the adolescent, with emphasis on the relation of development to the secondary school. Prerequisite: six hours of educational psychology. D 17 830 0 0822

840 (541). Psychology of Exceptional Children. (3). A study of the conceptual and theoretical formulations, empirical evidence and research concerning behavioral characteristics of exceptional children, with an emphasis on the mentally retarded child. Prerequisite: consent of instructor. D 17 840 0 0808

841 (540). Program Development in Mental Retardation. (3). Examination of the social and psychological factors in classroom organization and management. The focus is on the mentally retarded classroom as a model of the factors affecting the establishment and operation of programs for the handicapped. Prerequisite: Ed. Psych. 601 (401) or departmental consent. D 17 841 0 0810

844 (544). Occupational Aspects in Mental Retardation. (3). Designed to study in-depth occupational information, curriculum and methods employed by teachers of the mentally retarded in secondary school. Prerequisite: Ed. Psych. 604 (404) or departmental consent. D 17 844 0 0810

847 (547). Practicum and Internship in Special Education: Mental Retardation. (3-6). Full-time participation in a special education class under immediate supervision of a master teacher and a college supervisor. (A) A minimum of two years experience in the specific special education field is required. (B) A full course sequence has been followed leading to this state of preparation. The course is for master's level students without teacher credentials and experience. Prerequisite: Ed. Psych. 841 (540), 844 (544) or departmental consent. D 17 847 2 0810

858 (558). Experimental Design in Educational Research. (3). A consideration of sampling 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 measure of the same group; and analysis of covariance. Not open to
students with credit in Ed. Psych. 559 (no longer offered). Prerequisite: Ed. Psych. 704 (504). D 17 858 0 0824

860 (560). Seminar on Research Problems. (1). Development and presentation of research proposals. Required of students enrolled in Master of Arts or 32-hour Master of Education programs. D 17 860 4 0824

862 (562). Presentation of Research. (2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psych. 860 (560). This course may be repeated for a maximum total of two hours of credit. D 17 862 4 0824

875 (575)-876 (576). Master's Thesis. (2-2). Required for a Master of Arts degree. Prerequisite: Ed. Psych. 860 (560). D 17 875 4 0824; D 17 876-4 0824

890 (550). Special Problems in Educational Psychology. (1-4). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent. D 17 890 3 0822

Elementary Education

Lower Division Courses

150 (150). Workshop in Elementary Education (1-3). D 19 150 2 0802

246 (246). Introduction to Methods and Materials in Preschool Education. (3). Introduction to the study of teaching methods for the teacher of the preschool child and the preparation of materials to enhance the learning experiences of these children. D 19 246 0 0823

252 (252). Introduction to Educating the Disadvantaged. (3). An investigation into the cultural backgrounds, the economic problems and the educational issues presented by the disadvantaged. Laboratory experiences in various school and community programs are included. D 19 252 0 0813

290 (222). Directed Study in Elementary Education. (1-6). D 19 290 3 0802

Upper Division Courses

316 (216). Children's Literature. (3) Reading and discussion of stories, poems and factual materials for children; a background of appreciation essential to the setting up of standards of selection. Authors, illustrators, poets and their contributions to children's literature are studied. Also included are the children's library and checklist. D 19 316 2 0802

319 (319). Language Arts in the Elementary School. (3). Objectives, methods and materials of teaching the language arts, including listening, oral and written communications, spelling and handwriting. Students are given an opportunity to acquire skill in manuscript and cursive writing. Prerequisites: Ed. Ed. 232 (232) and Ed. Psych. 233 (233). D 19 319 2 0829

321 (321). Science in Elementary Education. (3). Encompasses the areas of: development of scientific concepts in children; strategy, tactics and audiovisual aids in teaching elementary school science; stating objectives; off-campus observation and participation; and introduction to experimental science. Prerequisite: Ed. Ed. 232 (232) and Ed. Psych. 233 (233). D 19 321 2 0834


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The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example: 2R; 2L means two hours of lecture and two hours of laboratory.
principles of curriculum development and organization of learning experiences. A two-hour laboratory practicum is required. Prerequisite: Fd. Ed. 232 (232) and Ed. Psych. 233 (233). D 19 420 2-0830

444 (344). Mathematics in the Elementary School. (3). A study of the basic methods of instruction, with emphasis given to relating mathematical concepts to cognitive development and learning. Specific attention is given to current curriculum practices, materials and evaluation technique. Prerequisites: Math. 501 (373) and 502 (374)—may be taken concurrently. D 19 444 2 0833


447 (447E). Student Teaching in the Elementary School. (13). The student teaching program provides full-time participation in the public schools under guidance of a master teacher and a college supervisor. Prerequisites: El. Ed. 319 (319), 420 (320), 321 (321), 444 (344) and 406 (406). (Prerequisites may be waived for equivalent experience with departmental consent.) The student teaching semester is required of all students working toward a degree certificate in elementary education. Every student wishing to receive the certificate must file an application with the coordinator of elementary student teaching. Application for the fall semester must be filed by April 15 and for spring semester by Nov. 15. Applications may be secured in Room 117, Corbin Education Center. (The only exception ever granted to the requirement of 13 semester hours is to the transfer student who has taken student teaching elsewhere or may have taught a number of years.) Any deviations from established grade point averages and other regulations must be approved by the elementary education department. D 19 447 2 0829


447 (447P). Student Teaching in the Elementary School. (3). Prerequisite: physical education majors. Application for student teaching must be made to the director of student teaching 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. D 19 447 2 0829

490 (322). Individual Studies in Education. (1-2). D 19 490 3 0602

518 (318). Methods for the Kindergarten Teacher. (3). To acquaint students with all aspects of the kindergarten program and introduce the wide variety of materials available and in use. Prerequisites: Fd. Ed. 232 (232) and Ed. Psych. 233 (233). D 19 518 0 0823

705 (405). Developmental Reading. (3). A course designed to acquaint students and teachers with all of the aspects of current reading theory and pertinent reading research. This course is also designed to point out the possibilities of applying this theory and research to the actual teaching of children in the classroom. Prerequisite: El. Ed. 420 (320). D 19 705 0 0830

743 (443). Parent Education for Preschool Teachers. (3). An introduction to ways of working with parents of preschool children and an analysis of formal and informal approaches, with emphasis on the teacher's role in developing these procedures. Prerequisites: El. Ed. 744 (444) or consent of instructor. D 19 743-0 0823

744 (444). Early Childhood Education. (3). An introduction to the problems and philosophy of educating children in the preschool years. D 19 744 0 0823

745 (445). Guidance of the Preschool Child. (3). Study of the dynamics of behavior of the preschool child in his relations with peers and adults, in his methods of coping with developmental aspects of growth and the teacher's role in guiding such behavior. Prerequisite:
745 (445). Methods and Materials in Preschool Education. (3). The study of teaching methods for the teacher of the preschool child and the preparation of materials to enhance the learning experiences of these children. Prerequisite: El. Ed. 744 (444) or consent of the instructor. D 19 746 0 0823

750 (450). Workshop in Education. (1-4). D 19 750 2 0802

751 (451). Institute in Elementary Education. (1-6). (A) mathematics, (B) science. A course designed for elementary teachers who will be institute participants. One or a combination of preselected areas are emphasized during a semester. Prerequisite: consent of instructor. D 19 751 2 0802

752 (452). Special Studies in Education. (1-3). (A) mathematics, (B) health and physical education, (C) language arts, (D) reading, (E) recent innovations, (F) science, (G) social studies, (H) instructional media, and (I) other areas. The course is designed for elementary school teachers, and only one preselected area is emphasized during a semester. Prerequisite: teacher certification and departmental consent. Course may be repeated with adviser’s consent. D 19-752 2 0802

828 (528). Elementary School Curriculum. (3). An intensive study of the field of curriculum in the elementary school. Who should make the curriculum; bases for making curriculum decisions; diversity within a school and school system; participation in curriculum development and revision; and the future in elementary school curriculum are all included. D 19-828 0 0829

850 (530). Language Development in the Reading Process. (3). A course emphasizing the relationship of the child’s language and the reading process. A review of the influence of environmental and intellectual abilities is made to examine how the speech-to-print correspondence may be made. D 19 850 2-0830

840 (540). Diagnostic Procedures in Reading. (3). Emphasis upon diagnosis. The use of standardized instruments, teacher-made instruments and corrective treatment of reading difficulties and a diagnostic practicum are included. Prerequisite: El. Ed. 420 (320) or equivalent. D 19 840 2 0830

842 (542). Clinical Procedures in Reading. (3). Emphasis upon diagnosis and corrective treatment of reading difficulties. A laboratory practicum in corrective teaching is required. Prerequisite: El. Ed. 840 (540) or equivalent. D 19 842 2 0830

849 (549). Seminar in Reading. (3). A seminar designed to examine the organization and administration of reading programs. Additional time is spent investigating pertinent research in the area of reading instruction. Prerequisite: El. Ed. 705 (405) or equivalent. D 19 849-9 0830

852 (552). Improvement of Instruction in Language Arts. (3). A course designed to aid the student in developing an understanding of the communicative arts in the elementary school by focusing on the past, present and future. It is hoped that this experience will present a balanced, realistic picture of the language arts curriculum and deal with materials and related experiences in the area. D 19 852 0 0829

854 (554). Improvement of Instruction in Social Studies. (3). A study of recent changes in social studies curriculum and instruction. Emphasis is placed on the teaching of concepts, values and independent learning skills. The inquiry-centered learning environment is stressed as behavioral objectives, innovative teaching strategies and complementary evaluative techniques are studied and practiced. D 19 854 0 0829

856 (556). Improvement of Instruction in Mathematics. (3). For teachers in service. Consideration of recent trends
in subject matter content and teaching guides to improve understanding of meanings, vocabulary and mathematical concepts. Instructional methods and materials are included. Prerequisite: Ed. Ed. 444 (344) or departmental consent. D 19 856 0 0833

858 (558). Improvement of Instruction in Science. (3). A course designed to identify and explore the principles of science that teachers should recognize and understand and to give consideration in their development from kindergarten through grade eight. To experience these concepts through demonstration or experimentation for teachers in service. Prerequisite: El. Ed. 321 (321) or departmental consent. D 19 858 2 0834

859 (559). Seminar in Elementary Education. (3). D 19 859 9 0802

862 (562). Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psych. 860 (560). This course may be repeated for a maximum total of two hours credit. D 19 862 4 0824

863 (563). Trends in Theories of Instruction. (3). A course using materials from public school work groups and from research journals to examine the development of modern practices in elementary education. D 19 863 0 0829


890 (550). Special Problems in Education. (1-2). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent. D 19 890 3 0802

**Industrial Education**

The purpose of the undergraduate industrial education curriculum is to develop an understanding of industrial technology. Special emphasis is provided for those students who wish to prepare for teaching in industrial education programs.

**Undergraduate Major (Teaching Emphasis).** Persons preparing to teach industrial education subjects in the public schools must satisfy the certification requirements established by the Kansas Board of Education. The following program is required of all industrial education candidates seeking recommendation for state certification.

**Area** | **Hours**
--- | ---
I. Industrial Education | 50
  
  Required—36 hours, including:
  
  Ind. Ed. 111 (111), 112, 113, 270, 280, 290, 443, 501 (401) and 519 (319)
  
  Electives—14 hours from:
  
  Ind. Ed. 370, 380 or 390

II. Secondary Education | 23
  
  Follow the sequence described under the Secondary Education heading at the beginning of the College of Education section of the Catalog.

III. General Education | 44
  
  Follow the general education program described under the Secondary Education heading at the beginning of the College of Education section of the Catalog.
IV. Electives

Choose from among the electives cited under the Secondary Education heading at the beginning of the College of Education section.

Total

Graduate Courses. The Master of Education program provides for specialization in secondary education, with an emphasis in industrial education. Courses must be selected in consultation with the student's graduate adviser.

Lower Division Courses

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

112. Construction Technology. (5). 3R; 4L. A course emphasizing the understanding of technology and the scope of industry as it applies to construction. Instruction includes occupationally oriented laboratory activities to reinforce the students' 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. (5). 3R; 4L. 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

121 (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. D 11 121 0 0839

125 (125). 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. D 11 125 0 0839

236 (236). Metals II. (3). 2R; 3L. A study of materials, machines and hand tools used by the sheet metal industry and an introduction to basic machine tool operations. D 11 236 0 0839

255 (255). Power Mechanics II. (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 0 0839

261 (261). Plastics II. (3). 2R; 3L. Technical information and product development and construction of molds and forms for molding, casting, laminating and thermoforming. D 11 261 0 0839

270. Materials and Processes. (5). 3R; 4L. A study of basic material processing methods, emphasizing those processing methods most common to all materials. Through laboratory applications, the student can develop an understanding of material processing that will facilitate the appropriate selection of suitable materials and processes for particular products. D 11 270 0 0839

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture and L stands for laboratory. For example: 3R; 4L means three hours of lecture and four hours of laboratory.
280. Power and Energy. (5). 3R; 4L. 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 11 280-0 0839

282 (282). 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 are included. D 11 282 0 0839

290. Visual Communications. (5). 3R; 4L. A study of systematic procedures common to development of visual communications including: analysis of communication problems, selection of media, communication preparation, communication dissemination, communication evaluation and communication storage and retrieval systems. Students develop communication projects using each of the following media: technical graphics, printing, television and photography. D 11 290 0 0839

Upper Division Courses

325 (325). Woodwork III. (3). 2R; 3L. For advanced woodworking students, with special emphasis on tools, materials and construction practices as they relate to the building trades. D 11 325 0 0839

328 (225). Drafting III. (3). 2R; 3L. Development of working drawings in machine, aircraft, steel structural, electrical, architectural details, pipe, map and patent drawings—all conforming to industrial and prescribed standards. Prerequisite: Ind. Ed. 121 (121). D 11 328-0 0839

337 (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. D 11 337 0 0839

356 (356). Power Mechanics III. (3). 2R; 3L. A continuation of the study of motor vehicles, including tune-up, electrical systems, fuel systems and engine service. D 11 356 0 0839

362 (362). Plastics III. (3). 2R; 3L. Advanced problems in production techniques; compression and injection molding; recent developments and experimental work. D 11 362 0 0839

370. Directed Study in Materials and Processes. (1-4). The directed study will deal with content related to trade and occupational titles as: building construction, metalworking, cabinetmaking and plastics tooling. The course provides depth of conceptual knowledge and psychomotor skills. Enrollment may be repeated with adviser’s consent. Prerequisites: Ind. Ed. 112, 113 and 270.* D 11 370 0 0839

380. Directed Study in Power and Energy. (1-4). A directed study dealing with content related to trade and occupational titles as: auto mechanics, electronics, electrical wiring and hydraulics. This course provides depth of conceptual knowledge and psychomotor skills. Enrollment may be repeated with adviser’s consent. Prerequisites: Ind. Ed. 112, 113 and 280.* D 11 380 0 0839

384 (384). Electronics III. (3). 2R; 3L. Course includes the theory, instrumentation and application of semiconductors in electronic circuitry. Emphasis is placed on the utilization of transistors and newly developed semiconductors. Prerequisite: Ind. Ed. 282 (282).* D 11 384 0 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. Enrollment may be repeated.* Prerequisite may be waived for equivalent experience with departmental consent.
with adviser’s consent. Prerequisite: departmental consent. D 11 390 3 8000

426 (326). Woodwork IV. (3). 2R; 3L. Advanced work for specialists in the woodworking field, with emphasis placed on problems growing from the needs of the student. Prerequisite: Ind. Ed. 125 (125).* D 11 426 0 0839

429 (327). Drafting IV. (3). 2R; 3L. Advanced study for drafting students, with emphasis on problems growing from the needs of students based on past performances and progress. Complete dwelling and machine problems, with special emphasis on industrial practices and procedures, are included. Prerequisite: Ind. Ed. 328 (225).* D 11 429 0 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 upon theory, organization and operation of a comprehensive general shop program. Prerequisite: departmental consent. Offered in the spring semester. D 11 443 0 0839

450 (350). Metals IV. (3). 2R; 3L. Fundamentals of bench work and basic operations on lathes, mills, grinders, shapers and drills. Prerequisite: Ind. Ed. 236 (236).* D 11 450 0 0839

457 (457). Power Mechanics IV. (3). 2R; 3L. Advanced study in the power mechanics field, with emphasis placed on problems growing from the needs of the student. Prerequisite: departmental consent. D 11 457 0 0839

463 (363). Plastics IV. (3). 3R; 3L. Advanced problems in production techniques; extrusion, rotational casting and foaming are included. Recent developments and experimental work are also explored. Prerequisite: Ind. Ed. 362 (362).* D 11 463 0 0839

485 (385). Electronics IV. (3). 2R; 3L. Motors and generators; synchros and syn- trocontrol systems; servoncontrol devices and systems; industrial measurement and control systems; introduction to micro-waves and microwave oscillators, micro-wave transmitters, microwave duplexer systems. Prerequisite: Ind. Ed. 384 (384).* D 11 485 0 0839

501 (401). Preparation of Instructional Materials. (3). The selection, development and organization of instructional materials for effective teaching of industrial education. D 11 501 0 0839

519 (319). 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 (450). Workshop in Industrial Education. (1-4). Offered from time to time on various aspects of industrial education. D 11 750 2 0839

Graduate Courses

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

821 (521). 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 (520).* 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 films, computer assisted instruction, learning resource centers and other pertinent topics. Students are involved in planning and preparing instructional material using systematic proce-
851. Institute in Industrial Education. (1-8). A course designed to develop knowledge and competence related to curricular and methodological innovations 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 11 851 0 0839
860 (560). Seminar in Industrial Education. (1-3). Innovations and critical analysis of contemporary problems in industrial arts and vocational education, with directed reading and research. This course may be repeated. D 11 860 0 0839
890. Special Problems in Industrial Education. (1-4). Directed reading and research under the supervision of a graduate instructor. Prerequisite: departmental consent. D 11 890 0 0839

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. Effective Jan. 1, 1972, requirements are as follows:

1. Elementary School Librarian: a valid certificate for teaching in the elementary school and a minimum of 15 semester hours of library science and audiovisual courses;

2. Junior and Senior High School of Fewer than 500 Pupils: a valid certificate for teaching in the secondary schools and a minimum of 15 semester hours of library science and audiovisual courses.

3. Junior and Senior High Schools of More than 500 Pupils: a valid certificate for teaching in the secondary schools and a minimum of 24 semester hours of library science and audiovisual courses.

Upper Division Courses

700 (400). Introduction to the School Library Program. (3). The introductory course in the library science program, with emphasis on planning and implementing an effective school library program. Objectives and standards are explored, and all phases of instruction and service, including media, through which the school library contributes to the instructional program are introduced. Not open to those with credit in Lib. Sci. 405 (no longer offered). D 10 700 0 1601
701 (401). School Library Cataloging and Classification. (3). The fundamentals of the Dewey Decimal Classification system and the basic cataloging techniques necessary for organizing a school library collection. D 10 701 0 1601
702 (402). The School Library Book Collection. (3). The principles and methods involved in book selection for the school library, the techniques of reference service and the literature of school subjects. D 10 702 0 1601
703 (403). School Library Administration. (2). The activities and functions of the school library; the relationships of the librarian to the teaching staff; the organization of technical and mechanical

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
processes, such as circulation and order routines; the repair of books; and the teaching of the use of the library to students. D 10 703 0 1601 704 (404). Library Reference Materials. (3). Study and problems in the use of reference books, indexes, bibliographies and nonbook reference materials. Included also are the fundamentals of reference service in libraries. D 10 704-0 1601

**Logopedics (Speech, Language and Hearing Disorders)**

The Department of Logopedics provides academic and clinical training for students at Wichita State University who wish to become professionally qualified to work with communicatively handicapped children and adults. The undergraduate program offers broad, comprehensive and *preprofessional* preparation for specialized training, offered on the graduate level. Graduate work, culminating in a master's degree, is required to obtain professional certification as a speech or hearing clinician in the public schools, hospital clinics or rehabilitation centers or to engage in private practice. With an undergraduate, preprofessional major, a student can normally complete the graduate program in one calendar year and be eligible for certification by the American Speech and Hearing Association and the State of Kansas public schools.

**UNDERGRADUATE MAJOR**

A preprofessional, undergraduate major is obtained with primary emphasis placed on the general area of communicative disorders and beginning specialized emphasis on speech and language pathology, audiology or deaf education. Supervised practicum courses are required as part of the training program. Logo. 517 (417) is required for undergraduate students majoring in speech and language pathology, and Logo. 447 (447) and 448 (448) are required for students wishing to qualify as speech clinicians in the public schools. Logo. 785 (441) is required for a major in audiology or deaf education.

Undergraduate students may major in logopedics 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.

**Speech and Language Pathology**

The major with emphasis in speech and language pathology consists of 30 hours and includes the following courses:

*Required:* Logo. 111 (111), 214 (214), 216 (216), 218 (218), 220

*College of Education 115*
(212), 315 (315), 317 (317), 324 (324), 326 (326), 517 (417) and 531 (431). To qualify as speech clinicians in the public schools, students must also complete Logo. 327 (327), 447 (447) and 448 (448).

Optional: Logo. 132 (132), 700 (415), 710 (461), 720 (535), 740 (436), 745 (437), 755 (455) and 760 (432).

**Audiology**

The major with emphasis in audiology consists of 30 hours and includes the following courses:

**Required:** Logo. 111 (111), 214 (214), 216 (216), 218 (218), 220 (212), 315 (315), 317 (317), 531 (431), 740 (436), 745 (437), 755 (455) and 785 (441).

Optional: Logo. 132 (132), 317 (317), 324 (324), 326 (326), 327 (327), 735 (435) and 760 (432).

**Deaf Education**

Undergraduate preparation with beginning emphasis in deaf education consists of 30 hours and includes the following required courses:

**Required:** Logo. 111 (111), 214 (214), 216 (216), 218 (218), 220 (212), 315 (315), 317 (317), 531 (431), 740 (436), 760 (432) and 785 (441).

**Teacher Education**

One full semester of student teaching is required for all who are working toward certification as a public school speech clinician. In order to complete this requirement, students must take Logo. 517 (417) in a clinical setting and 447 (447) and 448 (448) in a public school setting, accumulating a total of ten hours of credit.

The assignment for student teaching begins with the opening of the public school, and the student teacher is expected to follow the public school calendar, on a half-day basis, for a semester.

Admission to the student teaching semester must be obtained by application and requires a grade point average of 2.50 overall, a 2.50 average in the major field, a grade of C or higher in Speech 111 (111), or its equivalent, and the recommendation of the major department.

**Certification**

The logopedics undergraduate preprofessional major may be applied toward certification by the American Speech and Hearing Association. This certification requires a master's degree (or equivalent), with major emphasis in speech and language pathology or in audiology.

**Undergraduate Minor**

A minor in logopedics consists of 15 hours and may be earned in either
the College of Education or Fairmount College of Liberal Arts and Sciences. The following courses are recommended for a minor unless other arrangements are made: Logo. 111 (111), 132 (132), 214 (214), 216 (216), 218 (218) and 220 (212). Arrangements for the minor should be made in consultation with the Department of Logopedics.

**OTHER REQUIREMENTS AND OPPORTUNITIES**

Logo. 705 (421), Speech and Hearing Handicapped in the Public Schools, which is cross-listed as Speech 665 (465), is a general survey course and may not be used as part of either a major or minor in logopedics at the undergraduate or graduate level.

Corrective training for regularly enrolled students at Wichita State with speech, language or hearing disorders may be arranged with the Department of Logopedics. A minimal fee is charged.

**Lower Division Courses**

**Communication Sciences**

214 (214). Anatomy and Physiology of the Speech and Hearing Mechanisms. (3). A study of the prenatal development and basic anatomy of the systems necessary for speech and hearing. The respiratory, phonatory, articulatory and auditory mechanisms are discussed from a functional point of view. Prerequisite: prior or concurrent enrollment in Logo. 111 (111). D 12 214 0 1220

216 (216). Introduction to Speech and Hearing Sciences. (2). 2R; 2L. Examination of elements in the chain of events that lead to human communication. Speech production and speech perception are studied at physiologic and acoustic levels, with primary emphasis on acoustics. Prerequisites: sophomore standing and prior or concurrent enrollment in Logo. 111 (111). D 12 216 0-1220

218 (218). Phonetics: Theory and Application. (3). 3R; 1L. The study of physiologic, acoustic and perceptual specification of speech sounds and a survey of current phonological theory and applications to speech improvement. Extensive practice is given in transcription of speech. Prerequisites: sophomore standing and prior or concurrent enrollment in Logo. 111 (111). D 12 218 0 1220

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

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When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of lab. Other courses are designated with the symbols R and D, R standing for lecture and D for demonstration. For example, 3R; 3D means three hours of lecture and three hours of demonstration.
Speech, Language and Hearing Disorders

111 (111). Introduction to Speech Pathology and Audiology. (3). Orientation to the professional disciplines of speech pathology and audiology (logopedics); the place of logopedics among the professions; communicative problems commonly found and treated and the impact of these problems on the individual; and general approaches to habilitation. D 12-111 0 1220

132 (132). Introduction to Habilitative Procedures. (2). 1R; 3D. An overview of communication disorders in relation to other educational disciplines. Observation of clinical procedures with handicapped children in a special educational environment is utilized. D 12 132 0-1220

Upper Division Courses

Advanced Communication Sciences

710 (461). The Neurology of Speech and Language. (4). A consideration of basic neuroanatomy and neurophysiology necessary for obtaining an understanding of the representation of speech and language in the human central nervous system and of conditions resulting from neurological impairment. Prerequisite: senior standing or consent of instructor. D 12 710 0 1220

735 (435). 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: Logo. 531 (431). D 12 735 0 1220

Speech, Language and Hearing Disorders

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

317 (317). Techniques of Speech Pathology. (2). 1R; 3L. Observation of cases in the speech clinic, with emphasis on simpler types of defects. A presentation of clinical techniques, interviewing and counseling procedures with parents and professional workers and the use of clinical equipment are included. Prerequisite: prior or concurrent enrollment in Logo. 315 (315). D 12 317 0 1220

324 (324). 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 procedures for differential diagnosis and clinical management, based on a working knowledge of the anatomy and physiology of normal voice production. Prerequisite: Logo. 214 (214). D 12 324 0 1220

326 (326). Application of Techniques. (2). 1R; 3L. Supervised application of techniques with simpler problems; observation of more difficult communicative disorders; and an introduction to techniques used with stutterers and aphasics. Prerequisite: Logo. 317 (317). D 12 326-0 1220

327 (327). Clinical Methods in the Public Schools. (3). Organization, administration and professional relationships in public school speech therapy programs on the elementary and secondary school levels. Emphasis is given to procedures and materials for surveying, scheduling, therapy lesson planning, record keeping and utilization of various instructional media. This course should be taken the semester prior to student teaching—Logo. 447 (447). Prerequisites: Logo. 315 (315) and 324 (324). This course may be taken concurrently with Logo. 324 (324). D 12-327 0 1220

447 (447). Student Teaching in Public School Speech Therapy. (5). Half-time participation in a public school speech therapy program under the guidance of a certified clinician and a college supervisor. Prerequisites: Logo. 327 (327) and departmental consent. D 12 447 2 1220

448 (448). Seminar: Public School Speech Therapy. (2). Discussion and evaluation of student teaching experiences in public
schools; demonstrations of applied clinical skills; counseling on the elementary and secondary school levels. To be taken concurrently with Logo. 447 (447). D 12-448 9 1220

490 (490). Directed Study in Speech Pathology or Audiology. (1-3). Individual study or research on specific problems. This course may be repeated. Consent of instructor must be obtained prior to enrollment. Offered all terms. D 12 490 3-1220

517 (417). Supervised Practicum in Speech Pathology. (3). 2R; 4L. Practice teaching in a clinical setting with methods of behavioral analysis, charting and control. The analysis of clinician-client interaction and of client progress is included. Prerequisite: Logo. 326 (326). D 12 517 0 1220

531 (431). Introduction to Audiology. (3). 3R; 1L. History and scope of the field. Basic aspects of the normal hearing function are studied and a survey of auditory testing procedures, including audiometric screening, is made. An introduction to the use of hearing aids, auditory training, lip reading and rehabilitative counseling is also included. Prerequisite: Logo. 214 (214) and 216 (216). D 12 531 0 1220

Speech and Language Pathology

700 (415). Cleft Palate: Evaluation and Clinical Management. (3). Methods of evaluating and modifying articulation and resonance in cleft palate individuals. The role of speech clinician within an interdisciplinary team is explored. Consideration is given to other organic anomalies. Prerequisite: prior or concurrent enrollment in Logo. 214 (214). D 12 700 0 1220

705 (421). Speech and Hearing Handicapped in the Public Schools. (3). A survey of commonly encountered speech and hearing disorders in elementary and secondary schools, their identification and treatment. Emphasis is placed on the role of the classroom teacher and other educational specialists in the total rehabilitative process. Not open to students majoring in logopedics. Credit in both Logo. 111 (111) and 705 (421) is not allowed. This course is cross-listed as Speech 665 (465). D 12 705 0 1220

720 (535). Stuttering: Diagnosis and Clinical Management. (3). 3R; 1D. A review of current theories on the etiology and development of the disorder. Behaviorally based diagnostic procedures for children and adults. Methods for clinical management and real-life generalization, including procedures for parent and client interviewing and counseling. Opportunities for observation and demonstration therapy are provided. D 12 720 0 1220

Audiology

740 (436). Introduction to Audiologic Technique. (3). 3R; 1L. Techniques and procedures for administering the basic auditory test battery and screening tests for various age levels and the interpretation of audiometric results. Calibration and maintenance of audiometric equipment. Prerequisite: Logo. 531 (431). D 12 740 0 1220

745 (437). Auditory Training and Speech Reading for the Hearing Impaired. (3). 3R; 1L. Rationale and methodology for training the auditory modality of the hearing impaired. Problems and techniques of teaching speech reading to children and adults are covered. Prerequisite: Logo. 531 (431). D 12 745 0-1220

755 (455). Practicum in Audiometrics. (1-3). 1R; 3-9L. Application of audiometric techniques in clinical situations. Experience is gained in complete patient management, counseling and rehabilitation follow-up, when appropriate. Prerequisite: Logo. 740 (436). This course may be repeated. D 12 755 0 1220

785 (441). Supervised Practicum in Speech and Language for the Hearing Impaired. (3). 2R; 4D. Supervised experience in the teaching of speech, language, speech reading and listening skills to deaf or hard-of-hearing children and adults. Prerequisite: Logo. 760 (432). D 12 785 0 1220
Deaf Education

760 (432). Introduction to Deaf Education. (3). 3R; 1L. 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: Logo. 531 (431). D 12 760 0-1220

765 (434). Teaching Language to the Deaf. (3). 3R; 1L. Analysis of language problems and methods for teaching language to the deaf. Prerequisite: Logo. 760 (432). D 12 765 0 1220

770 (438). Teaching Speech to the Deaf. (3). 3R; 1L. Current methods and evaluation techniques. Prerequisite: Logo. 760 (432). D 12 770 0 1220

775 (439). Teaching School Subjects to the Deaf. (3). 3R; 1L. A study of the principles, techniques and methods for teaching school subjects to deaf children. The development of reading readiness and reading ability from the point of view of acquiring language facility or achievement in other basic studies is also examined. Prerequisite: Logo. 760 (432). D 12 775 0 1220

General

715 (491). Selected Topics in Logopedics. (1-3). Individual or group study in specialized areas of communicative sciences and disorders. This course may be repeated. D 12 715 0 1220

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

Graduate Courses

Advanced Communication Science

830 (470). Laboratory Instrumentation. (3). 2R; 3L. An introduction to clinical and research instrumentation used in the field of logopedics. Experience with instrumentation is gained through practical projects and applications within the laboratory. D 12 830 0 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: Logo. 740 (436) and 830 (470). D 12 867 0 1220

900 (531). Basic Communicative Sciences: Physiological Phonetics. (3). 3R; 2L. A critical review of pertinent research concerning the physiological bases of speech: respiratory, laryngeal, resonatory and articulatory functions. Prerequisite: Logo. 830 (470). D 12 900 0-1220

910 (532). Basic Communicative Sciences: Acoustic Phonetics. (3). 3R; 2L. A critical review of research dealing with the acoustical characteristics of speech. Also included are speech perception and techniques of speech synthesis and analysis. Prerequisite: Logo. 830 (470). D 12 910 0 1220

920 (541). Neurophysiology of Communication. (2). Special lectures, seminars, clinical demonstrations and independent study. Prerequisite: Logo. 830 (470). D 12 920 0 1220

Speech and Language Pathology

805 (524). Aphasia: Evaluation and Clinical Management. (3). 3R; 1D. Review of historical and contemporary literature; standard tests for evaluation of communicative disorders in aphasia; procedures for planning rehabilitation regimes for children and adults. Prerequisite: prior or concurrent enrollment in Logo. 710 (461). D 12 805 0 1220
810 (462). Cerebral Palsy: Evaluation and Clinical Management. (3). 3R; 1D.
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 Logo. 710 (461). D 12 810 0 1220

815 (550). Interviewing and Parent Counseling in Speech Pathology and Audiology. (3). 3R; 2D. Presentation of current techniques of case history taking and interviewing as they apply to parents of speech and/or hearing handicapped children and adults with communication disorders. Procedures employed in ongoing and terminal counseling are considered. Interviewing and counseling experience in the clinical setting are provided. Prerequisite: departmental consent. D 12 815 0 1220

820 (552). Examination Methods in Speech Pathology. (3). 2R; 4L. Appraisal and differential diagnostic techniques in speech pathology. A weekly diagnostic practicum in communicative disorders is held, with experiences in report writing and follow-up procedures provided. Prerequisites: prior or concurrent enrollment in Logo. 720 (535), 805 (524) and 810 (462). D 12 820 0 1220

825 (560). 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

835 (540). Graduate Practicum in Communicative Disorders. (1-3). 3-9L. Supervised application of diagnostic and/or clinical management techniques, with children and adults presenting communicative disorders. Prerequisite: Logo. 517 (417). This course may be repeated for credit. Offered all terms. D 12 835 0-1220

Audiology

855 (510). Auditory Evaluation of Infants and Children. (3). 3R; 1L. Demonstration and practice in assessing auditory functioning of infants and children through 48 months of age. Report writing and parent counseling, as well as a study of appropriate instruments and procedures, are included. Prerequisite: Logo. 740 (436). D 12 855 0 1220

860 (514). Hearing Aids. (3). 3R; 2L. The history and function of hearing aids. The measurement and significance of the electroacoustic characteristics, principles and procedures for the selection and recommendation of specific hearing aids for individual hearing losses, hearing aid orientation and counseling related to various age categories are encompassed. Prerequisite: Logo. 740 (436). D 12 860-0 1220

865 (516). Advanced Clinical Audiology. (3). 2R; 3L. Diagnostic and rehabilitative procedures in the audiology clinic. Techniques and procedures for the administration and interpretation of special auditory tests, including acoustic impedance and evoked auditory response measurements, are included. Prerequisite: Logo. 740 (436). D 12 865 0 1220

870 (518). Seminar in Audiology. (2-3). Review of recent developments and research, with attention given to industrial audiology and environmental noise problems. Prerequisite: consent of instructor. D 12 870 9 1220

General

800 (505). Introduction to Graduate Study. (3). A general introduction to graduate study. A survey is made of research procedures utilized in the fields of communication sciences and communication pathology, and a presentation of principles for scientific writing and critical reading of professional research journals is included. D 12 800 0 1220

880 (562). Presentation of Research. (1-3). A directed research project culminating in a manuscript appropriate for publication. This course may be repeated, but total credit hours may not exceed three. Prerequisites: Logo. 800 (505) and consent of instructor prior to enrollment. D 12 880 4 1220
890 (590). Independent Study in Speech Pathology or Audiology. (1-3). Arranged individual, directed study in specialized content areas in speech pathology or audiology. Admission is by consent of instructor prior to enrollment. This course may be repeated for credit. Offered all terms. D 12 890 3 1220

895 (575). Thesis Research. (1-2). This course may be repeated, but total credit hours counted toward degree requirements must not exceed two. D 12 895-4 1220

899 (576). Thesis. (1-2). This course may be repeated, but total credit hours counted toward degree requirements shall not exceed two. D 12 899 4 1220

930 (568). Seminar in Clinical Research.

(3). Presentation of advanced models in research design applicable to the investigation of communicative disorders in a clinical setting. Prerequisites: Logo. 800 (505) and competency in statistics. D 12-930 9 1220

990 (690). Advanced Independent Study in Speech Pathology, Audiology or Speech Science. (1-3). Arranged individual, directed study in specialized content areas in speech pathology, audiology or speech sciences. This course may be repeated for credit. Offered all terms. Prerequisites: advanced standing and consent of instructor. D 12 990 3 1220

999 (676). Doctoral Dissertation. (1-24). This course may be repeated. D 12 999-4 1220

Military Science

U. S. ARMY ROTC

The Army Reserve Officers' Training Corps (ROTC) exists to develop citizen officers for the United States Army. It enables a student to prepare for a position of leadership in either a civilian or military career by earning a reserve army commission, while acquiring his baccalaureate degree. Outstanding students are designated as Distinguished Military Students with an opportunity to acquire a regular army commission. Completion of the ROTC program, coupled with courses in a prescribed field of study, enables the college graduate to fulfill his military obligation as an officer.

Students enrolled at nearby colleges not offering U. S. Army ROTC may enroll in the ROTC program at Wichita State University as special students and thereby qualify for a commission.

Currently a university graduate who is commissioned through U. S. Army ROTC is placed on active duty in the U. S. Army for a maximum period of two years. Commissionees may apply for active duty for training and serve on active duty for a period of three to six months. Students may be permitted to delay entry upon active duty for a period up to four years in order to pursue graduate level studies.

Information of Army ROTC scholarships can be obtained from the Wichita State Office of Financial Aids.

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 consists of 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 leadership laboratory hour each week. Enrollment in the basic course does not obligate a student to enter the advanced course.

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 one leadership laboratory hour each week. Advanced course students attend a six-week summer camp between their junior and senior years.

To qualify for enrollment in the advanced course, a student must:
1. Complete the basic course or armed forces active duty service credit;
2. Be physically qualified;
3. Have a scholastic grade point average of 2.00 or above;
4. Successfully complete survey and general screening tests;
5. Pass the Officer Qualification Test.

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

Advanced course students receive $100 per month for approximately 20 months. Attendance at summer camp is reimbursed by approximately $500, plus 6 cents a mile for travel to and from summer camp. Total pay allowances received by an advanced course student is approximately $2,500. The commissioned officer is presented with a uniform, and upon entering active duty, a $300 uniform allowance is allotted.

During all courses each student is furnished with a uniform and military science texts. Extracurricular activities that students may voluntarily participate in are the Pershing Rifles Drill Team, the Scabbard and Blade fraternal organization and the ROTC Rifle Team.

Two-Year Program

Although designed basically for transfer students from junior colleges and colleges and universities not offering ROTC, any student who has four semesters of school remaining before qualifying for a degree may enroll in a basic six-week summer camp between his sophomore and junior years. This camp is designed to educate the student in the basic military skills that he would have acquired during the 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.

Army Aviation Training

Qualifying ROTC seniors may participate in an on-campus pilot training
program. The 35 hours of ground training and 36 hours of flying instruction by an approved FAA school lead to the opportunity to qualify for a private pilot's license. After graduation, commissioning and completion of army aviation training, a student is given his army aviation assignment.

**Lower Division Courses**

113 (F113) & 114 (S114). First Year Basic Military Science. (1-1). 1R; 1 Leadership Laboratory. Historical growth and development of the army. The United States Army and national security are also included. D 15 113 5 1801 & D 15 114 5 1801.

223 (F223) & 224 (S224). Second Year Basic Military Science. (1-1). 1R; 1 Leadership Laboratory. Introduction to tactics, map reading and cadet noncommissioned officer training. Prerequisite: completion of MS 113 (113) and MS 114 (114) or department consent. D 15 223- 5 1801 & D 15 224 5 1801.

**Upper Division Courses**

333 (F333) & 334 (S334). First Year Advanced Military Science. (2-3). 2R-3R; 1 Leadership Laboratory. Includes branches of the army, military teaching principles, leadership, small-unit tactics and communications. Prerequisites for MS 333 (F333); MS 223 (F223) and 224 (S224), basic summer camp, or departmental consent. D 15 333 5 1801 & D 15 334 5 1801.

443 (F443) & 444 (S444). Second Year Advanced Military Science. (3-2). 3R-2R; 1 Leadership Laboratory. Includes theory and dynamics of the military team, seminar in leadership and management, military law and service orientation. Prerequisites for MS 443 (F443): MS 333 (F333) and 334 (S334), or departmental consent. D 15 443 5 1801 & D 15 444 5 1801.

**Music Education**

Music Ed. 351 (251), 352 (252) and 606 (306) 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 are given in the College of Fine Arts, Division of Music, section.

**Physical Education, Health and Recreation**

The Department of Physical Education, Health and Recreation offers both a service program and a practical program.

**SERVICE PROGRAM**

Physical Education 101 (101) activity courses carry one hour of credit. Included in this series of courses are:

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviation is used in the course descriptions: R stands for lecture. For example, 1R; 1 Leadership Laboratory means one hour of lecture and one hour of leadership laboratory.
1. **Group activities:** Volleyball, basketball, field hockey, speed-a-way, softball, soccer, touch football, outing activities and varsity activities;

2. **Individual activities:** Tennis, badminton, bowling, swimming, fencing, ice skating, cycling, mountaineering, canoeing, jogging, golf, lifesaving, scuba, water safety, and track and field;

3. **Dance:** Folk dance; square dance; modern dance I, II, III; theater dance; social dance; ballet I, II, III; tap and jazz; Orchesis;

4. **Combatives:** Karate, judo and wrestling;

5. **Gymnastics:** Tumbling, trampoline and apparatus.

**PROFESSIONAL PROGRAM REQUIREMENTS**

**Admission.** All prospective majors in the Department of Physical Education, Health and Recreation must file a formal application for admission to the department. They may file at any time after enrolling at Wichita State, but they may not file later than the date they apply for admission to the College of Education. Application forms may be obtained in the department office, 101 Henrion Gymnasium.

**State Certification.** Physical education instructors in Kansas schools must have 24 hours of preparation, including a minimum of five hours of health, physiology, first aid or hygiene. A minimum of ten semester hours is required in courses in the field of physical education, including teaching methods in physical education. (Effective until September 1, 1974.)

**Major.** A major consists of 24 semester hours, including a minimum of 18 semester hours in physical education and at least one course in human anatomy and one in human physiology. At least six semester hours must be taken in each of these areas: skill courses in physical education activities, theory courses in sports and/or dance, and theory courses in physical education. (Effective September 1, 1974.)

**Core Requirements.** To meet core requirements, each physical education major must complete 26 hours in the physical education core, which includes PE 111 (111), 115 (115), 117 (117), 270, 328 (330), 329 (329), 530, 533 (433) and 544 (444).

**Areas of Specialization.** Each physical education major is required to complete one area of specialization, either elementary or secondary physical education. Courses that may be taken in these areas are as follows:

**Area 1—Elementary—16 hours, including:**
Ed. Psych. 219 (219) and PE 200, 212 (212), 225 (225), 500 (400), 244 (204M) and 254 (204W).

**Area 2—Secondary—23 hours, including:**
PE 206, 212 (212), 248 (218M), 311 (311), 312 (312), 337 (337M) and 253 (203W) and 254 (204W) for women, and 220 (220M) and 244 (204M) for men.
A physical education major may select both secondary and elementary areas of specialization with the completion of the hours in each area.

**Area of Concentration.** Any student, major or nonmajor, may select specific courses within an area of concentration or may choose to complete the entire area. Requirements and courses for these areas are given below.

1. Driver's education (state certification)—18 hours
   - Required: Psych. 111 (111), PE 300 (300), 301 (301) and 210 (210). Three hours must be selected from the following courses: PE 101 (101)—Motorcycle Safety—117 (117), 331 (331) or 750 (450).
   - Electives: Six semester hours in the following areas: visual education, auto mechanics, sociology or courses dealing with human relations, such as American democracy, law enforcement, traffic problems and court procedures.

2. Recreation—17 hours
   - PE 202 (202), 212 (212), 226 (226), 528 (436); Soc. 226 (226); and Psych. 347 (246).

3. Health—20 hours
   - PE 115 (115), 500 (400), 502 (495), 504 (496), 810 (510) and Biol. 112 (112) and 120 (120).

4. Coaching (certification)—20 hours
   - Required: PE 331 (331), 336 (336M), 337 (337M), 530, 570 (570) and PE 220 (220M) and 345 (335M) for men, and PE 253 (203W) and 334 for women.
   - Elective: 3 hours may be selected from the following: PE 206, 248 (218M), 311 (311M), 312 (312M), 244 (204M) for men and 204 (204W) for women, or any three PE 101 (101) classes.

5. Dance—20 hours
   - PE 212 (212), 223 (223), 512 (412), 514 (424), 516 (446) and PE 101 (101)—Dance I, II, III; Ballet I and II; Tap and Jazz; Theater Dance; and Ballroom Dance.

6. General
   - A physical education major could develop an area of concentration or take hours for graduation from some other academic area, such as mathematics or sociology.

**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 (111). Introduction to Physical Education. (2). A survey study of health, physical education and recreation as to their identification, purpose and inter-

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 1R; 2L means one hour of lecture and two hours of lab.
and/or advanced first aid with certification by the American Red Cross. D 13-117 0 0837

200. Observation in Physical Education. (1). A course that provides students with observation experiences in selected elementary schools. D 13 200 1 0835


206. Aquatics. (2). 1R; 2L. An introduction to aquatic techniques and an orientation to all levels of aquatics that would enable individuals to manage themselves adequately and satisfactorily in water. Prerequisite: PE 101 (101)—Beginning Swimming—or departmental consent. D 13 206 0 0835

210 (210). Safety Education. (2). 2R. Basic foundations and principles of safety education. D 13 210 0 0836

212 (212). Introduction to Dance. (4). 4R; 1L. Introduction to dance, with emphasis on techniques relating to the participation, performance and teaching for the science and art of dance. D 13-212 0 0835

220 (220M). Officiating Techniques for Men's Sports. (3). 3R. Theory, rules and mechanics of officiating major sports common to the high school and college athletic programs. D 13 220 1 0835

223 (223). History and Philosophy of Dance. (2). 2R; 2L. A basic background in the history and philosophy of dance. D 13 223 0 0835


226 (226). Introduction to Community Recreation. (2). A study of the philosophy, origin and development of modern recreation programs. D 13 226 0 0835

244 (204M). Body Mechanics and Gymnastics for Men. (3). 3R. A fundamental and laboratory course in gymnastics designed to aid the physical education major in his ability to teach and coach this activity. Prerequisite: PE 101 (101)—Gymnastics—or departmental consent. D 13 244 1 0835

248 (218M). Methods and Techniques I. (3). 3R; 2L. Emphasis upon methods, teaching progression, analysis and skill development. Activities covered include: softball-baseball, field hockey—football and basketball. Prerequisite: women, PE 101 (101) major's courses in softball, field hockey and basketball or skills proficiency exam; men, passing skills proficiency exam in the above activities. D 13 248 1 0835

253 (203W). Officiating Techniques for Women's Sports. (3). Includes the study of the philosophies and standards of DGWS, officiating techniques, basic skills, testing procedures and laboratory work. Prerequisite: PE 101 (101)—Basketball and Volleyball—or departmental consent. D 13 253 1 0835

254 (204W). Body Mechanics and Gymnastics for Women. (3). 3R. Principles of body mechanics and application to gymnastics, including free exercise, apparatus and trampoline. Prerequisite: PE 101 (101)—Gymnastics—or departmental consent. D 13 254 2 0835

270. Motor Learning. (3). 3R. The introduction and examination of the physiological and psychological factors that affect the acquisition of motor skills. D 13 270 1 0835

Upper Division Courses

300 (300). Basic Driver Education and Training I. (3). D 13 300 0 0836

301 (301). Advanced Driver Training II. (3). D 13 301 2 0836

311 (311M). Methods and Techniques II. (3). 3R; 2L. Emphasis upon methods teaching progression, analysis and skill development. Activities covered include: soccer—speed-a-way, wrestling—archery, flag football and volleyball. Prerequisites: women, PE 101 (101) major's courses in speed-a-way and volleyball and any PE 101 course in archery, or skills proficiency exam; men, passing
skills proficiency exam in soccer, wrestling and volleyball. D 13 311 1 0835

312 (312M). Methods and Techniques III. (3). 3R; 2L. Emphasis upon methods, teaching progression, analysis and skill development. Activities covered include: golf, tennis, badminton and bowling. Prerequisites: women, PE 101 major's courses in above activities or passing sports proficiency examination: men, passing skill proficiency exam in golf, tennis and badminton. D 13 312 1 0835

328 (330). Kinesiology and Biomechanics. (3). 3R. The understanding of the kinesthetics and mechanics of human motion, with respect to performance of sports activities. D 13 328 0 0835

329 (329). 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. Prerequisite: C or better in Biol. 100 (100) or departmental consent. D 13 329 1 0835

331 (331). Athletic Injuries and Training Techniques. (2). 2R; 1L. Injuries common to athletic activities, emphasizing prevention, first aid, treatment and care as prescribed by the team physician. D 13 331 1 0835


337 (337M). Theory and Organization of Track and Field. (2). 2R. The theory, organization, responsibilities and techniques of coaching track and field. D 13 337 0 0835

345 (335M). Theory and Organization of Football. (2). 2R. The theory, organization, responsibilities and techniques of coaching football. D 13 345-0 0835

500 (400). 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 (495). Applied Health I. (2). Introduction to public health problems and practices. Field excursions are arranged. Prerequisite: departmental consent. D 13 502 2 0837

504 (496). 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 (495) or departmental consent. D 13 504 2 0837

512 (412). Ethnic and Recreative Dance. (2). Materials selected from American and European countries utilized to develop methods for schools and recreational groups. D 13 512 2-0835

514 (424). Creative Dance for Children. (2). Classwork, library work and observations of selected groups are utilized to develop creative dance concepts for the schools. D 13 514 1 0835

516 (446). Dance Composition and Production. (2). D 13 516 1 0835

526 (426). Community Recreation. (2). 2R. The organization and administration of community recreation. Prerequisite: PE 226 (226). D 13 526 1 0835

528 (436). Camp Administration. (3). 3R. Modern practice in camp organization, program building, business practices, staff training and guidance. Problems in camping administration are considered. D 13 528 0 0835

530. Physiology of Exercise. (3). 3R. To provide the student with a working knowledge of human physiology as it relates to exercise. D 13 530 1 0835

533 (433). Tests and Measurement in Physical Education. (3). 3R. 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 tools. D 13 533 0 0825

544 (444). History, Philosophy, Curriculum and Administration. (4). History, philosophy and objectives of physical education. The organizational and administrative problems of the health and physical education programs and the management of the physical plant and curriculum are examined. D 13 544 2-0835

570. Psychology of Sport. (3). 3R. 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

730 (455). Perspectives on Human Design and Behavior. (3). Survey of concepts—from anatomy, medicine, biology, anthropology, neuropsychology—concerned with human form and behavior. A discussion of individual differences is included. Prerequisites: consent of instructor and Anthro. 655 (455). D 13-730 0 0835

750 (450). Workshop in Education. (1-4). D 13 750 2 0835

Graduate Courses

800 (500). 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

810 (510). Adapted Physical Education. (3). Philosophy, principles and methods of adapting physical education and recreational activities to the needs of the handicapped and the exceptional individual. Laboratory experience is provided. Prerequisite: PE 328 (330) or consent of department. D 13 810 1 0819

812 (512). Advanced Techniques in Physical Education. (3). Comprehensive coverage of selected physical activities, with special emphasis on class procedures. Laboratory experiences are included. D 13 812 1 8835

820 (520). Foundations of Physical Education. (2). Examination of the biological, psychological and sociological bases for physical education. D 13 820 0 0835

825 (525). Physical Education in Elementary Schools. (2). New concepts, recent trends, methodology, programming and supervision. This course is designed for the elementary teacher and physical education specialist. D 13 825 0 0835


860. Research Methods in Health, Physical Education and Recreation. (2). An introduction to research in health, physical education and recreation. Included in the course content are: (1) importance and meaning of research, (2) a literature search, (3) laboratory and nonlaboratory studies and (4) the research report. D 13 860 0 0835

871 (571). Master's Dance Recital. (2). Prerequisites: Ed. Psych. 704 (504) and PE 860. D 13 871 4 0835

872 (504). Recital Defense and Presentation of Report. (2). Prerequisites: Ed. Psych. 704 (504) and PE 860. D 13 872-4 0835

875 (575). Thesis. (2). Prerequisites: Ed. Psych. 704 (504) and PE 860. D 13 875 4 0835

876 (576). (2). Prerequisites: Ed Psych. 704 (504) and PE 860. D 13 876 4 0835

880 (550). Analysis of Motor Skills. (3). Movement and sport skills analyzed in terms of mechanical principles by means of films and experimentation. D 13 880-0 0835

890 (515). Problems in Health, Physical Education and Recreation. (1-4). Directed reading and research under supervision of a graduate instructor. D 13-890 3 0835

College of Education 129
Secondary Education

The student teaching semester—Sec. Ed. 447 (447)—is required of all those who are working toward a secondary certificate and is a full-time assignment. Applications for approval to enroll in this program must be made to the coordinator of student teaching by March 1 of the semester prior to the year in which the student intends to enroll. In addition, students must obtain approval from the representative of the subject area in which they wish to student teach before placement can be considered.

It is expected that students will student teach in their field of major interest. However, individuals who are well prepared in more than one field may apply to student teach in a second field, but they must take the special methods course in the second field before entering the student teaching semester.

The assignment for student teaching begins with the opening of the public school semester, and enrollees must arrange to meet from 8 a.m. to 5 p.m. daily and to be available for selected evening programs throughout the semester.

Credit for the student teaching semester is entered on the transcript according to the following distribution:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fd. Ed. 428 (428), Social Aspects of the Teaching Process</td>
<td>2 or 3</td>
</tr>
<tr>
<td>Ed. Psych. 433 (433), Psychological Aspects of the Teaching Process</td>
<td>2 or 3</td>
</tr>
<tr>
<td>Sec. Ed. 442 (442), Methods in Teaching</td>
<td>4</td>
</tr>
<tr>
<td>Sec. Ed. 447 (447), Student Teaching (prerequisites: senior standing, Fd. Ed. 232 (232), Ed. Psych. 333 (333) and departmental consent)</td>
<td>7</td>
</tr>
</tbody>
</table>

Total 16 or 17

Note: Fd. Ed. 727 (427) or Ed. Psych. 534 (434) may be selected in lieu of Fd. Ed. 428 (428) in order to reduce the load in the student teaching semester.

Lower Division Courses

150 (150). Workshops in Education. (1-4). D 20 150 2 0803

Upper Division Courses

442 (442). Special Methods in Teaching. (4). This course cannot be counted for graduate credit. Prerequisites: Fd. Ed. 232 (232) and Ed. Psych. 333 (333). (Offered each semester.)

A—Art Education in the Secondary Schools. Same as Art Ed. 414 (442).

B—Field and Laboratory Methods in Biology.

D—Methods of Teaching Speech and Dramatic Art.

E—The Teaching of English. Preparation for student teaching of English composition, grammar and literature. This course is required of all English majors expecting to teach in junior and/or
senior high schools and is strongly recommended for all English minors expecting to teach English in junior and senior high schools. Prerequisite: completion of the requirements of the English department for English majors and minors planning to teach English in junior and senior high schools.

FL—The Teaching of Foreign Languages. Methods of teaching foreign languages, based on the audiolingual approach and applied linguistics contrasted with traditional methods. Laboratory techniques, transition into reading and writing, planning and evaluation of student progress are included.

This course is required of all foreign language majors or minors expecting to teach in junior and senior high schools.

H—Methods of Teaching the Social Studies in Secondary Schools. Preparation for student teaching in history, political science, economics, sociology and psychology. Meaning and content of the broad field of the social studies, materials for instruction, preparation of teaching units and evaluating instruction and student progress in the social studies are encompassed.

I—Methods of Teaching Industrial Education. Selection and arrangement of teaching content, methods of teaching, lesson planning, courses of study, testing and grading shop work, evaluating pupil progress, securing industrial education positions and professional responsibility of the shop teacher.

P—Methods in Physical Education. Presentation and participation in methods of teaching physical education, with emphasis on techniques, skills, organization of activities and classroom procedure.

R—Methods in Teaching Science and Mathematics. Preparation of the student for teaching in biological science, physical science or mathematics. Materials for instruction, preparation of teaching units and evaluating instruction and student progress in the sciences or in mathematics are included.

S—Special Methods of Business Education. Prerequisites: Bus. Ed. 234 (234) or data processing, and Bus. Ed. 237 (237), Acctg. 213 (210) and 214 (220). D 20 442 2 0829

447 (447). Student Teaching. Offered each semester. D 20 447 2 0829

490 (322). Individual Studies in Education. (2-3). Offered each semester. D 20 490 3 0803

745 (445). Utilizing the Print Media in Classrooms. (3). Explores various ways the print media may be utilized to teach critical thinking skills, propaganda analysis, communicative skills through word study and writing practice and improved reading through speed and comprehension practice. Special stress is placed upon the utilization of 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 20 745 0 0803

746. Introduction to Career Education. (3). An introduction to the philosophical consideration of career education. Participants examine the concepts of career education and explain means whereby they can be infused into the existing curriculum. Experience-based activities related to career opportunities in the local business-industrial sector and postsecondary educational programs are offered in addition to the preparation of curricula materials. D 20 746 0 0803

750 (450). Workshops in Education. (1-4). D 20 750 2 0803

752 (452). Special Studies in Education. (1-5). (A) Mathematics, (B) health and physical education, (C) language arts, (D) reading, (E) recent innovation, (F) science, (G) social studies and (H) other areas. Courses are designed for secondary school teachers. Only one preselected area is emphasized during a semester. Prerequisite: teacher certification or consent of instructor. This course may be repeated with adviser’s consent. D 20 752 2 0803

755 (455). 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 schools. There are two parts: (1) Aeronautical knowledge of the airplane and of flight and (2) general knowledge about aviation and aerospace. Part I includes the basic ground school subjects of aerodynamics, structures and propulsion, meteorology, navigation, communication and federal aviation regulations. Part II presents information concerning occupational opportunities and the influence of powered flight on modern society. D 20 755 0-0899

**Graduate Courses**

829 (529). Secondary School Curriculum. (3). A study of basic curriculum concepts necessary to meet the needs of high school youth. Major emphasis is put on the conversion and improvement of high school curriculum to comprehensive designs, college preparatory and vocational, with studies of methods of curriculum evaluation. D 20 829 0 0829

830 (530). Trends and Innovations in Secondary Education. (3). A course emphasizing the factors bearing upon the development of a qualitative learning environment in the secondary school and the evaluation of current trends in the secondary school. Modular scheduling, team teaching, educational television and interaction analysis are indicative of topics presented. D 20 830 0 0829

834 (534). The Teaching of English. (3). Study and application of recent research in classroom methodology and the teaching of English. Topics of central concern include the relationship of performance objectives and humanistic goals; instruments for recording and analyzing classroom behavior; new techniques and materials for teaching English and methods of evaluating performance; alternatives to traditional curricular designs; and needed research in English education. Open discussion is intermixed with individual and small-group presentations. Students are encouraged to develop questions for class consideration and to suggest areas for special investigation. D 20-834 0 0829

835 (535). Problems in Teaching at the Secondary Level. (3). A course designed to study in depth new curricular designs and emphases in specific disciplines at the secondary level. Particular attention is devoted to examining the latest curricular developments, new techniques in teaching, research in secondary education and new materials available in secondary disciplines. Students are encouraged to place emphasis in their study upon the disciplines in which they teach. D 20-835 0 0829

836 (536). Problems in Teaching Social Studies at the Secondary Level. (3). A course designed to study in depth new curricular designs and emphases in secondary social studies. Particular attention is devoted to examining the latest social studies curriculum developments, new techniques for teaching the social studies, research in social studies education and new materials available to the secondary social studies teacher. D 20 836 0 0829

837 (537). Problems in Teaching Science at the Secondary Level. (3). A course designed to study in depth new curricular designs and emphases in secondary school science. Particular attention is devoted to examining the latest science curriculum developments, new techniques for teaching the sciences, methods of conducting research in science education and new materials available to the secondary science teacher. Offered in Summer Session. D 20 837 0 0834

838 (538). Curriculum Alternatives. (3). An examination of curriculum models that are alternatives to the traditional curriculum and the socioeconomic, political and psychological factors that motivate their development. Attention is given to a comparison of historical and contemporary models for the secondary curriculum. D 20 838 0 0829

848 (548). Teaching Reading in the Secondary School. (3). Emphasis upon the teaching of reading in the content areas. Secondary teaching experience or departmental consent. Offered in the spring semester and Summer Session. D 20 848 2 0830
851 (451). Institute in Secondary Education. (1-8). A course designed to develop knowledge and competence relative to the concerns of secondary education. The course may encompass single, multi- or interdisciplinary approaches to curriculum and methodology. D 20 851 2-0803

857 (557). Seminar in Secondary Education. (3). Offered each semester. D 20-857 9 0803

862 (562). Presentation of Research. (1-3). A project submitted in thesis manuscript form. Prerequisite: Ed. Psych. 801 (501). This course may be repeated for a maximum total of three hours of credit. D 20 862 4 0824

875 (575)-876 (576). Master's Thesis. (2-2). Required for MA degree. Prerequisite: Ed. Psych. 860 (560). Offered each semester. D 20 875 4 0824; D 20-876 4 0824

890 (550). Special Problems in Education. (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent. Offered each semester. D 20-890 4 0803

FOUNDATIONS OF EDUCATION

Lower Division Courses


Upper Division Courses

428 (428). Social Aspects of Education. (3). Part of the secondary student teaching block. For description, see Fd. Ed. 727 (427). Offered in the fall and spring semesters. D 20 428 0 0821

725 (425). History of Education. (3). Education's career in relation to other institutions (political, religious, etc.) in promoting and inhibiting social change. Prerequisite: Fd. Ed. 232 (232). Offered in Summer Session. D 20 725-0 0821

726 (426). Comparative Education. (3). Educational systems of selected nations in terms of their unique structures and pervasive problems. D 20 726 0 0821

727 (427). Educational Sociology. (3). Attention is given to the contributions of sociology and anthropology to the understanding of the school and its position in relation to contemporary social problems. Prerequisite: Fd. Ed. 232 (232). This course may be substituted for Fd. Ed. 428 (428) in the student teaching semester. Not open to those who have had Fd. Ed. 428 (428). Offered each semester. D 20 727 0 0821

729 (429). 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: Fd. Ed. 232 (232) or Phil. 121 (121). Offered in the spring semester. D 20 729-0 0821

749 (449). Educational Anthropology. (3). Same as Anthro. 649 (449). A course dealing with the basic concepts of anthropology and their application to social science units in the elementary and secondary school. The nature of subcultures in American society and the problems they pose for the classroom teacher are explored. A course for education majors and graduate students. Offered fall semester. D 20 749 0 0821

Graduate Courses

826 (526). Humanistic Foundations of Education. (3). The philosophic, historic and literary foundations of modern education. Emphasis is on recent scholarship in these areas. Offered in the fall semester and Summer Session. D 20 826-0 0821

* Prerequisites may be waived for equivalent experience with departmental consent.
829 (529). Educational Classics. (3). Depth study of master works, ancient and modern, in education. Prerequisites: consent of instructor and six hours of foundations of education. D 20 829 0 0821

834 (534). Basic Concepts of Citizenship. (3). Basic principles of citizenship as found in great treatises are discussed in the context of the democratic American tradition. Prerequisite: six hours of foundations of education. D 20 834-0 0821

* Prerequisites may be waived for equivalent experience with departmental consent.

**Student Personnel and Guidance**

**Upper Division Courses**

750 (450). Workshop in Education. (1-4). D 18 750 2 0826

752 (452). Special Studies in Education. (1-5). (E) recent innovations, (H) other areas. The course is designed for students with personnel and guidance interests. Different preselected areas may be emphasized during a semester. This course may be repeated with adviser's consent. Prerequisite: consent of instructor. D 19 752 2 0826

**Graduate Courses**

801 (501). Principles and Philosophy of Guidance. (3). The development of a guidance philosophy and a survey and study of the several guidance services that are part of the modern elementary and secondary school guidance program. D 18 801 0 0826

802 (502). Introduction to Interaction Processes. (1). A laboratory approach to an examination of the counselor's role in the counseling process. The course is designed to aid the prospective counselor increase personal understanding of self as a variable in the counseling process. Limited to SPG majors. To be taken concurrently with SPG 801 (501). D 18 802 2 0826

803 (503). Counseling Theory. (3). A study of selected theories of counseling. Prerequisite: SPG 801 (501) or concurrent enrollment. D 18 803 0 0826

805 (505). Educating the Poorly Adjusted Individual. (3). Perceptual approach to the problems of emotionally disturbed and/or delinquent children and youth in both elementary and secondary schools. D 18 805 0 0816

806 (506). 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 (510). Guidance Services for the Elementary School. (2). Examination of the role of the guidance counselor and techniques appropriate to guidance services in an elementary school setting. Prerequisite: SPG 801 (501). Recommended: SPG 805 (505), SPG 806 (506). D 18-810 0 0826

820 (520). Occupational Information. (2). The classification, collection, evaluation and use of informational materials in a

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
guidance program. Study of current occupational trends and developments, and theories of occupational choice. Prerequisite: SPG 801 (501) or concurrent enrollment. D 18 820 0 0826

823 (523). Psychometric Procedures in Counseling. (3). Survey and study of standardized tests and their application in counseling, with an emphasis on their selection, use and interpretation. Study is made of the basic concepts pertaining to the interpretation of psychological tests and inventories, including basic measurement theory and the factors involved in the selection of tests. Prerequisite: SPG 801 (501), Ed. Psych. 801 (501) or concurrent enrollment. D 18 823 0 0826

824 (524). Techniques of Counseling. (3). Through simulated counseling situations and extensive examination of counseling case studies, techniques of counseling are examined and practiced. Prerequisite: SPG 803 (503). D 18 824 0 0826

825 (525). Group Techniques in Guidance. (2). Laboratory approach to the study of group formation, process and communication as a tool for guidance services. Prerequisite: SPG 801 (501) or concurrent enrollment. D 18 825 2 0826

833 (533). Administration of Guidance Services. (3). Administration theory, with emphasis for the SPG major on relating theory to the problem of administration of guidance services. Prerequisite: 15 hours of SPG courses. D 18 833 0 0826

855 (555). Individual Intelligence Testing in the Public School. (3). Use of individual tests for appraisal of intelligence. Prerequisites: SPG 823 (523), or concurrent enrollment, and departmental consent. D 18 855 0 0825

856 (556). Practicum in Individual Counseling. (3). Supervised practice in individual counseling. Prerequisites: SPG 824 (524) and consent of instructor. This course may be repeated. D 18 856 2 0826

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

858 (558). Diagnostic Testing. (3). Practice in the interpretation and evaluation of commonly used test results and student records to develop an educational diagnosis and a remedial program for individual students in the public schools. Prerequisites: Ed. Psych. 801 (501), SPG 855 (555) and consent of instructor. D 18 858 2 0825

862 (562). Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psych. 860 (560). This course may be repeated for a maximum of two hours of credit. D 18 862 4 0826

866 (566). Practicum in Guidance Services. (3). Supervised work in administration, test interpretation, group counseling and other activities of the guidance counselor. Prerequisites: SPG 833 (533) and consent of instructor. D 18 866 2 0826

867 (567). Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and group counseling. Prerequisites: SPG 825 (525), SPG 856 (556) and consent of instructor. This course may be repeated for three hours of additional credit. The second practicum must be in a different area or have a different focus from the first. D 18 867 2 0826

875 (575)-876 (576). Master's Thesis. (2-2). Required for a MA degree. Prerequisite: Ed. Psych. 860 (560). D 18 875 4 0826; D 18 876 4 0826

890 (550). 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

* Prerequisites may be waived for equivalent experience with departmental consent.
Modern technological developments in engineering have caused considerable changes 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 a sufficient number of 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 of Science (BS) degree or allows them to continue in graduate studies for a more active participation in research and advanced study.

Wichita State engineering students are offered a basic core of knowledge, including scientific and analytical tools needed to grapple with realistic problems they may face in a professional engineering career.

Due to the diverse nature of engineering subject material, the College of Engineering is organized into several degree-granting departments: aeronautical, electrical, industrial and mechanical. A Master of Science (MS) degree is offered in aeronautical, electrical, engineering mechanics (aeronautical department) and mechanical engineering. A cooperative Doctor of Philosophy degree with the University of Kansas in the field of aeronautical engineering is also available. See Wichita State University Graduate School Bulletin for more information about the graduate programs.

The curricula of the various undergraduate departments contain a large portion of common courses for two years, with provisions for specialized departmental offerings in the following years. Students are allowed ample flexibility within their major field of study to select areas outside the engineering core subjects. Detailed program requirements for majors in the various engineering fields are given under the course sequences listed in this section.

The programs in engineering are offered in daytime and evening classes, and the courses are the same whether they are taught in the daytime or at night. The outlines of the departmental programs given on the following pages are arranged for full-time students and contain all the requirements for the various undergraduate degrees.

The curricula of the departments of aeronautical engineering, electrical engineering and mechanical engineering are accredited by the Engineers' Council for Professional Development.
Entrance Requirements

Students may enter the College of Engineering from University College, other degree-granting colleges within the University or other universities and colleges, provided they have completed 24 semester credit hours with a 2.00 grade point average.

A student with fewer than 72 credit hours and less than a 2.00 but more than a 1.70 grade point average will be admitted to the College of Engineering on probation, provided he has not been academically dismissed from the last institution he attended. A student with more than 72 credit hours and less than a 2.00 grade point average will be admitted on probation, provided he has not been academically dismissed from the last institution attended, subject to the approval of the College of Engineering Exceptions Committee.

Entering students should note that Math. 242 (142) is a first-semester requirement in the engineering sequence of courses. In order to take Math. 242 (142), a student must have taken Math. 112 (141) or the equivalent.

Math. 112 (141). Algebra and Trigonometry. (5). An exploration of functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions, and other standard topics prerequisite to a beginning study of analysis. Prerequisite: 1½ units or high school algebra or Math. 011 (052) and 1 unit of high school geometry or Math. 021 (060). Credit in both Math. 111 (140) and 112 (141) is not allowed. A 20 112 0 1701

Math. 242 (142). Introductory Analysis I. (5). A study of analytic geometry and the calculus in an interrelated form. Prerequisites: Math. 112 (141) with a C or better or 2 units of high school algebra and 1 unit of high school geometry and ½ unit of high school trigonometry, or Math. 123 (139) and 111 (140) with a C or better in each. A 20 242 0 1701

Engineering students who have not had high school physics are permitted to register for Phys. 213 (123). These students are then required to take Phys. 314 (244E) when they have fulfilled prerequisites for this course, which are: Math. 243 (243), with a grade of C or better, and Phys. 213 (123), with departmental consent. Phys. 313 (243E) is also a prerequisite for engineering students enrolling in Phys. 314 (244E). Students who have had high school physics should prepare themselves with the proper mathematics prerequisites and enter the Phys. 313 (243E)-314 (244E) sequence.

Probation and Dismissal Standards

PROBATION

A student is placed on probation for the next term in which he enrolls if his cumulative grade point average falls below 2.00. The student
remains on probation even though he earns a 2.00 grade point average in the term during which he is on probation if his cumulative grade point average does not meet 2.00. Probation is removed when his cumulative grade point average reaches the required level.

A student is also placed on probation for the next term in which he enrolls if his engineering major grade point average falls below 2.00 (the engineering major consists of 43 hours of engineering core courses and the courses required by the student's engineering department).

The student remains on probation even though he earns at least a 2.00 engineering major grade point average in the term during which he is on probation if his cumulative engineering major grade point average does not yet meet the minimum standards. Probation is removed when the engineering major grade point average reaches the required level. A student may not be placed on probation until he has completed 12 or more hours in his major at Wichita State.

A student on probation for not meeting either the required cumulative or the required engineering major grade point average may not enroll for more than 12 semester hours in an 18-week term or six semester hours in Summer Session, excluding one hour of military or air science, physical education or marching band. Exceptions to this limitation may be made on the recommendation of the student's adviser, with the approval of his dean. Such exception is to be recorded by the University's Committee on Admissions and Exceptions.

ACADEMIC DISMISSAL

A student is subject to academic dismissal from the College of Engineering when he is on probation because of his cumulative grade point average, and his grade point average for the term during which he is on probation falls below 2.00. No student on probation because of a deficient cumulative grade point average may be placed on academic dismissal for failure to raise his average until he accumulates 12 or more hours. At that time, the cumulative grade point average, including these hours, is used to determine whether he should be academically dismissed.

A student is also subject to dismissal when he is on probation because of his cumulative engineering major grade point average, and his engineering major grade point average for the term during which he is on probation falls below 2.00. No student on probation because of a deficient engineering major grade point average may be placed on academic dismissal for failure to raise this average until he accumulates three or more engineering major courses. At that time, the cumulative engineering major grade point average, including the hours for the last three or more courses, is used to determine whether he should be academically dismissed.
READMISSION
A student who has failed to meet the necessary scholastic requirements and has been academically dismissed may apply to the College of Engineering Exceptions Committee for readmission consideration. It is the student's responsibility to supply the committee with sufficient reason for readmission consideration.

OTHER REGULATIONS
Students are expected to maintain a C average in all work for which they are registered for credit during any semester. Failure to maintain this standard implies that the student's program should be limited.

No student is allowed credit toward graduation for D grade work in excess of one-quarter of his total hours.

At the end of the first eight weeks in each semester, reports of unsatisfactory grades are sent to the student.

Core Curriculum
All engineering students follow the same general curriculum for the first two years. For administrative purposes, the student is requested to choose a departmental curriculum in which to study, but change to another curriculum may be made during this period without loss of credit toward graduation.

Each of the curricula consists of three parts: (1) the general University requirements, (2) an engineering core program and (3) specialized departmental courses.

As a portion of the general University requirements, the student must elect four hours of core electives, as specified under Academic Information-Requirements for Graduation in the Catalog.

Every engineering student is required to complete a total of 43 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 (43 Hours Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engr. 100 (100), Engineering Perspectives</td>
<td>1</td>
</tr>
<tr>
<td>Engr. 125 (125), Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>IE 110 (110), Graphics I</td>
<td>2</td>
</tr>
<tr>
<td>IE 213 (213), Graphics II</td>
<td>2</td>
</tr>
<tr>
<td>IE 354 (254), Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>AE 223 (223), Engineering Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>AE 327 (227), Engineering Digital Computation</td>
<td>2</td>
</tr>
<tr>
<td>ME 398 (298), Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>EE 382 (382), Electrical Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>AE 373 (373), Engineering Mechanics II</td>
<td>3</td>
</tr>
</tbody>
</table>
The recommended sequence of courses for engineering students in all departments is outlined below. This sequence has been planned so that the student can complete the program in the minimum time and can satisfy all University course requirements and prerequisites for engineering students. Any deviation from this sequence should be discussed with the engineering faculty adviser.

A student who has 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 his 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. A course major is defined as follows:

All courses in the Wichita State University catalog sequence of courses (courses required for graduation designated by a course number) are considered as required courses for a student's major. In technical elective courses, a course will be considered a major if taken in the department in which the student is majoring.

Students enrolled before the fall of 1973, who have not used up the maximum number of 24 semester hours on 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**

The College of Engineering offers a special 132-hour program designed to help students who wish to pursue studies in interdisciplinary fields. Typical programs are computer engineering, bioengineering, environmental engineering or other special engineering fields augmented by other course offerings at Wichita State. Students graduating through this program receive a BS in engineering.

To complete the program, a student must select a major field that has a focus (depth) in a specified area. A related minor must be chosen from any engineering field, any field of the physical sciences or the management or economics field. Each student's program must have the approval of a faculty member active in the minor field. The dean of the College of Engineering will appoint an appropriate faculty mem-
ber to assist the student with the total program, which must be approved by an engineering committee and the dean of the College of Engineering.

The requirements for graduation are summarized below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
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<tr>
<td>Humanities and Social Sciences</td>
<td>24</td>
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<tr>
<td>Communications</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics</td>
<td>13</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>19</td>
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<td>Engineering Science</td>
<td>40</td>
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<tr>
<td>Major and Minor</td>
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<tr>
<td></td>
<td>132</td>
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</table>

Sequence of Courses

AERONAUTICAL ENGINEERING

Rapid progress in the development of airplanes, missiles and space vehicles presents challenging opportunities for engineers interested in research, development, design and teaching.

The aeronautical engineering curriculum at Wichita State offers students an opportunity to develop a strong fundamental knowledge of mathematics, physics and the engineering sciences and allows them to acquire competence in professional fields such as aerodynamics, flight and orbital mechanics, propulsion, control systems and structural mechanics. Emphasis is placed on the fundamental principles involved in aeronautical engineering so that graduates are prepared to contribute to this rapidly changing and expanding field, which utilizes a wide variety of engineering applications. Engineers trained in this field also may find challenging careers in other industries that make use of many advanced concepts similar to those developed in the aeronautical field.

The undergraduate program requires the completion of 132 semester hours for graduation, less hours commensurate with honors and advanced placement credit.

The suggested course of study for aeronautical engineering students is given in the accompanying table.

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101 (111), College English I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Math. 242 (142), Introductory</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Analysis I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IE 110 (110), Engineering</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Graphics I</td>
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<td></td>
</tr>
<tr>
<td>Chem. 111 (111), General Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>University Core Elective</td>
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</tr>
<tr>
<td></td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Math. 243 (243), Introductory</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Analysis II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IE 213 (213), Engineering</td>
<td>2</td>
<td></td>
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<tr>
<td>Graphics II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phys. 313 (243E), General College Physics</td>
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<td></td>
</tr>
<tr>
<td>Humanities or Social Sciences</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>University Core Elective</td>
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FRESHMAN
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<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Course</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech 111 (111), Basic Public Speaking</td>
<td>3</td>
<td>Math. 550 (346), Ordinary</td>
<td>3</td>
</tr>
<tr>
<td>Math. 344 (244), Introductory Analysis III</td>
<td>3</td>
<td>IE 354 (254), Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 314 (244E), General College Physics</td>
<td>4</td>
<td>Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>AE 223 (223), Engineering Mechanics I</td>
<td>3</td>
<td>AE 373 (373), Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Sciences</td>
<td>4</td>
<td>ME 398 (298), Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>University Core Elective</td>
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<td>Humanities or Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Course</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 333 (333), Mechanics of Materials</td>
<td>3</td>
<td>AE 347 (347), Science of Engineering Materials</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 361 (361), Fluid and Heat Flow</td>
<td>4</td>
<td>AE 424 (324), Aerodynamics Theory</td>
<td>3</td>
</tr>
<tr>
<td>EE 382 (382), Electrical Dynamics</td>
<td>4</td>
<td>Phys. 551 (331), Topics in Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Core Elective</td>
<td>3</td>
<td>Engineering Core Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Sciences</td>
<td>3</td>
<td>Humanities or Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Course</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 525 (425), Flight Structure I</td>
<td>4</td>
<td>AE 526 (426), Flight Structure Lab</td>
<td>1</td>
</tr>
<tr>
<td>AE 512 (412), Experimental Methods in Aeronautical Engineering</td>
<td>2</td>
<td>AE 517 (417), Projects in Aeronautical Engineering</td>
<td>2</td>
</tr>
<tr>
<td>AE 514 (414), Flight Mechanics</td>
<td>3</td>
<td>AE Technical Electives</td>
<td>4</td>
</tr>
<tr>
<td>AE 516 (416), Supersonic Aerodynamics</td>
<td>2</td>
<td>Engineering Core Electives</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Core Elective</td>
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<td>Humanities or Social Sciences</td>
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</tr>
<tr>
<td>Humanities or Social Sciences</td>
<td>3</td>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

*Engineering core electives totaling at least 13 hours must be chosen from the engineering core courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 327 (227), Engineering Digital Computation</td>
<td>2</td>
<td>AE 409 (399), Experimental Mechanics Lab</td>
<td>1</td>
</tr>
<tr>
<td>Engr. 363 (363), Electromagnetic Fields</td>
<td>2</td>
<td>EE 492 (392), Electronic Circuits</td>
<td>4</td>
</tr>
<tr>
<td>Engr. 464 (464), Field Analysis</td>
<td>3</td>
<td>Engr. 100 (100), Engineering Perspectives</td>
<td>1</td>
</tr>
<tr>
<td>ME 469 (369), Energy Conversion</td>
<td>3</td>
<td>Engr. 125 (125), Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>AE 408 (398), Systems Dynamics</td>
<td>3</td>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

†Technical electives may be chosen from any course numbered 300 or above in engineering, mathematics or any of the physical sciences, with the exception of courses required for the BS in aeronautical engineering.
ELECTRICAL ENGINEERING

In the electrical engineering department emphasis is placed on the intensive study of physical laws as appropriate to the study of modern electrical devices, including electrical machines. The laws governing the individual behavior as well as behavior in the interconnection of devices is particularly stressed. Analysis and synthesis of electrical networks, or systems, is of particular concern in specialized courses. The undergraduate program in electrical engineering is flexible enough to allow a student to specialize in communication systems, modern control theory, computers, energy conversion, network and system theory, biomedical engineering and general electronics.

Electrical engineering students are required to have a strong interest in mathematics and physics. As part of the curriculum, senior-level students are required to take a senior project of their own choosing under the supervision of a faculty member. The choice of subject material is varied and represents a challenge in judgment and creativity in analysis or design. This program requires the completion of 133 semester hours for graduation, less hours commensurate with honors and advanced placement credit.

Specific requirements and a suggested semester breakdown for the electrical engineering program are given in the accompanying table.

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101 (111), College English I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Math. 242 (142), Introductory Analysis I</td>
<td>5</td>
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<tr>
<td>Chem. 111 (111), General Chemistry</td>
<td>5</td>
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<tr>
<td>Speech 111 (111), Basic Public Speaking</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Core Elective</td>
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</tr>
<tr>
<td>Math. 243 (243), Introductory Analysis II</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Phys. 313 (243E), General College Physics</td>
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<tr>
<td>Humanities or Social Sciences</td>
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SOPHOMORE

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<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>AE 327 (227), Engineering Digital Computation</td>
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<td></td>
</tr>
<tr>
<td>AE 223 (223), Engineering Mechanics I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities or Social Sciences</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>IE 354 (254), Engineering Probability and Statistics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Math. 344 (244), Introductory Analysis III</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Phys. 314 (244E), General College Physics</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>AE 373 (373), Engineering Mechanics II</td>
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</tr>
<tr>
<td>EE 382 (382), Electrical Dynamics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ME 398 (298), Thermodynamics I</td>
<td>3</td>
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</tr>
<tr>
<td>Math. 550 (346), Ordinary Differential Equations</td>
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<td>Humanities or Social Sciences</td>
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<tr>
<td>Course</td>
<td>FIRST SEMESTER</td>
<td>Hrs.</td>
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<tr>
<td>Engr. 361 (361), Fluid and Heat Flow</td>
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<td>Engineering Core Elective</td>
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<tr>
<td>EE 492 (392), Electronic Circuits</td>
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<td>Phys. 551 (311), Topics in Modern Physics</td>
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<td>Humanities and Social Sciences</td>
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</table>

**SENIOR**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Core Elective</td>
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<td></td>
<td>EE 595 (495), Electrical Design Project II</td>
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<tr>
<td>EE 585 (485), Electrical Design Project I</td>
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<td>Technical Electives *</td>
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<tr>
<td>EE 686 (486), Information Processing</td>
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</tbody>
</table>

* Either ME 469 (369) or EE 488 (388) must be taken; both ME 469 (369) and EE 488 (388) may be taken. Either Engr. 464 (464) or EE 682 (482) must be taken; both Engr. 464 (464) and EE 682 (482) may be taken.

Technical electives may be chosen from (1) any 700 or above level EE course that is not required (at least six hours of technical electives must be selected from EE courses); (2) any 700 or above level engineering core course over and above the basic core requirements; or (3) selected courses in mathematics and engineering outside the EE department, with the approval of the student's adviser.

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**INDUSTRIAL ENGINEERING**

The Department of Industrial Engineering is concerned with instruction and research in design, analysis and operation of integrated systems of men, material, equipment and money. In addition to a strong interest in the solution of current, real problems found in industry, the department's curriculum is devoted to the preparation of students who can examine and analyze problem areas that are amenable to a system's engineering approach.

A student is allowed to take 16 hours of industrial engineering electives in order to tailor his program to one of the following primary options: (1) operations research, (2) manufacturing systems or (3) information systems. This scheme is completely flexible to allow the student to specialize in a specific aspect of industrial engineering. A student's program is determined by his own special interests in consultation with his major adviser.

A modern, well-equipped laboratory is also available to supplement classroom theory in human factors engineering, manufacturing processes, work measurement and factory planning. In addition, the industrial...
The engineering department has the responsibility for teaching all engineering graphics courses. To fulfill this responsibility the department maintains modern drafting rooms and drafting facilities and is currently developing a modern sequence of engineering graphics courses oriented toward digital computer applications.

The industrial engineering program requires the completion of 133 semester hours for graduation, less hours commensurate with honors and advanced placement credit. Specific requirements and a suggested semester breakdown for the industrial engineering program are given in the accompanying table.

### FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
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SENIOR

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</table>

The student may select engineering core electives from the following courses after consulting with his major adviser.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td>Engr. 363 (363), Electromagnetic Fields</td>
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</tr>
<tr>
<td>AE 347 (347), Science of Engineering Materials</td>
<td>3</td>
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<tr>
<td>ME 469 (369), Energy Conversion</td>
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</tr>
<tr>
<td>EE 492 (392), Electronic Circuits</td>
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</tr>
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<td>AE 408 (398), Systems Dynamics</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>AE 409 (399), Experimental Mechanics Lab</td>
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<tr>
<td>Engr. 464 (464), Field Analysis</td>
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<tr>
<td>Engr. 100 (100), Engineering Perspectives</td>
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<tr>
<td>Engr. 125 (125), Introduction to Engineering Concepts</td>
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</table>

The student may select industrial engineering electives from the following courses after consulting with his major adviser.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>IE 257 (257), Tool Design I</td>
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<tr>
<td>IE 356 (356), Introduction to Numerical Control</td>
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<td>IE 357 (357), Safety Engineering</td>
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<td>IE 501 (401), Probabilistic Method in Operations Research</td>
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<td>IE 435 (435), Project Engineering</td>
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<td>IE 549 (449), The Human Factor in Engineering Design</td>
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<td>IE 550 (450), Applied Operations Research I</td>
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<td>IE 650 (451), Applied Operations Research II</td>
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<table>
<thead>
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<th>Hrs.</th>
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<tbody>
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<td>IE 652 (452), Factory Planning</td>
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<tr>
<td>IE 553 (453), Production Control</td>
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</tr>
<tr>
<td>IE 554 (454), Statistical Quality Control</td>
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<tr>
<td>IE 555 (455), Numerical Control and Parts Programming I</td>
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<tr>
<td>IE 556 (456), Introduction to Information Systems</td>
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<tr>
<td>IE 558 (458), Manufacturing Methods and Materials</td>
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<tr>
<td>IE 665 (465), Management Systems Simulation</td>
<td>3</td>
</tr>
<tr>
<td>IE 590 (490), Senior Projects in Industrial Engineering</td>
<td>1-3</td>
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</tbody>
</table>

Electives taken in other departments may be selected with the approval of the student's major adviser.

MECHANICAL ENGINEERING

The curriculum in mechanical engineering is based upon three central parts of an integrated program of study. The first part provides the student with a basic series of courses in physics, mathematics and appropriate humanities. The second part consists of a core of engineering science subjects embracing the concepts and techniques judged fundamental to the requirements of the modern mechanical engineer. The third part of the program permits the student to choose from a series of specialized mechanical engineering department electives in addition to choosing from a series of engineering core courses that best suit the needs and desires of the student. Study in all three of these fields is distributed.
throughout the entire curriculum in order to provide a fully integrated program. The undergraduate program in mechanical engineering is sufficiently flexible to allow a student to choose a program that is appropriate to the fields of design, heat transfer, systems, thermodynamics, instrumentation and experimentation.

The objective of this program is to provide a modern engineering education and a strong stimulus for continued learning that will enable the student to take an active and meaningful part in the technical and social community of today and tomorrow. The program includes the technical and conceptual fundamentals necessary to permit the student to contribute to the technical or scientific community and/or continue his education at the graduate level. At the same time, the program is broad enough to help the student find an appreciation and concern for the social problems that he will encounter in his professional and personal life.

The technical portion of the program provides the student with a background for a career in design, research, development, production and technical management in a wide variety of industries and fields. The course of study equips the student for the development of systems and processes involving mechanical, thermal and electrical energy, including the generation, conversion, metering, control and utilization of these energy sources.

Through the mechanical engineering program the student is prepared to accept the challenges from almost the entire range of industry, including electrical and heat energy generation, transportation by all modes, consumer products, manufacturing, environmental control and health engineering equipment. In fact, many employers seek the mechanical engineer because of his versatility.

The faculty and laboratory facilities of the department provide elements for a well-balanced, coherent program. In the senior year, the program provides for a selection of specialized electives, where the student may emphasize the study of design, fluid flow, heat transfer, instrumentation or systems and controls. The student is urged to work out a suitable program of study with consultation with the faculty. The program requires the completion of 135 semester hours for graduation, less hours commensurate with honors and advanced placement credit. Specific requirements and a suggested semester breakdown for the mechanical engineering program are given in the accompanying table.

<table>
<thead>
<tr>
<th>FRESHMAN</th>
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<tr>
<td><strong>Course</strong></td>
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<tr>
<td>Eng. 101 (111), College English I</td>
</tr>
<tr>
<td>Math. 242 (142), Introductory Analysis I</td>
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<tr>
<td>IE 110 (110), Engineering Graphics I</td>
</tr>
<tr>
<td>Humanities or Social Sciences</td>
</tr>
<tr>
<td>Communications Elective</td>
</tr>
<tr>
<td>Math. 243 (243), Introductory Analysis II</td>
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<tr>
<td>IE 213 (213), Engineering Graphics II</td>
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<tr>
<td>Phys. 313 (243E), General College Physics</td>
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### SOPHOMORE

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<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Speech 111 (111), Basic Public Speaking</td>
<td>3</td>
<td></td>
<td>ME 398 (298), Thermodynamics I</td>
<td>3</td>
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<tr>
<td>Math. 344 (244), Introductory Analysis III</td>
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<td>Chem. 111 (111), General Chemistry</td>
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<tr>
<td>Phys. 314 (244E), General College Physics</td>
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<td>Math. 550 (346), Ordinary Differential Equations</td>
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<tr>
<td>AE 327 (227), Engineering Digital Computation</td>
<td>2</td>
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<td>AE 373 (373), Engineering Mechanics II</td>
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### JUNIOR

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<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>EE 382 (382), Electrical Dynamics</td>
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<td>Phys. 551 (311), Topics in Modern Physics</td>
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<tr>
<td>AE 333 (333), Mechanics of Materials</td>
<td>3</td>
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<td>AE 408 (398), Systems Dynamics</td>
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<tr>
<td>Engr. 361 (361), Fluid and Heat Flow</td>
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<td>ME 301 (301), Mechanical Engineering Measurement</td>
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### SENIOR

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</table>

° Engineering core electives must be selected from the following list: AE 347 (347), AE 409 (399); EE 492 (392); Engr. 100 (100), 125 (125), 363 (363), 464 (464); and ME 499 (369). A minimum of 11 hours of these engineering core electives is required for graduation, and the electives must have the approval of the student's departmental adviser.

† Mechanical engineering electives may be selected from the following: ME 504 (404), 505 (405), 621 (421), 622 (422), 643 (443), 656 (456), 659 (459); Math. 540 (335) and 651 (447). Appropriate courses from other engineering departments may be selected if they suit the academic needs of the student. Electives must have the approval of the student's departmental adviser.

† Total of two hours required for graduation.
Graduate Work

The departments of aeronautical engineering, electrical engineering and mechanical engineering supervise graduate programs leading to a Master of Science degree, as offered by the Graduate School. Various specializations are available in each of the departments, and a notation on the diploma identifies the department of study.

The Doctor of Philosophy degree in aeronautical engineering is offered in cooperation with the University of Kansas.

Students must be accepted for graduate standing before any graduate work can be scheduled. Prospective students should obtain a copy of the Wichita State University Graduate School Bulletin and the engineering graduate regulations before applying for graduate standing.

General Engineering Curriculum

Lower Division Courses

100 (100). Engineering Perspectives. (1). An introductory course for freshman students with an interest in science and engineering. Lectures, tours and demonstration of laboratories and computing equipment are held. The course is taught in small group sessions. Grade for the course is credit/no credit. Prerequisite: not open for enrollment to students with more than 32 hours or credit in Engr. 125 (125). E 10 100 1 0901

125 (125). Introduction to Engineering Concepts. (2). 4L. An introduction to the orderly approach to problem solving used in engineering by guiding the student through a comprehensive design project. Emphasis is put on problem formulation and solution techniques as they are required in the design project. Prerequisites: freshman standing with 1½ units of high school algebra. Not open for enrollment to students with more than 48 hours of credit. E 10 125 1 0901


199 (199). Introduction to Computer Science. (3). Cross-listed Admin. 199 and Math. (Computer Science) 199 (199). A survey of digital computer development, organization and application. Design of computational algorithms, flow charting and implementation of algorithms in the FORTRAN IV programming language are included. Prerequisite: Math. 111 (140) or 112 (141). E 10 199 1 0901

228 (228). Computer Organization and Programming. (3). Same as Math. (Computer Science) 297 (228). An introduction to the basic concepts of computer organization and operation, including a study of machine and assembly language programming concepts that illustrate basic principles and techniques. Prerequisite: Math. (Computer Science) 199 (199) or Engr. 199 (199). E 10 228 1 0901

Upper Division Courses

300 (300). Engineering Science in Society. (3). A course to demonstrate and explain—in depth but without technical

When two course numbers are given at the beginning of a course description, the first number refers to the current course number and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of lab.
jargon—developments in engineering science in the past century that have influenced large portions of society. Emphasis is placed upon conceptual understanding of scientific phenomena and devices. Guest lecturers and demonstrations are used extensively. Prerequisite: upper division standing. E 10 300 0 0901

361 (361). Fluid and Heat Flow. (4). 3R; 3L. A study of pressure and velocity fields; kinematics of perfect and real fluids; similarity; temperature fields and heat transfer, conduction, convection and radiation, as well as an introduction to gas dynamics. Prerequisites: Phys. 314 (244E), Math. 550 (346), and ME 398 (298). E 10 361 1 0910

363 (363). Electromagnetic Fields. (2). 2R. A vector development of electric and magnetic fields including experimental laws, polarization phenomena and Maxwell’s equations. Prerequisites: Phys. 314 (244E) and Math. 550 (346). E 10 363 0 0909

400 (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 or graduate standing recommended. Prerequisite: consent of instructor. E 10 400 0 0901

410 (410). Professional Development I. (3). A course to review engineering fundamentals in conjunction with the topics covered in the Engineer-in-Training Examination and does not satisfy credit requirements for engineering degree. Prerequisite: engineering degree or consent of instructor. Offered for credit/no credit only. E 10 410 0 0901

464 (464). Field Analysis. (3). 3R. Potential theory: applications of the equations of Poisson and Helmholtz and of the diffusions and wave equations to various field and flow phenomena. Analysis of representative problems is also made. Prerequisites: Engr. 361 (361) and 363 (363). E 10 464 0 0901

Aeronautical Engineering

Lower Division Courses

223 (223). Engineering Mechanics I. (3). 3R. Composition and resolution of vector quantities, conditions of equilibrium, friction and the statics of lumped and distributed systems, including internal force systems. Prerequisites: Math. 243 (243) and Phys. 313 (243E), which may be taken concurrently. E 11 223 0 0921

Upper Division Courses


333 (333). Mechanics of Materials. (3). 3R. Theories of stress and strain; analysis of structural elements; and selected laboratory demonstrations. Prerequisite: AE 223 (223), with C or better, and Math. 344 (244), which may be taken concurrently. E 11 333 1 0921

373 (373). Engineering Mechanics II. (3). 3R. A study of the laws of motion and the dynamics of particles and systems of particles. Prerequisites: AE 223 (223), with C or better, and Math. 344 (244), which may be taken concurrently. E 11 347 1 0915

408 (398). Systems Dynamics. (3). 3R. Mathematical modeling and analogies of electrical, mechanical, fluid and other lumped parameter systems, classical and transform methods of solution and the theory and use of analog computers are studied. Prerequisites: AE 373 (373), EE 382 (382) and Math. 550 (346), which may be taken concurrently. E 11 408 1-0901

409 (399). Experimental Mechanics Laboratory. (1). 3L. Selected experiments in mechanics of material and materials science, including experiment design, measurement and data interpretation. Prerequisites: AE 333 (333) and AE 347 (347), which may be taken concurrently. E 11 409 1 0915

424 (324). Aerodynamic Theory. (3). A study of dynamics of compressible and incompressible flow. This course deals with two- and three-dimensional airfoil theory, viscous flow and drag and an introduction to performance. Prerequisites: Math. 550 (346), Engr. 361 (361) and AE 373 (373). E 11 424 0 0902

427 (327). Numerical Methods in Engineering. (2). 2R. 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 by divided differences are included. Prerequisites: AE 327 (227) and Math. 550 (346), which may be taken concurrently. E 11 427 1 0901

512 (412). Experimental Methods in Aerodynamics Engineering. (2). 4L. A study of experimental methods and test planning, error analysis and propagation, model design, instrumentation, flow visualization. Use is made of subsonic and supersonic wind tunnels, shock-tube, etc. Prerequisite or concurrent enrollment in: AE 424 (324). E 11 512 1 0902


516 (416). Supersonic Aerodynamics. (2). 2R. A study of one-dimensional flow of a perfect gas; shock and expansion waves; applications to nozzles, wind tunnels and airfoils in two-dimensional supersonic flow. Hypersonic flow is included. Prerequisite: AE 424 (324). E 11 516 0 0902

517 (417). Projects in Aeronautical Engineering. (1-2). Design, analysis or research problems under supervision of faculty adviser. This course may be taken for one hour of credit in each of two consecutive semesters. Prerequisite: departmental consent. E 11 517 3 0902

525 (425). Flight Structures I. (4). Stress analysis and strength analysis of flight vehicle components. Prerequisites: Math. 550 (346), which may be taken concurrently and AE 333 (333). E 11 525 0 0902

526 (426). Flight Structures Laboratory. (1). 3L. Special projects in the design and analysis of flight vehicle structures. Prerequisite: AE 525 (425). E 11 526 1-0902

618 (418). Missile and Space Dynamics. (2). Fundamentals of space vehicle trajectory and performance analysis. Prerequisite: AE 373 (373). E 11 618 0 0902

625 (429). Flight Structures II. (2). A study of energy methods in structural analysis, with emphasis on the unit-load method. Prerequisites: Math. 550 (346) and AE 333 (333). E 11 625 0 0902

628 (428). Airplane Design. (2). 6L. Preliminary design procedure and systems analysis. Prerequisite: AE 514 (414). E 11 628 1 0902


633 (433). Advanced Strength of Materials. (3). An exploration of limitations and usefulness of basic concepts of resistance of materials. Advanced concepts, including theories of failure and stresses and deformation in thin plates, cylinders, nonsymmetrical and curved flexural members, noncircular bars in torsion, etc., are studied in addition to stress concentrations and energy methods. Prerequisite: AE 333 (333). E 11 633 0-0921

674 (474). Physical Metallurgy. (3). A study of properties of pure metals. The constitution and properties of alloys, mechanical and thermal treatment of metals and alloys, physical metallurgy principles and reference to specific alloy systems are included. Prerequisite: AE 347 (347). E 11 674 0 0914


700 (500). Structural Dynamics I. (3). Matrix methods for the analysis of the free and forced vibrations of multiple degree of freedom structures. Prerequisite: AE 677 (477). E 11 700 0 0921

702 (502). Jet Propulsion. (3). Analysis of jet propulsion devices; study of cycles, effect of operating variables; and presentation of problems of installation, operation and instrumentation. Prerequisite: AE 632 (432) or equivalent. E 11 702-0 0902

705 (505). System Optimization. (3). A study of analytical and numerical techniques for minimizing or maximizing functions and the functionals occurring in engineering problems. E 11 705 0 0901


709 (509). Flight Stability and Control. (3). Comprehensive analysis of flight dynamic stability and control and an introduction to the analysis of closed-loop flight systems. E 11 709 0 0902

711 (511). Aerodynamics of Nonviscous Fluids. (3). A study of equations of motion; potential flow; conformal transformations; finite wing theory; and nonsteady airfoil theory. E 11 711 0 0902

716 (516). Aerodynamics of Compressible Fluids I. (3). Analysis of compressible fluid flow for one- and two-dimensional cases; moving shock waves; one-dimensional flow with friction and heat addition; linearized potential functions; method of characteristics; conical shocks; and subsonic similarity laws. Prerequisite: AE 516 (416) or equivalent. E 11-716 0 0902

721 (521). Finite Element Analysis of Structures I. (3). Development of basic stiffness matrices from elastic considera-
tion and an analysis of statically indeterminate structures by force and displacement methods. E 11 721 0 0902

730 (530). Theory of Elasticity. (3). Elements of the common theory of elasticity, with emphasis on two-dimensional problems in strain and stress. E 11 730 0 0921

733 (533). Continuum Mechanics. (3). A unified development of the basic theories and equations of solids and fluids in invariant tensor notation and a formulation of problems of elasticity, plasticity and fluid mechanics. Prerequisite: consent of instructor. E 11 733 0 0921

735 (535). Experimental Stress Analysis. (3). Theoretical bases and techniques of the common method of experimentally determining stress and strain in structural and machine parts, with selected laboratory demonstrations. E 11 735 1 0921

737 (537). Advanced Engineering Dynamics. (3). A study of kinematics and kinetics of particles and rigid bodies for two- and three-dimensional motion, with an introduction to vibratory motion. Lagrange's equations are included. E 11 737 0 0921

760 (560). Selected Topics in Engineering Mechanics. (1-3). New or special courses are presented under this listing, on sufficient demand. This course may be repeated for credit when subject material warrants. Prerequisite: departmental consent. E 11 760 0 0921

761 (561). Selected Topics in Aerodynamics and Fluid Mechanics. (1-3). New or special courses are presented under this listing on sufficient demand. This course may be repeated for credit when subject material warrants. Prerequisite: departmental consent. E 11 761 0 0902

762 (562). Selected Topics in Propulsion. (1-3). New or special courses are presented under this listing on sufficient demand. This course may be repeated for credit when subject material warrants. Prerequisite: departmental consent. E 11 762 0 0902

763 (563). Selected Topics in Guidance and Control. (1-3). New or special courses are presented under this listing on sufficient demand. This course may be repeated for credit when subject material warrants. Prerequisite: departmental consent. E 11 763 0 0902

Graduate Courses

801 (501). Structural Dynamics II. (3). A study of vibration of strings and membranes; longitudinal, torsional and lateral vibration of bars; lateral vibration of plates and shells; classical, numerical and energy solutions; and an introduction to problems in aeroelasticity. Prerequisite: AE 677 (477). E 11 801 0 0921

807 (507). Random Processes in Engineering. (3). Included are concepts from probability theory. Statistical description of random processes, variance and power spectral analysis for stationary and non-stationary linear systems, and analog and digital computer techniques are included. E 11 807 1 0901

812 (512). Aerodynamics of Viscous Fluids. (3). Viscous fluid flow theory and boundary layers. E 11 812 0 0902

820 (520). Theory of Elastic Stability. (3). Includes buckling and bending of columns, beams, plates and shells. Prerequisite: consent of instructor. E 11 820-0 0921

822 (522). Finite Element Analysis of Structures II. (3). Analysis of structures by the direct stiffness method and comparison of methods and selected topics in finite element analysis. Prerequisite: AE 721 (521). E 11 822 0 0902

824 (524). Theory of Thermal Stresses. (3). Thermal stress analysis of elastic systems. Prerequisite: AE 730 (530). E 11 824 0 0921

832 (532). Theory of Plates. (3). Encompasses small deflections of thin elastic plates, classical solutions for rectangular and circular plates, approximate solutions for plates of various shapes and an introduction to vibration and stability of plates. Prerequisite: consent of instructor. E 11 832 0 0921
838 (538). Random Vibration. (3). Includes characterization, transmission and failure of mechanical systems subjected to random vibration. Analysis and measurement methods for random data are included. Prerequisite: consent of instructor. E 11 838 0 0921

839 (539). Energy Methods in Mechanics. (3). Included are the principles of virtual work, potential energy and potential co-energy applied to static equilibrium of rigid and deformable, discrete and distributed mass bodies. Also included is a study of energy methods extended to the dynamics of discrete mass systems. E 11 839 0 0921

841 (541). Transform Methods in Mechanics. (3). Includes the LaPlace, Hankel, Legendre, Fourier and Jacobi transform solutions of differential equations arising in engineering mechanics. Prerequisite: consent of instructor. E 11 841 0 0921

843 (543). Advanced Materials Science. (3). Includes interaction and motion of dislocations of metal properties in terms of dislocation theory. Also included are point and surface defects and radiation damage in solids; nucleation and growth in solid state reaction; and corrosion and oxidation. Prerequisite: AE 347 (347) or equivalent. E 11 843 0 0915


Electrical Engineering

Upper Division Courses

382 (382). Electrical Dynamics. (4). 3R; 3L. Electric circuit analysis with emphasis on the time varying case: sinusoidal excitation, frequency response, network theorems, coupled circuits and polyphase circuits. Prerequisites: Math. 344 (244) and Phys. 314 (244E). E 12-382 1 0909


When two course numbers are given at the beginning of a course description, the first number refers to the current course number and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of lab.

College of Engineering 155
492 (382). Electronic Circuits. (4). 3R; 3L. Includes physical electronics, electron beams; semiconductor, vacuum and gaseous devices and their equivalent circuits; and application to the field of information processing, power modulation and simulation. Prerequisites: EE 382 (382) and Math. 550 (346). E 12-492 1 0909

580 (480). Transient and Frequency Analysis. (4). 3R; 3L. Review of classical transient analysis and Fourier series. An introduction is made to Laplace and Fourier Transforms, with emphasis on network response, complex frequency concepts and signal spectra. Prerequisite or concurrent enrollment in: EE 492 (392). E 12 580 1 0909

585 (485). Electrical Design Project I. (1). 3L. A design project under faculty supervision chosen according to the student's interest. Prerequisite: departmental consent. E 12 585 3 0909

588 (488). Advanced Electromechanical Energy Convertors. (4). 3R; 3L. A continuation of EE 488 (388), including solid-state control. Computer applications are stressed. Prerequisites: EE 492 (392) and EE 488 (388). E 12 588 1 0909

594 (394). Logic Design and Switching Theory. (3). 2R; 3L.* Same as Math. (Computer Science) 594 (394). An introduction to the theory and application of switching devices with particular emphasis on computer applications. Combinatorial, sequential and threshold logic concepts and realizations; network minimization methods; hazards; codes; and computerized logic design are included. Prerequisites: Math. (Computer Science) 691 (311) and Phys. 214 (124), or equivalent, or departmental consent. E 12 594 1 0909

595 (495). Electrical Design Project II. (1). 3L. Prerequisite: EE 585 (485), or departmental consent. E 12 595 3 0909

596 (496). Electron Dynamics. (3). A study of electron ballistics in static and dynamic fields, electron optics, beam deflection devices, space charge effects and velocity modulation principles and applications. Prerequisites: Phys. 551 (311) and Engr. 363 (363). E 12 596 0 0909

597 (497). Theory of Semiconductor Devices. (3). Included are principles of operation of semiconductor devices with emphasis on underlying physical phenomena. Some treatment is given to integrated circuit geometries and associated problems. Prerequisites: Phys. 551 (311) and EE 492 (392). E 12 597 0 0909

598 (498). Electric Energy Systems. (4). 3R; 3L. Concepts of electric energy systems; system model representation; high-energy transmission lines and load-flow analysis with computer applications stressed. Prerequisite: EE 488 (388). E 12 598 1 0909

677 (477). Special Topics in Electrical Engineering. (1-4). New or special courses are presented under this listing on sufficient demand. This course may be repeated for credit. Prerequisite: departmental consent. E 12 677 0 0909

681 (481). Pulse Electronics. (4). 3R; 3L. An investigation of active and passive circuits, including integrated circuits, for the generating and processing of pulse waveforms. Topics covering other nonlinear electronic circuits are included (e.g., class C amplifiers, nonlinear feedback and adaptive selection of linear circuits). Prerequisite: EE 580 (480) or departmental consent. E 12 681-1 0909

682 (482). Energy and Information Transmission. (4). 3R; 3L. A study of transmission line parameters; power, signal and high frequency transmission lines; wave propagation in free space and bounded media; and wave guides and antennas. Prerequisites: Engr. 303 (363) and EE 686 (486) or concurrent enrollment. E 12 682 1 0909

683 (483). Network Theory. (3). Matrix algebra, generalized theory and analysis of lumped parameter networks; introduction to network synthesis and symmetrical
components. Prerequisite: EE 580 (480). E 12 683 0 0909

684 (484). Introductory Control System Concepts. (4). 3R; 3L. An introduction to system modeling and simulation, dynamic response, feedback theory, stability criteria and compensation design. Prerequisites: EE 580 (480) and AE 408 (398). E 12 684 1 0909

686 (486). Information Processing. (4). 3R; 3L. Properties of signals and noise; introduction to information theory; and AM, FM and pulse modulation and detection. Principles of sampling, coding and multiplexing and the organization of analog and digital systems for information processing are included. Prerequisite: EE 580 (480). E 12 686 1 0909

694 (494). Digital Computer Design Fundamentals. (3). 3R. An introductory but reasonably detailed study of stored program digital computers from an integrated hardware-software approach. Consideration is given to computer logical design, arithmetic units and operation, large capacity storage systems, input-output units and system integration. Prerequisites: Math. (Computer Science) or EE 594 (394), EE 492 (392) or departmental consent. E 12 694 0 0909

782 (582). Methods of Systems Analysis. (3). Methods of analysis of both linear and nonlinear systems. Time-domain techniques; singularity functions; resolution of signals from elementary functions, and solution of differential and difference equations are included. Also covered are transform techniques; LaPlace, Fourier and Z transforms; frequency spectra; complex frequency; complex integration; significance of singularities; and matrices and vector spaces as used in systems work. Prerequisite: EE 580 (480) or departmental consent. E 12 782 0 0909

783 (583). Electromagnetic Field Theory I. (3). Introduction to advanced mathematical treatment of electric and magnetic fields; boundary value problems; Maxwell's equations; and applications to waveguide and cavity resonators. Prerequisite: Engr. 363 (363) or departmental consent. E 12 783 0 0909

Graduate Level Courses

873 (573). Pulse, Digital and Switching Circuits. (3). Investigation of active and passive circuits used for the generation and processing of pulse, digital and switching waveforms. Such circuits are required in computers, control systems, counting and timing, data processing, instrumentation, communications, radar telemetry and television. Prerequisite: EE 681 (481) or departmental consent. E 12 873 0 0909

876 (576). Thesis. (1-3). May be repeated for credit toward a thesis option up to six hours. Prerequisite: prior consent of thesis adviser. E 12 876 4 0909

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

878 (578). Directed Studies in Electrical Engineering. (2-4). May be repeated toward the directed studies option up to four hours. The student must write a paper and give an oral presentation on the study made. Prerequisite: departmental consent. E 12 878 4 0909

884 (584). Electromagnetic Field Theory II. (3). Special topics in static and electrodynamic fields: special solution techniques, moving reference frames and radiation. Prerequisite: EE 783 (583). E 12 884 0 0909

887 (587). 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 782 (582). E 12 887 0 0909

888 (588). 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 783 (583). E 12 888 0 0909

889 (589). Advanced Electrical Laboratory. (2). 6L. Training in fundamental experimental technology in some field of electrical specialization. This course consists of selected experiments in various areas of electrical engineering. The general subject area is announced each semester the course is offered. The course may be repeated for credit. Prerequisite: EE 889 (589).

890 (590). Topics in Control Systems. (3). A study of various concepts such as multiloop systems, multivariable systems and decoupling; nonlinear systems; and sampled-data systems. This course may be repeated for credit. Prerequisite: EE 694 (494) or departmental consent. E 12 889 1 0909

892 (592). State-Variable Techniques in Systems I. (3). Review of mathematics fundamental to state-space concepts. Formulation of state-variable models for linear and nonlinear continuous and discrete systems, Liapunov and Lagrange stability and computational approximation techniques are included. Prerequisite: EE 782 (582) or departmental consent. E 12 892 0 0909

893 (593). 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 of systems with wide classes of performance measures. Prerequisite: EE 892 (592) or departmental consent. E 12 893 0 0909

896 (596). Passive Network Synthesis. (3). A detailed study of the direct approach to network synthesis from the functional description. Topics include realizability conditions for passive networks, synthesis of LC, RL, RC and RLC driving point impedances and synthesis of LC transfer impedances. Butterworth and Chebyshev filters and time domain synthesis are covered. Prerequisite: EE 782 (582) or consent of instructor. E 12 896 0 0909

897 (597). Special Topics in Physical Electronics. (3). 3R. Special studies selected from the general topics: electron optics, space-charge waves, plasmas and quantum electronics. Prerequisites: EE 596 (496) and 597 (497). E 12 897 0 0909

898 (598). Advanced Energy Systems. (3). 3R. Energy systems in steady-state optimum operating strategies; system steady-state control; surge phenomena; system faults; transient stability analysis. Computer applications are stressed. Prerequisite: EE 598 (498) or departmental consent. EE 12 898 0 0909

Industrial Engineering

Lower Division Courses

110 (110). Engineering Graphics I. (2). 4L. Basic spatial relationships involving lines and planes, auxiliary views of solids and problems in intersections. Prerequisite: departmental consent. E 13 110-1 0901

132 (132). Industrial Fire Safety. (3). A study of the causes and effects of industrial fires with special emphasis on:

(1) proper housekeeping procedures as a means of fire prevention, (2) criteria related to the handling and storage of flammable materials, (3) the role of firefighting training in the industrial environment, (4) the analysis of the fire hazards associated with specific manufacturing processes, (5) the organizational concepts related to the develop-

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ment of an industrial fire-fighting team and (6) the control of and reaction to catastrophes. Prerequisite: departmental consent. E 13 132 0 0913

133 (133). Construction Methods and Materials. (3). The analysis of various building materials relative to their physical properties and their reaction to fire. The course includes the study of various building configurations and their applicability to specific hazardous industrial operations. Concepts of fire-resistive enclosures, partitions, fire walls or cutoffs are discussed as they pertain to the degree of the fire hazards present. Possible sources of ignition as related to the vulnerability of the structure is also treated in some detail. Prerequisite: departmental consent. E 13 133 0 0913

203 (203). Fire Protection Systems. (3). A study of the mechanical and procedural systems of fire protection. It includes an exposure to: (1) fire hydrant operating design criteria, as well as location concepts, (2) the basic configuration and design of standpipes, (3) combustible vapor detectors, (4) automatic sprinkler systems, (5) flame arresters, (6) flame-failure controls for oil- and gas-fired equipment, (7) explosion venting and pressure relief devices and (8) automatic fire-resistant door and shutter design and operational concepts. Also included is an analysis of automated computer controlled fire detection systems as well as the automated emergency fire dispatch systems. Prerequisite: IE 132 (132). E 13 203 0 0913

213 (213). Engineering Graphics II. (2). 4L. The application of descriptive geometry, standards in graphical communications and conventions to engineering design and analysis. Prerequisite: IE 110 (110). E 13 213 1 0901

215 (115). Architectural Drawing. (3). 9L. The study of materials and construction details pertaining to the design of simple buildings, including preparation of working drawings and specifications. Prerequisite: IE 110 (110) or departmental consent. E 13 215 1 0901

250 (250). Topics in Engineering Graphics. (2). 4L. The application of engineering graphics to the study of special problems and to methods of conveying information. Prerequisite: Speech 244 (244) or departmental consent. E 13-250 1 0901

257 (257). Tool Design I. (3). 2R; 4L. Design of work-holding devices for locating and holding workpieces for metal removal by machining processes, the design of small assembly jigs and the design of pressworking tools. Prerequisite: departmental consent. E 13 257-1 0913

260 (260). Production Illustration. (2). 6L. The study of the graphical methods of presenting engineering information in the form of rendered pictorial (three-dimensional) drawings. Prerequisite: IE 110 (110) or departmental consent. E 13-260 1 0913

Upper Division Courses

352 (352). Work Measurement. (3). 2R; 3L. Work measurement, motion and time study, biomechanics, work sampling, predetermined time standards and time formula derivation. Prerequisite: departmental consent. E 13 352 1 0913

354 (254). Engineering Probability and Statistics. (3). Basic theory of probability and statistics with emphasis on applications to engineering. Prerequisite or concurrent enrollment in: Math. 344 (244). E 13 354 1 0901

355 (355). Engineering Economy. (3). Economic comparisons of engineering alternatives. Limiting factors of economic return are considered. Prerequisite: departmental consent. E 13 355 0 0913

356 (356). Introduction to Numerical Control. (2). An introduction to the concepts and techniques of the operation of machine tools from numerical data, including open and closed loop systems, point-to-point and a discussion of continuous path processing and the various means of data representation. Prerequisite: departmental consent. E 13 356 1-0913

College of Engineering 159
357 (357). Safety Engineering. (2). Design for safety. Environmental aspects of accident prevention, industrial compensation and safety legislation are included. Prerequisite: departmental consent. E 13 357 0 0913

435 (435). Project Engineering. (2). Principles and practices of critical path methodology under conditions of certainty and uncertainty. Prerequisite: IE 354 (254). E 13 435 0 0913

440. Statistical Analysis in the Health Service. (3). A course designed to acquaint the student with the concepts of statistical reasoning as applied to decision-making problems in the health field. The general principles of statistical analysis are reviewed, with emphasis on the design of health service studies and on the methods of collection, tabulation, presentation and interpretation of statistical data. Topics covered include vital statistic rates, life tables, probability distributions, sampling and sampling distribution, estimation procedures, hypothesis testing, Bayesian inference, simple linear regression and correlation. E 13 440 0 0913


510. Industrial Engineering Case Studies in Health Administration. (3). Building upon an appreciation of industrial engineering in hospital and other health institutions, this course is concerned with a variety of problems facing management in the health industry and with industrial engineering techniques useful in increasing systems productivity and improving managerial decisions. The major purpose of this course is to demonstrate approach, method and attainable results in actual health administration situations through the medium of case studies. A broad range of industrial engineering topics are covered, such as work methods, time study, work standard, standard data, staffing facility layout, material management, quality control, cost analysis and safety measures. Prerequisite: one semester of an introductory course of probability and statistics. E 13 510 0 0913

520. Survey of Operations Research in Health Administration. (3). An introduction for students in health administration to operations research as a technique for the study of problems involving decision making in the health services. Emphasis is placed on the history and philosophy of operations research, the concept nature of various approaches to decision problems, recurrent system phenomena and the appropriate models, and the application of the methodology to problems in health service systems. The general aim of the course is to familiarize the students with values of operation research as a quantitative basis for the choice of a course of action from among many possible alternatives. Areas of study include inventory control, queuing theory, competitive strategies, resource allocation, mathematics for optimization, project planning and control, decision theory and linear and nonlinear programming. Prerequisite: one semester of probability and statistics. E 13 520-0 0913

530. Systems Approach to Health Care System Management (Health Systems I). (3). Concepts introduced in HCA 410 are developed in greater depth through an exploration of general systems theory and its application to the health field. Material on systems analysis includes basic systems concept formulation of objectives and measure of effectiveness, techniques for developing and testing organizational strategies, concepts of cost/benefit and cost/effectiveness and program planning and evaluation and review techniques. Computer simulation as an adjunct to system analysis modeling and the analysis of key subsystem within a health organization are explored. Prerequisite: HCA 410. E 13 530 0 0913

540. Comprehensive Health Planning (Health Systems II). (3). Development
of the concept of the importance of long-range planning in the development of comprehensive health service. Emphasis is placed on the integrated, multidisciplinary approach to health planning. Major consideration is given to the bases of planning, including demography economics and the measurement of health needs and the sociopolitical demands and constraints in health planning. Special attention is given to data collection analysis and interpretation in determining and projecting health service needs and demands as a basis for projecting manpower and facility needs, in allocating resources to meet demand and in measuring quality and effectiveness of services. Emphasis is also given to planning methods including survey techniques, operation research, system analysis and quantitative decision procedures. A major part of the course is devoted to the actual development of a comprehensive plan including personal health service and environmental health service for an actual specified population, such as a state or metropolitan area. In addition, guest lecturers give their point of view of the hospital and/health administrators. Prerequisite: HCA 410. E 13 540 0 0913

549 (449). The Human Factor in Engineering Design. (2). The synthesis of human physiological, psychological, sociological and legal limitations and influence on design of consumer, public and experimental products. Prerequisite: departmental consent. E 13 549 0 0913

550 (450). Applied Operations Research I. (3). Linear, dynamic, geometric and parametric programming. The uses of schematic models are included. Prerequisites: IE 354 (254) and 355 (355) if applied toward major; departmental consent for others. E 13 550 1 0913

553 (453). Production Control. (3). Techniques of production planning, scheduling and dispatching, and applications to automation and computer control. Prerequisite: departmental consent. E 13 553 1 0913

554 (454). Statistical Quality Control. (3). A continuation of IE 354 (254) with special emphasis on quality and process control. Prerequisite: IE 354 (254). E 13 554 1 0913

555 (455). Numerical Control and Parts Programming I. (3). The study and application of the various parts programming languages, with particular emphasis on the APT language. Prerequisite: IE 356 (356) or departmental consent. E 13-555 1 0913

556 (456). Introduction to Information Systems. (3). An introduction to the analysis of general information systems. The design, implementation and economic analysis of computer-based information systems are emphasized. Knowledge of programming is useful but not essential. Prerequisite: departmental consent. E 13 556 0 0913

558 (458). Manufacturing Methods and Materials. (3). A general survey of the manufacturing and fabricating methods employed in industry. Special emphasis is placed on the latest manufacturing techniques. E 13 558 0 0913

560. Health Information Systems and Computers in Medicine. (3). A course designed at an introductory level to present and explore characteristics, requirements and developments of information networks for operation, administration, planning and research purposes in existing and potential health service systems. The course provides an introduction to computer science with applications to the field of medicine to reflect the great potential of adoption of computers in health information systems. Fundamentals of computer hardware, including input/output devices, central processors, peripheral equipment, data communication equipment and analog to digital converters, are presented. Computer software and programming are explained. Emphasis is given to the computer-based health information system and computer application in medicine: medical records system, computer aids to diagnosis, automated laboratory, and medical library system. E 13 560-0 0913

570. Planning and Design of Health Care Facilities. (3). A review and analysis
of the architectural and engineering process that shapes the physical spaces where medical care is delivered. Historical, governmental, legal and technological aspects are studied, with emphasis given to facility planning methods. The organizations and types of professionals involved; the physical requirements of inpatient and outpatient situations; the relationship between quality, quantity and cost; and the need for flexibility and conceptual innovations receive attention. Visiting lecturers and class projects are used to extend the study use. Prerequisite: departmental consent. E 13 570 0 0913

590 (490). Senior Projects in Industrial Engineering. (1-3). Selection and research of a specific industrial engineering topic. E 13 590 3 0913

650 (451). Applied Operations Research II. (3). A continuation of IE 550 (450). Industrial experimentation, dynamic programming, Monte Carlo analysis, use of random numbers and queuing theory are included. Prerequisite: IE 550 (450). E 13 650 1 0913

652 (452). Factory Planning. (3). Determination of methods and capacities to meet production requirements economically. Principles and techniques of plant layout are explored. Prerequisites: IE 352 (352), 355 (355) and 558 (458). E 13 652 1 0913

665 (465). Management Systems Simulation. (3). The design of simulation methods and techniques for use in managerial decision models, engineering evaluations and other systems too complex to be solved analytically. Emphasis is on the general purpose computer simulation language GPSS. Prerequisites: AE 327 (227) and IE 354 (254). E 13 665 1 0913

730 (530). Advanced Linear Programming. (3). A course covering stochastic programming, integer programming, sensitivity analysis and the application of these techniques to specific problem areas. Numerical technique or geometric programming may also be included. Prerequisites: IE 550 (450) and IE 650 (451) or departmental consent. E 13 730 0 0913

733 (533). Queuing Theory. (3). An analytical analysis of the transient and steady state behavior of queues and queuing systems. Poisson, non-Poisson and imbedded Markov chain queuing models are discussed. Prerequisite: IE 650 (451) or departmental consent. E 13 733 0 0913

734. Theory of Inventory Systems. (3). A detailed study of deterministic and probabilistic inventory systems. Course includes the development of single- and multiple-item constrained inventory models, periodic and continuals review policies and simulation techniques for systems that cannot be treated analytically. Prerequisite: IE 650 (451) or departmental consent. E 13 734 0 0913

735 (535). Forecasting and Scheduling. (3). Analysis of prediction techniques in forecasting and scheduling by time series and probability models, smoothing techniques and error analysis. Prerequisite: departmental consent. E 13 735 0 0913

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

Graduate Courses

831 (531). Classical Optimization Techniques. (3). An extensive treatment of those optimization techniques that do not require the use of linear programming. A development of variational methods, direct search and numerically based techniques is given. Prerequisite: departmental consent. E 13 831 0 0913

840 (540). 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. Prerequisite: IE 355 (355) or departmental consent. E 13 840 0 0913
842 (542). System Simulation with Digital Computers. (3). Development of the methods and techniques for simulating large-scale systems with digital computers using FORTRAN and GASP programming languages. Prerequisites: AE 327 (227) and IE 354 (254) or departmental consent. E 13 842 1 0913

843 (543). Operations Research. (3). A study of the theory and application of model building techniques for the problems found in industry. Also studied are linear and dynamic programming, queuing theory, allocation processes, inventory theory, experimental designs and the utilization of digital computers. Prerequisite: IE 550 (450) or departmental consent. E 13 843 1 0913


**Mechanical Engineering**

**Lower Division Courses**

131 (131). Basic Heating, Ventilating and Air-conditioning. (2). The design of heating, ventilating and air-conditioning systems, including load calculations, system components, design of air-distribution systems, system controls and refrigeration. This course is intended for engineers and technologists interested in this field and is not allowed for major credit. Prerequisite: departmental consent. E 14-131 0 0910

**Upper Division Courses**

301 (301). Mechanical Engineering Measurements. (3). 2R; 3L. An introduction to modern measurement techniques in mechanical engineering. Prerequisites: Math. 550 (346) and Phys. 314 (244E). E 14 301 1 0910

398 (298). Thermodynamics I. (3). A study of the first and second laws. Thermodynamic analysis is explored as it is applied to thermal, mechanical and fluid systems. Prerequisites: Math. 344 (244) and Phys. 313 (243E). E 14 398 0-0910

439 (439). Mechanical Engineering Design I. (3). Application of strength of materials, dynamics, materials science, statistics and optimization techniques to the design of machine elements. Prerequisites: AE 333 (333), AE 373 (373), Math. 550 (346) and IE 354 (254). E 14 439 0 0910

448 (448). Mechanical Engineering Projects. (1 or 2). 3L or 6L. A design analysis or research project under faculty supervision. Problems are selected according to the student's interest. Departmental consent is required for students wishing to take both required hours in a single semester. Prerequisites: ME 301 (301) and senior standing. E 14 448 3-0910

450 (450). Topics in Mechanical Engineering. (1-3). An investigation of selected phases of mechanical engineering. Prerequisite: departmental consent. E 14 450 0 0910

469 (369). Energy Conversion. (3). Energy conversion principles and their implementation in engineering devices. Consideration is given to all main areas of converting energy from one form to another. Prerequisites: ME 398 (298), Engr. 361 (361) and EE 382 (382). E 14-469 0 0901

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of lab.
502 (402). Thermodynamics II. (3). Continuation of ME 398 (298), with emphasis on availability, irreversibility, Maxwell’s equations and thermodynamic property relations. Prerequisite: ME 398 (298). E 14 502 0 0910

504 (404). 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. Prerequisites: ME 301 (301). E 14 504 0 0910

505 (405). Design of Engineering Experiments. (3). Study of theoretical, analytical and statistical aspects of basic engineering experimentation. Theories of test planning, data checking, analysis and synthesis, and evaluation are considered. Prerequisite: departmental consent. E 14 505 1 0910

541 (441). Mechanical Engineering Design II. (4). 3R; 3L. Continuation of ME 539 (439), with emphasis on kinematic analysis, design of mechanical elements and other advanced topics in mechanical design. Prerequisite: ME 439 (439). E 14 541 1 0910

621 (421). Intermediate Fluid Mechanics. (3). Study and transient flow of ideal and real fluids. Included are a study of non-Newtonian fluids and an introduction to boundary layer theory. Prerequisite: Engr. 361 (361). E 14 621 0 0910

622 (422). Intermediate Heat Transfer. (3). A rigorous treatment of heat transfer, including transient and multidimensional conduction, free and forced convection, radiation and combined heat transfer. Various analogies, numerical methods and approximate solutions are considered. Prerequisite: Engr. 361 (361). E 14 622 0 0910

643 (443). Mechanical Engineering Design III. (3). Kinematic synthesis and dynamic analysis as applied to machine design. An introduction is made to mechanical control theory. Prerequisite: ME 541 (441). E 14 643 0 0910

656 (456). Analysis in Engineering. (3). Analytical techniques applied to engineering problems. Prerequisite: Math. 550 (346). E 14 656 0 0910

659 (459). Mechanical Control I. (3). Theory and analysis of the dynamic behavior of mechanical, thermal, fluid and electromechanical control systems as based on the laws of physics and linear mathematics. Prerequisite: AE 408 (398) or departmental consent. E 14 659 0 0910

749 (549). Advanced Mechanical Engineering Design. (3). Studies of current mechanical engineering design problems that involve high speed, vibrations and dynamic loading. Prerequisites: Math. 651 (447) or departmental consent. E 14 749 0 0910

767 (567). 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

Graduate Courses

801 (501). 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. Prerequisites: ME 857 (557) and Math. 651 (447), or departmental consent. E 14 801 0 0910

830 (530). Cryogenic Engineering I. (3). A study of cryogenic problems in mechanical engineering involving production of low temperatures, properties of solids and liquids, fluid flow, heat transfer, insulation and applications at low temperatures. Prerequisites: Math. 651 (447), ME 855 (555), or departmental consent. E 14 830 0 0910

846 (546). Fatigue and Wear. (3). A study of the phenomena of fatigue and wear of engineering materials and reliability as applied to problems of engineering design. Prerequisite: departmental consent. E 14 846 0 0910
851 (551). Heat Transfer-Conduction. (2). Theory and measurement, Fourier's Equation, steady and unsteady state with and without heat sources and sinks, and numerical methods. Prerequisites: ME 622 (422), Math. 651 (447), or departmental consent. E 14 851 0 0910

852 (552). Heat Transfer-Convection. (2). Free and forced convection in laminar and turbulent flow. Analysis and synthesis of heat transfer equipment are included. Prerequisites: ME 622 (422) or departmental consent. E 14 852 0-0910

853 (553). Heat Transfer-Radiation. (2). Analysis and synthesis of radiant heat transmission systems and components; analogous and approximate method of solutions. Prerequisite: ME 622 (422) or departmental consent. E 14 853 0-0910

855 (555) & 856 (556). Advanced Thermodynamics. (3 & 3). Laws of thermodynamics, steady and unsteady flow, availability, Maxwell's relations, kinetic theory, statistical concepts of thermodynamics, introduction to ionized gas theory, Boltzmann statistics and other selected topics of interest. Neither course is prerequisite for the other. Prerequisite: ME 502 (402) or departmental consent. E 14 855 0 0910 & E 14 856 0 0910

857 (557). Advanced Fluid Dynamics. (2). Steady and transient flow of ideal, real and heterogeneous liquids and gases in simple and complex passages. Prerequisite: ME 621 (421) or departmental consent. E 14 857 0 0910

859 (559). Mechanical Control II. (3). Application of feedback methods to mechanical and combined control systems. Prerequisite: ME 659 (459) or equivalent. E 14 859 0 0910

860 (560). Electromechanical Control Systems. (3). Description, analysis and design of electromechanical control systems with an emphasis on actual devices. Prerequisite: ME 659 (459) or departmental consent. E 14 860 0 0910

861 (561). Similitude in Engineering. (2). Critical analysis of models and analogies as aids to engineering design. Prerequisite: departmental consent. E 14 861-0 0910

863 (563). Advanced Transport Phenomena. (2). Combination of heat transfer, diffusion and fluid dynamics theories in the determination of transport of mass, momentum and energy. Prerequisite: Math. 651 (447) or departmental consent. E 14 863 0 0910

868 (568). Rational Design Methods. (3). The principles of creativity, decision theory, modeling, optimization and reliability as applied to problems of engineering design. Prerequisite: departmental consent. E 14 868 0 0910

870 (570). Special Topics in Mechanical Engineering. (3). New or special courses are presented under this listing on sufficient demand. Prerequisite: departmental consent. This course may be repeated for credit when subject material warrants. E 14 870 0 0910

The College of Fine Arts is responsible for the instruction and education, scholarly study and inquiry, performance and practice in music and the visual arts. The College of Fine Arts is receptive to new and challenging concepts and experimental ideas to keep the arts in the forefront of contemporary society. Interdisciplinary cooperation within the various units of the college is encouraged. The College of Fine Arts seeks ways of expanding the overall concept of art in our society and hopes to serve as a laboratory for new artistic ideas, experiences and philosophies in all art media and in all areas of artistic thought and expression. Students are afforded the opportunity of a complete spectrum of artistic endeavors, whether they are interested in professional activities, teaching careers, graduate study or increased knowledge about the arts. The College of Fine Arts provides students with the opportunity to explore various art forms with an open mind in order to enable them to respond to changes, developments and challenges within the art world of the future. The new techniques and historical research and information necessary to achieve these ends are developed by the college. The college also helps students to be active with the arts of the present time. The college further seeks to make the arts an integral part of the lives of all students and expand the role of the arts in the many communities that it serves.

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, the student is eligible to enroll in the Division of Art or the Division of Music.

Transfer students may enroll in the College of Fine Arts if their transcript indicates 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 this minimum requirement are enrolled in University College until they meet this requirement.

Freshmen planning to major in art or music should indicate their preference on the Application for Admission form by placing a mark
opposite the words "College of Fine Arts" and by writing the word "Art" or "Music" directly below.

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 2.25 prior to enrolling in student teaching.

A student who does 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 his 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. A student must attain at least an average of 2.00 each semester while on probation. If the student fails to maintain this average each semester while on probation, he will be dismissed from the University.

A transfer student, admitted on probation, must complete at least 12 semester hours with a minimum grade point average of 2.00 on his work at Wichita State before probation may be lifted. If a grade point average of 2.00 is not achieved for the first 12 hours of Wichita State work, the transfer student admitted on probation will be dismissed from the University.

A student who has been dismissed for poor scholarship may be readmitted by the permission of the Curriculum and Policy Committee of his major division in the College of Fine Arts and by the University Committee on Admissions and Exceptions.

Degree Requirements

The College of Fine Arts offers four undergraduate degrees: Bachelor of Fine Arts, Bachelor of Art Education, Bachelor of Music and Bachelor of Music Education. Graduation requirements for each degree are listed in the descriptions of the appropriate division programs.

DIVISION OF ART

The Division of Art forms a portion of the College of Fine Arts. It is divided into four departments: studio arts—with its four areas of
drawing-painting, printmaking, ceramics and sculpture; graphic design; art history; and art education. The departments' faculty pride themselves in their professional attainment as productive researchers and creative and exhibiting artists.

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.

The Division of Art offers both the Bachelor of Fine Arts (BFA) and the Bachelor of Art Education (BAE). Students majoring in studio arts (painting, printmaking, ceramics and sculpture), graphic design and art history may obtain the BFA. Students receiving the BAE must meet state requirements for teacher certification.

Requirements

No student is allowed credit toward graduation for D grade work in excess of one-quarter 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 the degree sought.

The division will accept the transfer of only one credit hour per semester of nonresidential studio work (such as extension or correspondence courses from accredited institutions), totaling not more than six hours of the last 30 or ten hours of the total number of hours required for graduation.

General Policies

The core curriculum requirements can be satisfied by all art history courses but Art Hist. 526 (463).

The division controls all art work or essays submitted for credit by the student 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 individual student.

Graduate Art Studies

The Graduate School offers a program leading to the Master of Fine Arts or the Master of Arts in art education, art history and graphic design. For information concerning the requirements for entrance and
curriculum, see the art section in the *Wichita State University Graduate School Bulletin*.

**Art Collections of the University**

The Division of Art manages four collections of paintings, drawings and prints. To date, the art division collection includes works by Albers, Friedlander, Gottlieb, Levine, Piza, Roualt, Trova, as well as those by graduate and undergraduate students. The University Collection of American Prints and Drawings, to which acquisitions are added every year, contains a wide range of works of the nineteenth and twentieth centuries, including those of Calder, Cassatt, Lichtenstein, Motherwell, Reinhart, Sloan, Whistler and many others. In addition, the Vermillion Collection includes works by Krushenick, Rayo, Summers, Tobey and Vasarely. The Bloomfield Collection contains an important group of paintings from such masters as Beechy, Cole and Lely and examples from the schools of Hubert Robert and Jacob Van Ruisdail.

**Art Major or Minor for Students in the College of Liberal Arts and Sciences**

*Studio Arts*. A liberal arts student wishing to major in studio arts must complete 39 hours of art. These hours must be distributed as follows: Art Hist. 121 (101), 122 (102), nine hours elected from art history courses and 24 hours elected from studio courses.

A liberal arts student wishing to minor in studio arts must complete 21 hours of art, including Art Hist. 121 (101), 122 (102) and 15 hours of electives.

*Art History*. A liberal arts student wishing to major in art history must complete 30 hours of art history, including Art Hist. 121 (101), 122 (102) and 526 (463). A minimum of 13 hours in one language (German, French or Italian) is also required.

A liberal arts student wishing to minor in art history must complete 15 hours of art history, including Art Hist. 121 (101), 122 (102) and nine hours elected from other art history offerings.

**Art Minor for Students in the College of Education**

Students in education who wish to minor in art need to complete 18 hours of art. These hours must be distributed as follows: SA (Drawing and Painting) 145 (165); Art Ed. 210 (240); Art Hist. 313 (343); one elected studio course; and six hours of art history, including Art Hist. 121 (101) and 122 (102).
Graduation Requirements

BACHELOR OF FINE ARTS DEGREE

In addition to the scholastic and residence requirements for graduation from this University, candidates for the BFA in painting, printmaking, ceramics, sculpture or graphic design must complete a total of 126 semester hours, with 45 hours from the core curriculum (given below) and 81 from the art curriculum. The student majoring in art history must complete a total of 124 semester hours, with 45 hours from the core curriculum and 79 from art history and elective curriculum hours. Specific programs for each of these areas are described on the following pages. A student must consult with his adviser before selecting electives.

CORE CURRICULUM

<table>
<thead>
<tr>
<th>I. Natural Sciences</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td>Elect one course from each area. A minimum of 4 hours must be a laboratory science</td>
<td></td>
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<tr>
<td>Physical</td>
<td></td>
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<tr>
<td>Geol. 111 (111), 5 hours with lab</td>
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<tr>
<td>Geol. 101, 5 hours without lab</td>
<td></td>
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<tr>
<td>Biological</td>
<td></td>
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<tr>
<td>Biol. 100 (100), 4 hours with lab</td>
<td></td>
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<tr>
<td>Biol. 102 (102), 5 hours without lab</td>
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<tr>
<td>II. Communications</td>
<td>9</td>
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<tr>
<td>Eng. 101 (111), 3 hours</td>
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<tr>
<td>Eng. 102 (211), 3 hours</td>
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<tr>
<td>Speech 111 (111), 3 hours</td>
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<tr>
<td>III. Humanities</td>
<td>15</td>
</tr>
<tr>
<td>Required</td>
<td></td>
</tr>
<tr>
<td>Art Hist. 121 (101), 3 hours</td>
<td></td>
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<tr>
<td>Art Hist. 122 (102), 3 hours</td>
<td></td>
</tr>
<tr>
<td>Elect one course in each of the following areas</td>
<td></td>
</tr>
<tr>
<td>History, 3 or 4 hours</td>
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<tr>
<td>Literature, 3 hours</td>
<td></td>
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<tr>
<td>Philosophy or Religion, 3 hours</td>
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<tr>
<td>IV. Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Elect one course in three of the following areas</td>
<td></td>
</tr>
<tr>
<td>Anthropology, all courses, 3 hours</td>
<td></td>
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<tr>
<td>Economics, 3 hours</td>
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<tr>
<td>Political Science, 3 hours</td>
<td></td>
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<tr>
<td>Psych. 111 (111), 3 hours</td>
<td></td>
</tr>
<tr>
<td>Sociology, 3 hours</td>
<td></td>
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<tr>
<td>V. Electives</td>
<td>4</td>
</tr>
<tr>
<td>Credit courses offered by any department except the student's major department.</td>
<td></td>
</tr>
</tbody>
</table>

Art Education

The art education department offers a professional program for students
interested in art teaching through its structured program that prepares majors to teach and supervise at various educational levels. All majors are encouraged to specialize in either studio or art history offerings.

**BACHELOR OF ART EDUCATION DEGREE**

In addition to the University scholastic and residence requirements for graduation, candidates for this degree must complete a minimum of 131 semester hours, with 51 hours in the core curriculum (described below), 39 in the studio arts curriculum, six in art history, 16 in art education and 19 in education. Electives must be selected in consultation with an adviser.

The art education program fulfills both the University general requirements for graduation and the Kansas certification requirements for teaching art at the secondary and elementary levels.

**CORE CURRICULUM**

<table>
<thead>
<tr>
<th>I. Natural Sciences</th>
<th>Required Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elect in at least two areas (a minimum of 4 hours must be in laboratory science)</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
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<tr>
<td>Geol. 111 (111), 5 hours with lab</td>
<td></td>
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<tr>
<td>Geol. 101 (101), 5 hours without lab</td>
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<tr>
<td>Biological</td>
<td></td>
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<tr>
<td>Biol. 100 (100), 4 hours with lab</td>
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<tr>
<td>Biol. 102 (102), 5 hours without lab</td>
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<tr>
<td>Engineering</td>
<td></td>
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<tr>
<td>Engr. 300 (300), 3 hours</td>
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<tr>
<td>II. Communications</td>
<td>9</td>
</tr>
<tr>
<td>Eng. 101 (111), 3 hours</td>
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<tr>
<td>Eng. 102 (211), 3 hours</td>
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<tr>
<td>Speech 111 (111), 3 hours</td>
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<td>III. Humanities</td>
<td>15</td>
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<tr>
<td>Required</td>
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<tr>
<td>Art History, 6 hours</td>
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<tr>
<td>Literature, 6 hours</td>
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<tr>
<td>Elect one course from the following areas:</td>
<td></td>
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<tr>
<td>History, 3 or 4 hours</td>
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<tr>
<td>Philosophy or Religion, 3 hours</td>
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</tr>
<tr>
<td>IV. Social Sciences</td>
<td>12</td>
</tr>
<tr>
<td>Required</td>
<td></td>
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<tr>
<td>Psych. 111 (111), 3 hours</td>
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<tr>
<td>Elect in two of the following areas:</td>
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<tr>
<td>Anthropology, 3 hours</td>
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<td>Economics, 3 hours</td>
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<tr>
<td>Political Science, 3 hours</td>
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<td>Sociology, 3 hours</td>
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<tr>
<td>V. Electives</td>
<td>4</td>
</tr>
<tr>
<td>Credit courses offered by any department except the student's major department.</td>
<td></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 2.25 and 2.50 in art courses at the time of application for student teaching; a grade of C or better in Eng. 101 (111) or its equivalent; a grade of C or better in Speech 111 (111); completion of Fd. Ed. 232 (232), Ed. Psych. 333 (333), Art Ed. 211 (241), 313 (343) and 414 (442); satisfactory physical examination; and recommendation by the Department of Art Education. Applications for student teaching must be on file with and approved by the chairman of art education by mid-term of the spring semester prior to the academic year in which student teaching is anticipated.

OUTLINE OF PROGRAM

A total of 131 hours is required, as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>61</td>
</tr>
<tr>
<td>Studio Arts</td>
<td>39</td>
</tr>
<tr>
<td>Art Education</td>
<td>16</td>
</tr>
<tr>
<td>Art History (above 100 level)</td>
<td>6</td>
</tr>
<tr>
<td>Education</td>
<td>19</td>
</tr>
<tr>
<td>Core Curriculum</td>
<td>51</td>
</tr>
</tbody>
</table>

MODEL PROGRAM

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Drawing) 145 (165),</td>
<td></td>
<td></td>
<td>SA (Sculpture) 180 (185),</td>
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<tr>
<td>Drawing I</td>
<td></td>
<td>3</td>
<td>Sculpture I</td>
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<td>8</td>
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<tr>
<td>SA (Ceramics) 170 (181),</td>
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<td>Art Elective (2-D area)</td>
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<tr>
<td>Ceramics I</td>
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<td>Art Hist. 122 (102), History of</td>
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<td>Art Hist. 121 (101), History of</td>
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<td>World Art II *</td>
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<td>Eng. 102 (211), College</td>
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<td>English II *</td>
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<td>Humanities *</td>
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<td>Social Science *</td>
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SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Drawing) 240 (267),</td>
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<td>SA (Drawing) 241 (268),</td>
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<tr>
<td>Life Drawing I</td>
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<td>Life Drawing II</td>
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<tr>
<td>SA (Painting) 250 (271),</td>
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<td>SA (Painting) 251 (272),</td>
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<tr>
<td>Painting I</td>
<td></td>
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<tr>
<td>Fd. Ed. 232 (232), Introductory</td>
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<td>Art Elective (3-D area)</td>
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<tr>
<td>Study of Teaching</td>
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<td>Art Specialization Elective</td>
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<tr>
<td>Natural Science (Biological) *</td>
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<td>Art Ed. 211 (241) or 311 (341),</td>
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<td>Humanities *</td>
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<td>3</td>
<td>Art Education in the Elementary School or Art Education Curriculum in the Elementary School</td>
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### Junior Year

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hrs.</th>
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<th>Second Semester</th>
<th>Hrs.</th>
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<tr>
<td>Art Specialization Elective</td>
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<td></td>
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<tr>
<td>Art History Elective</td>
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<td>Art Ed. 414 (442), Art Education in the Secondary School</td>
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<td>Art Ed. 415 (445), Development of Visual Material</td>
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<td>Ed. Psych. 333 (333), Secondary School Student</td>
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<td>Social Science *</td>
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<td>Natural Science (Physical) *</td>
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<td>Humanities *</td>
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### Senior Year

<table>
<thead>
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<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Specialization Elective</td>
<td></td>
<td>3</td>
<td>Art Ed. 416 (406), Art Curriculum and Supervision Methods</td>
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<tr>
<td>Art History Elective</td>
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<td>Fd. Ed. 408 (428), Social Aspects of Education</td>
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<tr>
<td>Art Ed. 313 (343), Art Education Methods and Laboratory</td>
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<td></td>
<td>Ed. Psych. 433 (433), Psychological Aspects of the Teaching Process</td>
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</tr>
<tr>
<td>Natural Science *</td>
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<td>3</td>
<td>Sec. Ed. 447 (447), Student Teaching</td>
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<td>Social Science *</td>
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<tr>
<td>Humanities *</td>
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<tr>
<td></td>
<td></td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Satisfies core curriculum.

### 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>79</td>
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<tr>
<td>Art History</td>
<td>30</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>Elective</td>
<td>36</td>
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<tr>
<td>Core Curriculum</td>
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### Model Program

#### Freshman

<table>
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<tr>
<th>Course</th>
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<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Hist. 121 (101), History of World Art I</td>
<td>3</td>
<td></td>
<td>Art Hist. 122 (102), History of World Art II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 (111), College English I *</td>
<td>3</td>
<td></td>
<td>Eng. 102 (211), College English II *</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities *</td>
<td>3</td>
<td></td>
<td>Humanities *</td>
<td>3</td>
<td></td>
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<tr>
<td>Social Science *</td>
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<td>Elective</td>
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<td></td>
<td>Elective</td>
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<tr>
<td></td>
<td>15</td>
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</tbody>
</table>
## Graphic Design—Commercial Art

The graphic design department offers a professional program for students interested in a career in the field of visual communication. The courses emphasize conceptual and practical problem-solving in various media—photography, typography, design and drawing—to develop design skills for communication purposes.

**Requirements.** A total of 126 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>81</td>
</tr>
<tr>
<td>Philosophy of Art</td>
<td>3</td>
</tr>
<tr>
<td>Graphic Design</td>
<td>36</td>
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<tr>
<td>Drawing</td>
<td>13</td>
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<tr>
<td>Basic Design</td>
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<tr>
<td>Color</td>
<td>3</td>
</tr>
<tr>
<td>Painting</td>
<td>3</td>
</tr>
<tr>
<td>Art Electives (graphic-design related ones)</td>
<td>20</td>
</tr>
</tbody>
</table>

* Satisfies core requirement.
## FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Drawing) 145 (165), Drawing I</td>
<td>3</td>
<td>GD 138 (198), Color</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>GD 135 (171), Design I</td>
<td>3</td>
<td>Art Hist. 122 (102), History of World Art II *</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>Art Hist. 121 (101), History of World Art I *</td>
<td>3</td>
<td>Eng. 102 (211), College English II *</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eng. 101 (111), College English I *</td>
<td>3</td>
<td>Humanities *</td>
<td>3</td>
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<tr>
<td>Humanities *</td>
<td>3</td>
<td>Social Science *</td>
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**Total:** 15

## SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 233 (295), Basic Typography, SA (Drawing) 240 (267), Life Drawing I</td>
<td>3</td>
<td>GD 234 (297), Layout and Production Techniques, SA (Drawing) 241 (268), Life Drawing II</td>
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<tr>
<td>GD 230 (238), Design Media I</td>
<td>3</td>
<td>GD 231 (239), Design Media II</td>
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<tr>
<td>GD 236 (299), Drawing for Commercial Art</td>
<td>3</td>
<td>SA (Painting) 251 (272), Painting II</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Humanities *</td>
<td>2</td>
<td>Physical Science *</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science *</td>
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</table>

**Total:** 17

## JUNIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>GD 335 (393), Graphic Design I—Theory</td>
<td>3</td>
<td>GD 334 (394), Graphic Design II—Production</td>
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<tr>
<td>GD 332 (387), Fashion Illustration I</td>
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<td>GD 333 (388), Fashion Illustration II</td>
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<tr>
<td>GD 336 (399), Advanced Drawing for Commercial Art</td>
<td>3</td>
<td>GD 337 (397), Advertising Illustration</td>
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<tr>
<td>Speech 111 (111), Basic Public Speaking *</td>
<td>3</td>
<td>Art Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science *</td>
<td>3</td>
<td>Biological Science *</td>
<td>4</td>
<td></td>
<td></td>
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<tr>
<td>Humanities *</td>
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<td>Humanities *</td>
<td>2</td>
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</tbody>
</table>

**Total:** 18

## SENIOR

*(select one area, graphic design or fashion illustration)*

### Graphic Design

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 430 (493), Graphic Design III—Media</td>
<td>3</td>
<td>GD 435 (494), Graphic Design IV—Design Programs</td>
<td>3</td>
<td></td>
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<tr>
<td>GD 437 (497) or 433 (487), Advanced Illustration Advertising or Advanced Fashion Illustration</td>
<td>3</td>
<td>GD 530 (462), Seminar: Philosophy of Art</td>
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<tr>
<td>Art Elective</td>
<td>3</td>
<td>Art Elective</td>
<td>3</td>
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<tr>
<td>Art Elective</td>
<td>3</td>
<td>Art Elective</td>
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**Total:** 16
Senior continued

Fashion Illustration

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<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>GD 433 (487), Advanced</td>
<td>Fashion Illustration</td>
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<td>GD 433 (487), Advanced</td>
<td>Fashion Illustration</td>
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</tr>
<tr>
<td>GD 430 (493), Graphic Design III—</td>
<td>Media</td>
<td>3</td>
<td>GD 530 (462), Seminar:</td>
<td>Philosophy of Art</td>
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<tr>
<td>Art Elective</td>
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<td>3</td>
<td>Art Elective</td>
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<tr>
<td>Art Elective</td>
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<td>Art Elective</td>
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<td>Art Elective</td>
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<td>3</td>
<td>Art Elective</td>
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</tr>
</tbody>
</table>

15

* Satisfies core curriculum requirements.

Studio Arts

CERAMICS

Through his course work the ceramics major is exposed to his materials: building, throwing, clays and glazes. Students investigate problems of glaze formulation, firing the kiln and characteristics of clays and production.

Requirements. A total of 126 hours is required for the major, as distributed below.

Area                  Hrs.
Art Curriculum         81
  Art History          3
  Ceramics             24
  Sculpture            6
  Drawing              12
  Painting             3
  Printmaking          3
  Art Elective         30
Core Curriculum        45

MODEL PROGRAM

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>SA (Drawing) 145 (165),</td>
<td>Drawing I</td>
<td>3</td>
<td>SA (Printmaking) 160 (175)</td>
<td>Printmaking II</td>
<td>3</td>
</tr>
<tr>
<td>SA (Ceramics) 170 (181),</td>
<td>Ceramics I</td>
<td>3</td>
<td>SA (Sculpture) 180 (185)</td>
<td>Sculpture I</td>
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</tr>
<tr>
<td>Art Hist. 121 (101), History of</td>
<td>World Art I *</td>
<td>3</td>
<td>Art Hist. 122 (102), History of</td>
<td>World Art II *</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101 (111), College English I *</td>
<td>Humanities *</td>
<td>3</td>
<td>Eng. 102 (211), College English II *</td>
<td>Social Science *</td>
<td>3</td>
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</tbody>
</table>

15

College of Fine Arts 177
### SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Ceramics) 270 (281), Ceramic II</td>
<td></td>
<td>3</td>
<td>SA (Ceramics) 271 (282), Ceramic III</td>
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</tr>
<tr>
<td>SA (Drawing) 240 (267), Life Drawing I</td>
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<td>SA (Drawing) 241 (268), Life Drawing II</td>
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<td>3</td>
</tr>
<tr>
<td>SA (Painting) 250 (271) or 251 (272), Painting I or Painting II</td>
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<td>3</td>
<td>SA (Sculpture) 280 (285), Sculpture II</td>
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<tr>
<td>Speech 111 (111), Basic Public Speaking</td>
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<td>Social Science *</td>
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</tr>
<tr>
<td>Humanities *</td>
<td></td>
<td>3</td>
<td>Physical Science *</td>
<td></td>
<td>5</td>
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<tr>
<td>Social Science *</td>
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18

### JUNIOR

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<tr>
<th>Course</th>
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<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Ceramics) 370 (381), Ceramic Studio</td>
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<td>SA (Ceramics) 370 (381), Ceramic Studio</td>
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<tr>
<td>SA (Ceramics) 275 (284) or 575 (484), Study of Ceramic Materials I or Study of Ceramic Materials II</td>
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<td>3</td>
<td>Art History Elective</td>
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<tr>
<td>SA (Drawing) 340 (367), Life Drawing Studio</td>
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<td>Art Elective</td>
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<tr>
<td>Art Elective</td>
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<td>3</td>
<td>Humanities *</td>
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<td>Biological Science *</td>
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<td>Humanities *</td>
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18

### SENIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Ceramics) 570 (481), Advanced Ceramics Studio</td>
<td></td>
<td>3</td>
<td>SA (Ceramics) 570 (481), Advanced Ceramics Studio</td>
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<tr>
<td>Art Elective</td>
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<td>Art Elective</td>
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<tr>
<td>Art Elective</td>
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<td>3</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

15

* Satisfies core curriculum requirements.

### DRAWING AND PAINTING

The drawing and painting program is designed to give the student a thorough preparation in drawing and painting and then allow him to progress through a structured regimen, which leads to the development of a personal style. Museums, galleries and traveling shows form the basis of environmental exposure.
Requirements. A total of 126 hours is required for the major, as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>81</td>
</tr>
<tr>
<td>Art History</td>
<td>9</td>
</tr>
<tr>
<td>Painting</td>
<td>21</td>
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<tr>
<td>Drawing</td>
<td>21</td>
</tr>
<tr>
<td>Printmaking</td>
<td>6</td>
</tr>
<tr>
<td>Art Elective</td>
<td>24</td>
</tr>
<tr>
<td>Core Curriculum hours</td>
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</tr>
</tbody>
</table>

**MODEL PROGRAM**

**FRESHMAN**

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Drawing) 145 (165), Drawing I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Art Hist. 121 (101), History of World Art I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 (111), College English I*</td>
<td>3</td>
<td></td>
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<tr>
<td>Humanities*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science*</td>
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Total Hrs.: 15

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Second Semester</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Printmaking) 160 (175), Printmaking I</td>
<td>3</td>
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</tr>
<tr>
<td>Art Hist. 122 (102), History of World Art II*</td>
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</tr>
<tr>
<td>Eng. 102 (211), College English II</td>
<td>3</td>
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<tr>
<td>Humanities*</td>
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Total Hrs.: 15

**SOPHOMORE**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hrs.</th>
</tr>
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<tbody>
<tr>
<td>SA (Painting) 250 (271), Painting I</td>
<td>3</td>
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<tr>
<td>SA (Drawing) 240 (267), Life Drawing I</td>
<td>3</td>
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</tr>
<tr>
<td>SA (Printmaking) 262 (275), Printmaking II</td>
<td>3</td>
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<tr>
<td>Humanities*</td>
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<tr>
<td>Speech 111 (111), Basic Public Speaking*</td>
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Total Hrs.: 17

**SECOND SEMESTER**

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<tr>
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<tbody>
<tr>
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<tr>
<td>SA (Drawing) 241 (268), Life Drawing II</td>
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<tr>
<td>Art Elective</td>
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Total Hrs.: 17

**JUNIOR**

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<th>Hrs.</th>
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<tbody>
<tr>
<td>SA (Painting) 350 (371), Painting Studio</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SA (Drawing) 340 (367), Life Drawing Studio</td>
<td>3</td>
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<tr>
<td>Art Elective</td>
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Total Hrs.: 16

**SECOND SEMESTER**

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<tr>
<td>SA (Painting) 350 (371), Painting Studio</td>
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</tr>
<tr>
<td>SA (Drawing) 340 (367), Life Drawing Studio</td>
<td>3</td>
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<tr>
<td>Art Elective</td>
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<tr>
<td>Art Elective</td>
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<td>Art History Elective</td>
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Total Hrs.: 17

College of Fine Arts 179
SENIOR

<table>
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<th>Course</th>
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<th>Course</th>
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<th>Hrs.</th>
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<tbody>
<tr>
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<td>SA (Painting) 550 (471), Advanced Painting Studio</td>
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<td>SA (Drawing) 545 (467), Advanced Drawing Studio</td>
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<td>SA (Drawing) 545 (467), Advanced Drawing Studio</td>
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<td>15</td>
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</tbody>
</table>

* Satisfies core curriculum requirements.

PRINTMAKING

The printmaking program is planned to give the student a broad base of experience in printmaking. Two primary disciplines are the 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 126 hours is required for the major, as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>81</td>
</tr>
<tr>
<td>Art History</td>
<td>9</td>
</tr>
<tr>
<td>Printmaking</td>
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<tr>
<td>Drawing</td>
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<tr>
<td>Painting</td>
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<td>Art Electives</td>
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<td>Core Curriculum</td>
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MODEL PROGRAM

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Drawing) 145 (165), Drawing I</td>
<td>3</td>
<td>SA (Printmaking) 262 (175), Printmaking II</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA (Printmaking) 160 (175), Printmaking I</td>
<td>3</td>
<td>Art Hist. 122 (102), History of World Art I *</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art Hist. 121, History of World Art I *</td>
<td>3</td>
<td>Eng. 102 (211), College English II *</td>
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</tr>
<tr>
<td>Eng. 101 (111), College English I *</td>
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<td>Humanities *</td>
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</tr>
<tr>
<td>Humanities *</td>
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<td>Social Science *</td>
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180
SOPHOMORE

<table>
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<th>Course</th>
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<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Printmaking) 262 (275), Printmaking</td>
<td>3</td>
<td>SA (Drawing) 241 (268), Life Drawing II</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA (Drawing) 240 (267), Life Drawing I</td>
<td>3</td>
<td>SA (Painting) 251 (272), Painting II</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA (Painting) 250 (271), Painting I</td>
<td>3</td>
<td>SA (Printmaking) 364 (375), Printmaking III</td>
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<tr>
<td>Humanities *</td>
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<td>Humanities *</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science *</td>
<td>3</td>
<td>Physical Science *</td>
<td>5</td>
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<td></td>
</tr>
<tr>
<td>Speech 111 (111), Basic Public Speaking*</td>
<td>3</td>
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18 16

JUNIOR

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>SA (Printmaking) 364 (375), Printmaking III</td>
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<td>Printmaking Elective</td>
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</tr>
<tr>
<td>SA (Drawing) 340 (367), Life Drawing Studio</td>
<td>3</td>
<td>Art History Elective</td>
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<td></td>
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<td>Art History Elective</td>
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<td>Art Elective</td>
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<td></td>
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<tr>
<td>Biological Science *</td>
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<td>Art Elective</td>
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<td></td>
<td>16</td>
<td>Social Science *</td>
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</table>

16 17

SENIOR

<table>
<thead>
<tr>
<th>Course</th>
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<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>SA (Printmaking) 560 (475), Advanced Printmaking Studio</td>
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<td>SA (Printmaking) 560 (475), Advanced Printmaking Studio</td>
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<tr>
<td>SA (Drawing) 545 (467), Advanced Drawing Studio</td>
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<td>Art Elective</td>
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<td>Art History Elective</td>
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<td>Art Elective</td>
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<td>Art Elective</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

15 15

* Satisfies core curriculum requirements.

SCULPTURE

The program is designed to provide students with a solid grounding in basic techniques and materials and to expose 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 126 hours is required, as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>81</td>
</tr>
<tr>
<td>Art History</td>
<td>9</td>
</tr>
<tr>
<td>Sculpture</td>
<td>21</td>
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<tr>
<td>Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>Drawing</td>
<td>15</td>
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<td>Painting</td>
<td>3</td>
</tr>
<tr>
<td>Printmaking</td>
<td>3</td>
</tr>
<tr>
<td>Art Elective</td>
<td>24</td>
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<td>Core Curriculum</td>
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College of Fine Arts 181
## MODEL PROGRAM
### FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>SA (Drawing)</td>
<td>145 (165)</td>
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<td>Art Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Drawing I</td>
<td></td>
<td></td>
<td>SA (Printmaking) 160 (175) or 262 (275), Printmaking I or Printmaking II</td>
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<td>3</td>
</tr>
<tr>
<td>SA (Scul)</td>
<td>180 (185)</td>
<td>3</td>
<td>Art Hist. 121 (101), History of World Art I *</td>
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<td>Sculpture I</td>
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<td></td>
<td>Eng. 101 (111), College English I *</td>
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<td>Biological Science *</td>
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### SOPHOMORE

<table>
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<tr>
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<td>SA (Drawing)</td>
<td>241 (268)</td>
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<td>Life Drawing I</td>
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<td>SA (Drawing)</td>
<td>240 (267)</td>
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<td>SA (Painting) 250 (271) or 251 (272), Painting I or Painting II</td>
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<tr>
<td>Life Drawing I</td>
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<td></td>
<td>Art Elective</td>
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<tr>
<td>SA (Ceramics, 170 (181) or 270 (281), Ceramics I or Ceramics II</td>
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<tr>
<td>Physical Science *</td>
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<td>Social Science *</td>
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<td>Speech 111 (111), Basic Public Speaking *</td>
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### JUNIOR

<table>
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<tr>
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<th>Course</th>
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<tbody>
<tr>
<td>SA (Scul)</td>
<td>380 (385)</td>
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<td>SA (Sculpture) 280 (385), Sculpture Studio</td>
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<td>SA (Sculpture) 381 (386), Sculpture Studio</td>
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<td>SA (Drawing)</td>
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<td>Art History Elective</td>
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</tr>
<tr>
<td>Life Drawing I</td>
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<td></td>
<td>Art Elective</td>
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<tr>
<td>Art Elective</td>
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<td>Humanities *</td>
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<td>Speech 111 (111), Basic Public Speaking *</td>
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### SENIOR

<table>
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<td>SA (Drawing)</td>
<td>545 (467)</td>
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<td>Art Elective</td>
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<td>Advanced Drawing Studio</td>
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<td>Art Elective</td>
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<tr>
<td>Art History Elective</td>
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<td></td>
<td>Art Elective</td>
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</tr>
</tbody>
</table>

* Satisfies core curriculum requirements.
Art Education

Lower Division Courses

210 (240). Art Fundamentals for the Classroom Teacher. (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 (241). Art Education in the Elementary School. (3). A study of philosophy, psychology and sensory growth of the elementary-age student, with emphasis on the development of the art program for this level. Prerequisite: art education major, or Art Ed. 210 (240), or consent of instructor. F 14 211 0 0831

Upper Division Courses

311 (341). Art Education Curriculum in the Elementary School. (3). A study of developmental characteristics of the elementary-age student and the development of the art program with respect to materials, skills and knowledge content. Prerequisite: art education major. F 14 311 0 0831

313 (343). Art Education Methods and Laboratory. (3). Laboratory problems in designing and executing work in various media not normally covered in other studio course offerings. The course includes methods of presenting media laboratory experiences for the intermediate and secondary classroom. Prerequisite: Art Ed. 211 (241) or consent of instructor. F 14 313 1 0831

414 (442). Art Education in the Secondary School. (3). A study of the philosophy, objectives and classroom procedures related to the teaching of art at the secondary level. Prerequisite: art education major. F 14 414 0 0831

415 (445). Developing Visual Materials for Art Education. (3). A production laboratory that concentrates on the use of technological/multimedia (films, slides, tapes, projector, etc.) for art education students. Students engage in constructing units of visual learning. F 14 415 1 0831

516 (406). Art Curricular and Supervision Method. (4). The construction of curriculum for elementary, junior high and senior high levels. Techniques of supervision and administration of an art program are included. F 14 516 0 0331

711 (501f). Seminar in Art Education. (3). Supervised study and research in the following art area: art education. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 14 711 9 0831

712 (519). Development of Art Understanding in the Educational Program. (3). Readings, observation and evaluative techniques in the development of concepts and materials for art understanding. May be repeated once for credit. Prerequisite: consent of instructor. F 14 712 0 0831

713 (523). Fiber and Fabric Processes. (3). Fiber processing and structuring in traditional and experimental processes in woven forms and other structural techniques using natural and man-made fibers. Prerequisite: consent of instructor. F 14 713 0 0831

715 (517). 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. May be repeated once for credit. Prerequisite: consent of instructor. F 14 715 0 0831

750 (450). Art Workshop. (1-3). May be repeated for credit. (The area to be covered will be determined at the time the course is offered.) F 14 750-2 0831

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
Graduate Courses

815 (518). Individual Research Problems in Art Education. (1-4). Directed independent study in art education not normally covered in other graduate course work. May be repeated for credit. Pre-

816 (575)-817 (576). Thesis. (2-2). F 14 816 4 0831; F 14 817 4 0831

818 (577)-819 (578). Terminal Project. (3-3). F 14 818 3 0831; F 14 819 3 0831

Art History

Lower Division Courses

121 (101). History of World Art I. (3). A survey of world art from prehistoric origins to the fourteenth century. F 15-121 0 1003

122 (102). History of World Art II. (3). A survey of world art from the fourteenth century to the mid-nineteenth century. F 15 122 0 1003

123 (161). Introduction to the Visual Arts. (3). An introduction to the understanding of images and materials in the visual arts in relation to the geographical, historical, religious, social and economic conditions of the Western world. The course is designed for the nonart major. F 15 123 0 1003

221 (211). Greek Art. (3). An introductory study of Greek art from the Archaic to Hellenistic periods. The course covers architecture, sculpture and vase painting, with emphasis on the art of Pericles’ Athens. F 15 221 0 1003

222 (212). Roman Art. (3). An introduction to the art of Rome from the age of Augustus to the age of Constantine. F 15 222 0 1003

223 (421). Northern Renaissance. (3). A study of French, Flemish and German painting from Parisian illumination in the fourteenth century to Dürer. F 15-223 0 1003

224 (422). Northern Baroque. (3). A study of the art of Flanders and Holland during the seventeenth 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 15 224 0 1003

Upper Division Courses


322 (307). Medieval Art I. (3). A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. An emphasis is put on style and iconography as it develops in mosaics and illustrated manuscripts. F 15 322 0 1003

323 (308). 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 (313). 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 15-324 0 1003

426 (463). 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.

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Prerequisite: consent of instructor. F 15-426 5 1003

520 (501g). Seminar in Art. (3). Supervised study and research in the following art area: art history. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 15 520 9 1003

521 (221). Italian Renaissance. (3). A study of the architecture, sculpture and painting from the thirteenth century to the sixteenth century. Emphasis is given to early developments in Florence and Siena and late developments in Rome. F 15 521 0 1003

522 (222). Italian Baroque. (3). A study of Baroque painting, sculpture and architecture in Rome, Venice and Bologna from 1600 to 1750, with emphasis on the Carracci, Bernini and Tiepolo. F 15-522 0 1003

523 (302). Eighteenth and Nineteenth Century European Art. (3). A history of European art from Watteau through post-Impressionism. F 15 523 0 1003


525 (401). Twentieth Century Art Before 1945. (3). A history of American and European art in the first half of the twentieth century. F 15 525 0 1003

527 (531). Seminar: Art of the Eighteenth and Nineteenth Centuries. (3). Selected readings and problems in eighteenth and nineteenth century art, emphasizing aesthetic theory and the history of ideas. Prerequisite: consent of instructor. F 15 527 9 1003

528 (565). 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

529 (431). Modern Architecture. (3). A course designed to offer an overall view of the development of modern architecture from its inception in the early twentieth century until today. Theoretical connections between architecture and the arts of painting and sculpture as they developed in the United States and Europe are stressed. F 15 529 0 1003

626 (464). Bibliography and Information Retrieval in Art History. (3). A course to prepare art history majors for research on the graduate school level. The student is introduced to the various research resources, such as bibliographies, indexes, collections, concordances and compilations. Practical assignments for informational retrieval provide the experience necessary for mastering research techniques. Prerequisite: nine hours in art history. F 15 626 0 1003

721 (532). Seminar: Art Since 1945. (3). Selected reading and problems in contemporary art. Prerequisite: consent of instructor. F 15 721 9 1003

Graduate Courses

828 (575)-829 (576). Thesis. (2-2). F 15 828 4 1003; F 15 829 4 1003

138 (193). Color. (3). A study of the qualities of color in design and art expression. F 17 138 1 1009

139 (172). Design II. (3). Introduction to the principles of three-dimensional design. A study of relationships of mass
and space using diverse media is conducted. F 17 139 1 1009

230 (238). Design Media I. (3). Introductory course in photography and related materials (color-key, ortho film for process and platemaking). Prerequisites: GD 135 (171) and consent of instructor. F 17 230 1 1009

231 (239). Design Media II. (3). Introductory course in motion picture photography and television. Prerequisites: GD 230 (238) and consent of instructor. F 17 231 1 1009

233 (295). Basic Typography. (3). Lettering as related to the study of type families and applied to advertisements. Type and its use are studied. Prerequisites: SA (Drawing) 145 (165) and GD 135 (171). F 17 322 1 1009

234 (297). Layout and Production Techniques. (3). Introduction to advertising theory and visual communication. Fundamentals of respective functions of purpose, copy, art, plans and media in advertising. A study is made of studio practices and art production problems. Prerequisite: GD 233 (295). F 17 234 1 1009

236 (299). 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 consent of instructor. F 17 236 1 1009

Upper Division Courses

330 (338). Design Media Studio. (3). Advanced study of photography. May be repeated for credit. Prerequisites: GD 230 (238) and consent of instructor. F 17 330 1 1009

332 (387). Fashion Illustration I. (3). Development of the fashion figure for use in fashion illustrating. Prerequisite: SA (Drawing) 240 (267). F 17 332 1 1009

333 (388). Fashion Illustration II. (3). Development of the fashion figure. Interpretation of varied textures of furs, fabrics, leathers, etc., is made. Problems in layout peculiar to fashion advertising are included, as is work in media for newspaper and magazine reproduction. Prerequisite: GD 332 (387). F 17 333 1 1009

334 (394). Graphic Design II—Production. (3). Introduction to printing processes: letterpress, offset printing and photo-silk screen. Prerequisite: GD 335 (393). F 17 334 1 1009

335 (393). Graphic Design I—Theory. (3). Experimentations 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. Prerequisite: GD 234 (297). F 17 335 1 1009

336 (399). Advanced Drawing for Commercial Art. (3). Directed practice in drawing for commercial art. Outside assignments with weekly critique. Maximum credit four hours by reenrollment. Prerequisite: consent of instructor. F 17 336 1 1009

337 (397). Advertising Illustration. (3). Development of skills in pictorial graphics. Their application to the needs of editorial and advertising illustration is studied as are black and white media. May be repeated for credit. Prerequisites: SA (Drawing) 240 (267), SA (Painting) 251 (272) and GD 236 (299). F 17 337 1 1009

430 (493). Graphic Design III—Media. (3). Application of design media in the applied arts. May be repeated for credit. Prerequisite: GD 334 (394). F 17 430 1 1009

433 (487). Advanced Fashion Illustration. (3). Fashion drawings of costumed models for newspaper and magazine layouts. Merchandising and fashion elements are analyzed in black and white and color. Consideration is given to reproduction requirements. May be repeated for credit. Prerequisite: GD 333 (388). F 17 433 1 1009

435 (494). Graphic Design IV—Design Programs. (3). A comprehensive study
of the corporate image. The development, coordination and execution of a corporate design program is included. This course emphasizes conceptual aspects of graphic design. May be repeated for credit. Prerequisite: GD 334 (394). F 17 435 1 1009

437 (497). Advanced Advertising Illustration. (3). Continuation of GD 337 (397). Color media are included. May be repeated for credit. Prerequisite: GD 337 (397). F 17 437 1 1009

438 (455). 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. F 17 438 1 1009

530 (462). Seminar: Philosophy of Art. (3). Survey of the field of aesthetics and philosophy of art. A critical examination of ideas is included. F 17 530 9 1009

730 (501). Seminar in Art. (3). Supervised study and research in the following art area: graphic design. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 17 730 9 1009

Graduate Courses

830 (551). Graphic Design Media. (3). Application of design media in the applied arts. May be repeated for credit. F 17 830 1 1009

833 (553). Typography. (3). The study of typography in visual communication and its use in graphic design. Laboratory work is performed in designing, setting, printing and binding an original work. May be repeated for credit. F 17-833 1 1009

834 (557). Production Techniques. (3). Laboratory problems in planning and executing design work for the various graphic media. A study of office practices related to the operation of a studio and the production of art is made. F 17 834 1 1009

835 (555). Graphic Design Theory. (3). Experimentation in visual phenomena and their uses in the communication of ideas through visual means. Studio practice is coordinated with discussions on design theory, philosophy and history of design. May be repeated for credit. F 17 835 1 1009

838 (577) & 839 (578). Terminal Project. (3 & 3). F 17 838 3 1009 & F 17-839 3 1009

Studio Arts

CERAMICS

Lower Division Courses

170 (181). Ceramics I. (3). Introduction to hand building, wheel throwing and glazing methods. Basic knowledge involving the physical characteristics of clay and glazes is covered. Reading assignments are made. F 16 170 1 1009

270 (281). Ceramics II. (3). Experience in hand building, wheel throwing, glazing methods. Lecture periods involve general

knowledge of clays, glazes, kilns and historical and contemporary pottery. F 16 270 1 1009

271 (282). Ceramics III. (3). Experience in hand building, wheel throwing, glazing methods and firing procedures. Lecture periods involve special studies of glazes and glaze materials and historical and contemporary pottery. Prerequisite: SA (Ceramics) 170 (181) or 270 (281). F 16 271 1 1009

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275 (284). Study of Ceramic Materials I. (3). Lectures and research covering clays, glazes and refractory materials. Reading assignments are made concerning physical and chemical characteristics of pottery materials. F 16 275 0 1009

Upper Division Courses

370 (381). Ceramics Studio. (3). Advanced studio problems involving forming methods. Experience is given in glaze formulation and kiln firing. Lecture periods are held on advanced studies of ceramic materials and historical and contemporary pottery. May be repeated for credit. Prerequisite: SA (Ceramics) 271 (282). F 16 370 1 1009

570 (481). Advanced Ceramics Studio. (3). Advanced studio problems involving forming methods, glaze formulation and firing procedures. Lecture periods are held involving advanced studies of ceramic materials and glaze formulation. May be repeated for credit. Prerequisite: SA (Ceramics) 370 (381). F 16 570 1 1009

575 (484). Study of Ceramic Materials II. (3). Lectures and research covering clays, glazes and refractory materials. Reading assignments are made concerning physical and chemical characteristics of pottery materials. F 16 575 0 1009

Graduate Courses

870 (511) & 871 (512). Special Problems in Ceramics. (3 or 5, 3 or 5). Research in advanced problems in ceramics. May be repeated for credit. F 16 870 3 1009 & F 16 871 3 1009

875 (548). Advanced Research of Ceramic Materials. (3). Lectures and advanced research covering clays, glazes and refractory materials. Reading assignments are made concerning physical and chemical characteristics of pottery materials. Notebook and outside lab work are required. F 16 875 4 1009

877 (501c). Seminar in Art. (3). Supervised study and research in the following art area: ceramics. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 16 877-9 1009

878 (577)-879 (578). Terminal Project (3 or 5, 3 or 5). F 16 878 4 1009; F 16 879 4 1009

DRAWING AND PAINTING

Drawing

Lower Division Courses

145 (165). Drawing I. (3). Introduction to the principles of drawing and theory and practice for beginning art students in various drawing media. Work deals in still life, landscape and human figure. Problems are in composition, projects and sketchbooks. F 16 145 1 1002

240 (267) & 241 (268). Life Drawing I & II. (3 & 3). Drawing from life, with emphasis on figure construction. Anatomy sketchbooks and portfolios are required. Prerequisite: SA (Drawing) 145 (165). F 16 240 1 1002 & F 16 241 1 1002

Upper Division Courses

340 (367). Life Drawing Studio. (3). Emphasis on individual development, figurative observation and interpretation. May be repeated for credit. Prerequisites: SA (Drawing) 240 (267) and 241 (268). F 16 340 1 1002

545 (467). Advanced Drawing Studio. (3). Drawing with a variety of media. Graphic problems relative to individual technical and aesthetic development are used. Group critiques are given. May be repeated for credit. Prerequisite: three semesters of life drawing. F 16-545 1 1002

Graduate Courses

840 (567). Special Problems in Life Drawing. (1 or 3). Drawing from life.
Sketchbooks and portfolio are required. May be repeated for credit. F 16 840-3 1002

845 (521) & 846 (522). Special Problems in Drawing. (1 or 3, 1 or 3). Advanced drawing in various media, with emphasis on independent work and the development of personal expression. May be repeated for credit. F 16 845 3 1002 & F 16 846 3 1002

849 (501i). Seminar in Art. (3). Supervised study and research in the following art area: drawing. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 16 849 5-1002

Painting

Lower Division Courses

250 (271). Painting I. (3). An introduction to oil painting, emphasizing studio practices, fundamental principles and techniques. Prerequisite: SA (Drawing) 145 (165). F 16 250 1 1002

251 (272). Painting II. (3). An introduction to watercolor painting in both transparent and opaque media. Prerequisite: SA (Drawing) 145 (165). F 16 251 1 1002

255 (229). Introduction to Methods and Media of Painting. (3). Survey of painting methods from the twelfth to twentieth century. History and nature of materials are examined, including encaustic, tempera, oil, oil-resin, synthetic media, groups, supports and surface protection. Prerequisite: prior or concurrent enrollment in painting or art history major. F 16 255 0 1002

Upper Division Courses

350 (371). Painting Studio. (3). Emphasis on individual development, personal interpretation and creativity. May be repeated for credit. Prerequisites: SA (Painting) 250 (271) and 251 (272). F 16 350 1 1002

550 (471). Advanced Painting Studio. (3). Designed for the professionally oriented student. Emphasis is on independent achievement and preparation for graduate study. May be repeated for credit. Prerequisites: SA (Painting) 350 (371) and consent of the painting/drawing faculty. F 16 550 1 1002

Graduate Courses

850 (505) & 851 (506). Special Problems in Painting. (3 or 5, 3 or 5). Professional and experimental painting with emphasis on the development of maturity, ideas, independent thinking and personal expression. Mediums include oil, watercolor and synthetic media. May be repeated for credit. F 16 850 3 1002 & F 16 851 3 1002

855 (561). Methods and Media of Painting. (3). Painting methods from the twelfth to twentieth century. History and nature of materials are studied, including encaustic, tempera, oil, oil-resin, synthetic media, groups, supports and surface protection. Prerequisite: consent of instructor. F 16 855 0 1002

857 (501a). Seminar in Art. (3). Supervised study and research in the following art area: painting. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 16 857 9 1002

858 (577)-859 (578). Terminal Project. (3 or 5, 3 or 5). F 16 858 4 1002; F 16 859 4 1002

PRINTMAKING

Lower Division Courses

160 (175). Printmaking I. (3). An introduction to printmaking. Exploratory work is done in intaglio, collograph, woodcut or relief techniques. F 16 160 1 1002

College of Fine Arts 189
262 (275). Printmaking II. (3). Basic intaglio methods (etching, engraving, soft ground, aquatint and mixed techniques). Second semester includes color printing in intaglio, colograph or mixed techniques. May be repeated for credit one semester. Prerequisite: SA (Drawing) 145 (165). F 16 262 1 1002

Upper Division Courses

364 (375). Printmaking III. (3). Introduction to lithography printing from the stone in black and white. The second semester includes color printing in lithography and combined techniques. May be repeated for credit. Prerequisite: SA (Drawing) 145 (165) or SA (Printmaking) 160 (175). F 16 364 1 1002

560 (475). Advanced Printmaking Studio. (3). For the student interested in professional printmaking. Printmaking is taken from the individual viewpoint, with options in technique. Specialization may be in combined methods in color printing or black and white. May be repeated for credit. Prerequisites: SA (Printmaking) 160 (175), 262 (275) and 364 (375), or consent of instructor. F 16 560 1 1002

Graduate Courses

860 (507) & 861 (508). Special Problems in Printmaking. (3 or 5, 3 or 5). Advanced printmaking on an individual basis. Encouragement is given to investigation and an experimental attitude, combined with a craftsmanlike approach. Techniques include all intaglio methods, lithography and relief, black and white, and color. May be repeated for credit. F 16 860 3 1002 & F 16 861 3 1002

867 (501b). Seminar in Art. (3). Supervised study and research in the following art area: printmaking. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 16 867 9 1002

868 (577) & 869 (578). Terminal Project. (3 or 5, 3 or 5). F 16 868 4 1002 & F 16 869 4 1002

SCULPTURE

180 (185). Sculpture I. (3). An introduction to basic sculpture techniques and materials. Direct work in plaster, clay, wood and metal and casting in plaster and concrete are done. F 16 180 1 1002

280 (285). Sculpture II. (3). An introduction to sculptural techniques in welded steel, assemblage, kinetics and optics. Prerequisite: SA (Sculpture) 180 (185). F 16 280 1 1002

Upper Division Courses

380 (385). Sculpture Studio. (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 assemblage techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.) and/or combined materials. May be repeated once for credit. Prerequisite: SA (Sculpture) 280 (285). F 16 380 1 1002

381 (386). Sculpture Studio. (3). Casting techniques for bronze and aluminum sculpture. Plaster investment, CO₂ set sand, foam vaporization and vitrified shell molds are used to develop individual and unique approaches to cast sculpture. Prerequisite: SA (Sculpture) 280 (285). F 16 381 1 1002

580 (485). Advanced Sculpture Studio. (3). Sculpture in any medium, with an emphasis on individual development and creativity. May be repeated for credit. Prerequisite: SA (Sculpture) 380 (385). F 16 580 1 1002

Graduate Courses

880 (509) & 881 (510). Special Problems in Sculpture. (3 or 5, 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. May be repeated for credit. F 16 880 3 1002 & F 16 881 3 1002
887 (501d). Seminar in Art. (3). Supervised study and research in the following art area: sculpture. Weekly consultation and reports are required. Individual areas may not be repeated for credit. Prerequisite: consent of instructor. F 16 887 9 1002

888 (577)—889 (578). Terminal Project. (3 or 5, 3 or 5). F 16 888 4 1002; F 16 889 4 1002

DIVISION OF MUSIC

The Division of Music, which includes the departments of performance, musicology-composition and music education, offers courses, programs and curricula designed to train and educate serious music students who are planning careers in the music profession. In addition, the offerings of the division 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. 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.

Two undergraduate degrees are offered by the Division of Music, the Bachelor of Music Education (BME) and the Bachelor of Music (BM) in performance and in theory-composition. Students receiving the BME minor in education meet the state requirements for the secondary three-year certificate and degree three-year elementary certificate. Students may select from three options within this degree:

1. Instrumental emphasis, which is offered to satisfy the needs of the student whose chief performing medium is instrumental or keyboard and who plans to enter the field of instrumental music teaching in the public schools;

2. Vocal emphasis, which is offered to satisfy the needs of the student whose chief performing medium is voice or piano and who plans to enter the field of vocal music teaching in the public schools;

3. Special music education emphasis, which is offered to satisfy the needs of the student, either vocal or instrumental specialist, who plans to enter the field of music education for special education children in the public schools.

Students receiving the BM in performance choose either a performing medium (piano, organ, voice, strings, wind or percussion) or theory-composition as their major area of concentration.

Requirements

PROFICIENCY EXAMINATIONS

New students majoring in music must demonstrate their performance ability on one instrument or voice to the satisfaction of the music examin-
ing committee following registration. In addition, in order to determine
the status of all students in applied music, proficiency examinations are
also given after the registration period. Thereafter, repertoire cards are
maintained, which record the student’s progress each semester.

All nonpiano music majors must pass a piano proficiency examination,
and entering students majoring in music but not in piano whose back-
ground indicates that they may be exempt from this requirement may
take a piano proficiency examination. If the student passes the exama-
tion, he may elect other interest areas or additional private study in piano
courses designed for the nonpiano major. Transfer students who submit
proof of the completion of a comparable piano proficiency examination,
by official transcript or letter from their dean, are exempt from this
requirement.

Proficiency examinations in music theory are also given to new students.
Those deficient in theory are required to enroll concurrently in remedial
work until competency has been attained. All proficiency examinations
must be passed before the student is allowed to student teach.

STUDENT TEACHING

Admission into the student teaching semester requires a minimum cumulative grade point average of 2.25; 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 Eng. 101 (111), or its equivalent; a grade of
C or better in Speech 111 (111); completion of prerequisites in educa-
tional psychology, foundations of education and music education methods; a
successful completion of the piano proficiency exam; a successful com-
pletion of a physical examination; and a recommendation by the music
education department.

Transfer students must satisfy education department requirements
for prerequisites if they have not been 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. Applications must be filed with
the chairman of the music education department by midterm of the
spring semester prior to the academic year in which student teaching
is requested.

APPLIED MUSIC REGULATIONS

Instruction is give in the applied media for the puprose of developing
musicianship, performance skills and reading knowledge of music litera-
ture. Specific requirements for each level are set by the individual
applied areas.

For one semester hour of credit the student receives a one-half hour
lesson each week and is required a minimum of five hours of practice
per week. For two semester hours of credit the student receives either (1) a one-half hour private lesson each week and a one-hour class each week or (2) a one-hour lesson per week. For two semester hours or credit the student is expected to practice a minimum of 10 hours each week. For four semester hours of credit the student receives two one-half hour lessons and a one-hour class lesson each week. The student is expected to practice a minimum of 20 hours per week.

Applied music instruction receives academic credit only when provided on the University campus by approved music faculty.

Applied music students may enroll in the following classifications: freshman, AM 120 (120); sophomore, AM 220 (220); junior, AM 320 (320); senior, AM 420 (420); and graduate 820 (520). These applied music courses may be repeated.

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. Students on secondary instruments must take class or private lessons until proficiency requirements are met.

Prior to graduation, candidates for any degree in music must pass an examination in keyboard proficiency. In addition, they must 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 attending a minimum of 14 specified recitals and concerts sponsored by the Division of Music. The student’s performance of his senior recital fulfills his fifth semester recital requirement; he must be enrolled in Recital (Mus. Perf. 400) during that semester.

Each student is required to declare a chief performance medium, and in this major area he is 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. Each student is to present to the examining committee a projected senior recital program. The examining committee shall determine (1) the suitability of the projected program; (2) the capability of the student to perform the program publicly; and (3) whether the program should be performed before a faculty jury.

The theory-composition major must present a selection of compositions representing large and small forms, totaling a minimum of 20 minutes in duration for his senior recital. These compositions are to be performed publicly. In addition, the student may elect to present a recital in his chief performing medium with the permission of his applied music instructor once he has achieved junior standing in his instrument.
No graduating senior may prepare or perform the graduation recital without the guidance of a full-time staff member. In the event the required credit hours have been earned prior to the recital presentation, the student is expected to elect the applied major during the preparation for recital performance.

Graduate Music Studies

The Graduate School offers programs leading to a Master of Music Education (emphases in elementary music, instrumental music, choral music and music in special education) and a Master of Music degree in performance, theory-composition or history-literature. For information concerning requirements for entrance and curricula, consult the *Wichita State University Graduate Bulletin* and/or the coordinator of Graduate Music Studies, Division of Music.

Graduation Requirements

BACHELOR OF MUSIC DEGREE REQUIREMENTS

The general graduation requirements of the University, as described under Academic Information-Requirements for Graduation, must be met. In addition, certain music requirements must be met for the different departments in the Division of Music.

*Bachelor of Music in Theory-Composition*

<table>
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<th>Hrs.</th>
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<tr>
<td>Chief performing medium (piano, organ)</td>
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<tr>
<td>Other performing media</td>
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or

<table>
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<th>Applied Music</th>
<th>Hrs.</th>
</tr>
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<tr>
<td>Keyboard performing medium</td>
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</tr>
<tr>
<td>Other performing media</td>
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<th>Hrs.</th>
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<tr>
<td>Mus.-Comp. 127 (127)-128 (128), 129 (129)-130 (130), 227 (227)-228 (228), 229 (229)-230 (230), 523 (323), 559 (359), 560 (360), 561 (361), 641 (441), 659 (459), 660 (460), 661 (461), 671 (371) and 672 (372)</td>
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<tr>
<td>History and Literature of Music</td>
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<td>Mus.-Comp. 113 (113)-114 (114) and 331 (331) and 332 (332)</td>
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<td>Conducting</td>
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<td>Mus. Perf. 217 (217) or 218 (218), 651 (451) or 691 (491)</td>
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<tr>
<td>Ensembles</td>
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<tr>
<td>Electives (music or nonmusic courses)</td>
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<tr>
<td>Recital Attendance (four semesters plus senior recital)</td>
<td></td>
</tr>
</tbody>
</table>

The theory-composition major is required to present for public performance a selection of his composition representing large and small forms, totaling a minimum
of 20 minutes. In addition the student may elect to present a recital in his chief performing medium with the permission of his applied music instructor and achievement of junior standing in that instrument—AM 320 (320).

**Bachelor of Music in Performance (Instrumental and Keyboard Major)**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td></td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>24</td>
</tr>
<tr>
<td>Theory</td>
<td></td>
</tr>
<tr>
<td>Mus.-Comp. 127-128 (127), 129 (129)-130 (130), 227 (227), 228 (228), 229 (229)-230 (230), 523 (323), 561 (361), 641 (441)</td>
<td>24</td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>10</td>
</tr>
<tr>
<td>Mus.-Comp. 113 (113)-114 (114) and 331 (331) and 332 (332)</td>
<td>10</td>
</tr>
<tr>
<td>Conducting</td>
<td></td>
</tr>
<tr>
<td>Mus. Perf. 217 (217) or 218 (218) and 651 (451) or 691 (491)</td>
<td>4</td>
</tr>
<tr>
<td>Electives (either music or nonmusic courses)</td>
<td>4</td>
</tr>
<tr>
<td>Senior Recital (Mus. Perf. 400)</td>
<td>1</td>
</tr>
</tbody>
</table>

**Bachelor of Music Performance (Vocal Major)**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Languages (10 hours of each of two of the three languages below)</td>
<td>20</td>
</tr>
<tr>
<td>Fr. 111 (111)-112 (112)</td>
<td>10</td>
</tr>
<tr>
<td>Ger. 111 (111)-112 (112)</td>
<td>10</td>
</tr>
<tr>
<td>Ital. 111 (111)-112 (112)</td>
<td>10</td>
</tr>
<tr>
<td>A student with two units of a foreign language from high school may continue this language for elective credit, but is required to take, in addition to this language, 10 hours in each of two of the three languages listed above.</td>
<td>10</td>
</tr>
<tr>
<td>Applied Music</td>
<td>26</td>
</tr>
<tr>
<td>Voice</td>
<td>24</td>
</tr>
<tr>
<td>Piano (two semesters)</td>
<td>2</td>
</tr>
<tr>
<td>Theory</td>
<td>18</td>
</tr>
<tr>
<td>Mus.-Comp. 127 (127)-128 (128), 129 (129)-130 (130), 227 (227)-228 (228), 229 (229)-230 (230) and 523 (323)</td>
<td>18</td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>10</td>
</tr>
<tr>
<td>Mus.-Comp. 113 (113)-114 (114), 331 (331) and 332 (332). These courses count in the core under humanities.</td>
<td>10</td>
</tr>
<tr>
<td>Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Mus. Perf. 218 (218)</td>
<td>2</td>
</tr>
<tr>
<td>Voice Pedagogy and Repertoire</td>
<td>5</td>
</tr>
<tr>
<td>Mus. Perf. 625 (425) and Mus.-Comp. 626 (426)</td>
<td>5</td>
</tr>
<tr>
<td>Ensembles</td>
<td>10</td>
</tr>
<tr>
<td>Electives (in upper division theory, conducting, choral materials or music theater directing)</td>
<td>4</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 plus senior recital)</td>
<td>1</td>
</tr>
</tbody>
</table>

* Mus. Perf. 581 (381) and Mus.-Comp. 582 (382) required of piano majors. Mus.-Comp. 597 (397) and 598 (398) required of organ majors.

**BACHELOR OF MUSIC EDUCATION DEGREE REQUIREMENTS**

The following program fulfills both the University requirements for
graduation and the Kansas certification requirement and is required of all Bachelor of Music Education degree candidates.

**General Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics and Natural Sciences</td>
<td>12</td>
</tr>
<tr>
<td>A minimum of 4 hours must be a laboratory science. Courses must be taken in at least two of the following three subdivisions: (1) mathematics, (2) physical science or (3) biological science.</td>
<td></td>
</tr>
<tr>
<td>Oral and Written Communications, Literature and Foreign Languages</td>
<td>12</td>
</tr>
<tr>
<td>Required: Eng. 101 (111) or 102 (211), or equivalent Speech 111 (111)</td>
<td></td>
</tr>
<tr>
<td>History, Social and Behavioral Sciences</td>
<td>12</td>
</tr>
<tr>
<td>Required: Psych. 111 (111)</td>
<td></td>
</tr>
<tr>
<td>Courses in two of the following subdivisions: economic, sociology, anthropology, political science</td>
<td></td>
</tr>
<tr>
<td>History may be used to complete the 12-hour requirement</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
</tr>
<tr>
<td>Required: Mus.-Comp. 113 (113), 331 (331) and 332 (332)</td>
<td></td>
</tr>
<tr>
<td>Any course in humanities (two subdivisions required), social sciences, mathematics or natural sciences</td>
<td></td>
</tr>
<tr>
<td>Education (taken during student teaching semester)</td>
<td>18</td>
</tr>
<tr>
<td>Required: Ed. Psych. 233 (233) or 333 (333) and 643 (443)</td>
<td></td>
</tr>
<tr>
<td>Fd. Ed. 232 (232) and 727 (427) or 428 (428)</td>
<td></td>
</tr>
<tr>
<td>Elem. Ed. 647 (447)</td>
<td></td>
</tr>
<tr>
<td>Sec. Ed. 447 (447)</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Courses Required for Instrumental Emphasis**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>12-16</td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>8-12</td>
</tr>
<tr>
<td>Second performing medium</td>
<td>2</td>
</tr>
<tr>
<td>Third performing medium</td>
<td>2</td>
</tr>
<tr>
<td>The above must include completion of keyboard proficiency and must include two hours of voice—one semester of applied voice and one semester of Mus. Ed. 342 (142). Keyboard majors with an instrumental background who elect the instrumental emphasis program must include two semesters of one orchestral instrument as the third performing medium.</td>
<td></td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>Mus.-Comp. 127 (127)-128 (128), 129 (129)-130 (130), 227 (227)-228 (228), 229 (229)-230 (230), 523 (323), 641 (441) or 645 (445)</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 (217) or 218 (218) and 651 (451) or 691 (491)</td>
<td></td>
</tr>
<tr>
<td>Ensembles</td>
<td>10</td>
</tr>
<tr>
<td>Wind and percussion majors are required a minimum of 6 hours in Music B (band) and 2 hours of Music M (marching band). The exceptions are: (1) 2 hours of Music B will be waived if the student elects 4 hours of Music M; (2) women with elementary instrumental emphasis are not required to elect Music M; and (3) upperclass transfer students, except women with elementary emphasis, are required only 1 hour of Music M. Keyboard majors following the instrumental emphasis program are required a minimum of 4 hours instrumental ensembles.</td>
<td></td>
</tr>
<tr>
<td>Recital Attendance (four semesters plus senior recital)</td>
<td></td>
</tr>
</tbody>
</table>
Music Education ................................. 13

Elementary Instrumental emphasis ................................. 7
Mus. Ed. 202 (202), 302 (302) and 402 (402) *

or

Secondary Instrumental emphasis ........................................ 7
Mus. Ed. 204 (204), 304 (304) and 404 (404) *
Mus. Ed. 235 (135), 236 (136), 237 (137), 238 (138), 239 (139) and 240 (140) ................................. 6

Additional Courses Required for Vocal Emphasis Hrs. 12-16

Applied Music .............................................
Chief performing medium ........................................... 8-12
Second performing medium ........................................... 8
Applied music electives ........................................... 2

Keyboard majors must elect 2 hours of voice—one semester of applied voice and one semester of Mus. Ed. 342 (142)—and complete the keyboard proficiency examination.

Theory ..................................................... 20
Mus.-Comp. 127 (127)-128 (128), 129 (129)-130 (130), 227 (227)-228 (228), 229 (229)-230 (230), 523 (323), 645 (445)

Conducting .................................................... 4
Mus. Ed. 217 (217) or 218 (218) and 651 (451) or 691 (491)

Ensembles ...................................................... 10
Voice majors, secondary emphasis, are required to enroll for 2 hours of small vocal ensemble and 2 hours of opera workshop. Keyboard majors are required to enroll for 5 hours of vocal ensemble; it is recommended that at least 2 of the remaining hours be in piano accompaniment or chamber music performance.

Music Electives (may not be in applied music) ..................... 6
Piano majors in vocal emphasis program must elect Mus. Perf. 581 (381)
Mus. Ed. 342 (142) may apply here

Recital Attendance (four semesters plus senior recital) .......... 7
Music Education .............................................
Mus. Ed. 201 (201), 301 (301), 401 (401) * (elementary vocal emphasis) or Mus. Ed. 203 (203), 303 (303), 403 (403) * (secondary

* These courses must be taken during the student teaching semester.

BACHELOR OF MUSIC EDUCATION—SPECIAL MUSIC EDUCATION (Vocal or Instrumental Emphasis)

The following courses and areas are required for the BME in special music education.

General Core Requirements Hrs. 12
Mathematics and Natural Sciences .....................................
A minimum of 4 hours must be a laboratory science. Courses must be taken in at least two of the following three subdivisions: (1) mathematics, (2) physical science or (3) biological science.
It is recommended that special music education majors take Logo. 214 (214) to fulfill 3 hours in this area.

Oral and Written Communications, Literature and Foreign Languages .............. 12

Required:
Eng. 101 (111), 102 (211), or equivalent

Speech 111 (111)

It is recommended that special music education majors take Speech 665 (465) to fulfill three hours in this area.

History, Social Sciences and Behavioral Sciences

Required:

Psych. 111 (111)

Courses in two of the following subdivisions: economics, sociology, anthropology or political science.

It is recommended that special music education majors take Psych. 361 (260) or 375 (275) to complete the 12-hour requirement.

Other

Required:

Mus.-Comp. 113 (113), 331 (331) and 332 (332)

Any course in humanities (two subdivisions required), social sciences, mathematics or natural sciences.

Education

Required:

Mus.-Comp. 233 (233) or 333 (333) and 433 (433) *

Fd. Ed. 232 (232) and 727 (427) or 428 (428) *

Elem. Ed. 447 (447) *

Sec. Ed. 447 (447) *

Music Requirements

Applied Music

Chief performing medium

Second performing medium

Third performing medium

Keyboards and instrumental music majors must elect 2 hours of voice—one semester of applied voice and one semester of Mus. Ed. 342 (142). The above must include completion of keyboard proficiency examination.

Theory

Mus.-Comp. 127 (127)-128 (128), 129 (129)-130 (130), 227 (227)-228 (228), 229 (229)-230 (230), 523 (323), 641 (441) or 645 (445)

Conducting

Mus. Perf. 217 (217) or 218 (218) and 651 (451) or 691 (491)

Music Electives (may not be in applied music)

Required for vocal majors

Mus. Perf. 581 (381) required for piano majors

Recital Attendance (four semesters plus senior recital)

Ensembles

Vocal majors—encouraged to enroll for 2 hours of vocal ensembles and 2 hours of opera workshop

Keyboard majors—required to enroll for 5 hours of vocal ensembles

Recommended—2 hours in Music J, Piano Accompaniment

Wind and Percussion majors—required to enroll in 6 hours of Music B (band) and 2 hours of Music M (marching band)

Music Education

Elementary vocal emphasis

Mus. Ed. 201 (201), 309 (309), 401 (401) *

or

Elementary instrumental emphasis

Mus. Ed. 202 (202), 309 (309), 402 (402) *

Mus. Ed. 235 (135), 236 (136), 237 (137), 238 (138), 239 (139), 240 (140)

* These courses must be taken during the student teaching semester.
MUSIC MAJOR IN THE 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.

<table>
<thead>
<tr>
<th>Group</th>
<th>Course Area</th>
<th>Hrs.</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Music Literature and History</td>
<td>8</td>
<td>Mus.-Comp. 113 (113), 331 (331)-332 (332)</td>
</tr>
<tr>
<td>II</td>
<td>Music Theory</td>
<td>16</td>
<td>Mus.-Comp. 127 (127)-128 (128), 129 (129)-130 (130), 227 (227)-228 (228), 229 (229), 523 (323)</td>
</tr>
<tr>
<td>III</td>
<td>Counterpoint</td>
<td>2</td>
<td>Mus.-Comp. 561 (361)</td>
</tr>
<tr>
<td>IV</td>
<td>Conducting, Orchestration and Choral Arranging</td>
<td>4</td>
<td>Mus. Perf. 217 (217) or 218 (218) and Mus.-Comp. 641 (441) or 645 (445)</td>
</tr>
<tr>
<td>V</td>
<td>Applied Music (4 semesters)</td>
<td>4</td>
<td>Voice, piano, organ or orchestral instrument</td>
</tr>
<tr>
<td>VI</td>
<td>Ensemble</td>
<td>3</td>
<td>Select in consultation with adviser</td>
</tr>
<tr>
<td>VII</td>
<td>Electives from the areas of music literature,</td>
<td>4</td>
<td>Conducting, orchestration and choral literature</td>
</tr>
</tbody>
</table>

MUSIC MINOR IN THE COLLEGE OF
LIBERAL ARTS AND SCIENCES

A music minor in liberal arts consists of 18 hours selected from the following: Mus.-Comp. 113 (113), 127 (127)-128 (128), 129 (129)-130 (130), 227 (227)-228 (228), 229 (229)-230 (230), 523 (323), 331 (331), 332 (332); a maximum of four hours of ensembles; and a maximum of two hours (two semesters) in applied music. Students who choose to utilize two hours of applied music must meet the requirements of AM 120 (120).

Musicology—Composition

Lower Division Courses

060 (60). Rudiments of Music. (2). Intensive study of music fundamentals and elementary aural skills. Required of students not achieving a satisfactory score in departmental placement examination for Mus.-Comp. 127 (127) or 129 (129). P 13 060 0 1004

113 (113). Introduction to Music. (2). Development of skills and techniques used in critical analysis and a comparison of the contrasting styles of music litera-

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
ture. The course is designed for music majors or students with advanced musical background. Must be taken concurrently with Mus.-Comp. 127 (127) or 128 (128). F 13 113 0 1006

114 (114). Music Literature Survey. (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: Mus.-Comp. 113 (113) or consent of instructor. F 13 114 0 1006

127 (127). Theory I. (2). Review of music fundamentals, including notation of pitch, rhythm, scales, intervals and triads. Melodic organization and harmony are introduced, with emphasis on analysis and creative writing. Prerequisites: concurrent enrollment in Mus.-Comp. 060 (60), or satisfactory score on departmental placement examination, and concurrent enrollment in Mus.-Comp. 129 (129). F 13 127 0 1004

128 (128). Theory II. (2). Study of diatonic harmony, including cadence and phrase structure, melody harmonization and nonharmonic usage, with emphasis on analysis of related literature and creative writing. Prerequisites: Mus.-Comp. 127 (127) and concurrent enrollment in Mus.-Comp. 129 (129) or 130 (130). F 13 128 0 1004

129 (129). Aural Skills I. (2). Recognition, singing and dictation of rhythms in simple and compound meters, scales and diatonic melodies. Prerequisite: concurrent enrollment in Mus.-Comp. 060 (60) or satisfactory score on departmental placement examination. F 13 129 0 1004

130 (130). Aural Skills II. (2). A continuation of Mus.-Comp. 129 (129) that introduces modulating melodies and elementary harmonic dictation. Prerequisite: Mus.-Comp. 129 (129). F 13 130 0 1004

161 (161). Music Appreciation. (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


227 (227). Theory III. (2). Review of diatonic harmony and introductory study of chromatic harmony, with emphasis on analysis of related literature and creative writing. Prerequisite: Mus.-Comp. 128 (128). F 13 227 0 1004

228 (228). Theory IV. (2). Introductory study of contemporary musical techniques, with emphasis on analysis of related literature and creative writing. Prerequisite: Mus.-Comp. 227 (227). F 13 228 0 1004

229 (229). Aural Skills III. (2). Recognition, singing and dictation of advanced rhythmic, melodic and harmonic materials. Prerequisite: Mus.-Comp. 130 (130). F 13 229 0 1004

230 (230). Aural Skills IV. (2). Continuation of Mus.-Comp. 229 (229) and an introduction of contemporary rhythmic, melodic and harmonic materials, Prerequisite: Mus.-Comp. 229 (229). F 13 230 0 1004

245 (245). Jazz Improvisation. (2). Melodic, harmonic and rhythmic creation, with emphasis on the relationship of scale patterns and seventh chords. Prerequisites: Mus.-Comp. 128 (128) and 130 (130), or consent of the instructor. F 13 245 0 1004

Upper Division Courses

310 (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

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
315 (315). Music of the Twentieth Century. (2). An aesthetic approach to music of this century, its major composers and stylistic and formal characteristics. It is designed primarily for the nonmusic major who has musical interest and background. F 13 315 0 1005

316 (316). Symphonic Literature. (2). An advanced course in the great orchestral literature covering the development of the symphony orchestra and its music from the eighteenth 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

331 (331). History of Music from Antiquity through the Eighteenth Century. (3). An intensive survey of the development and evolution of musical styles and practices in Western civilization from ancient times to the eighteenth century. Lectures, reference readings and the study of representative music of the various periods and composers. Prerequisite: Mus.-Comp. 113 (113) or 161 (161), or consent of instructor. F 13 331 0 1006

332 (332). History of Music from the Eighteenth Century to the Present. (3). A continuation of Mus.-Comp. 331 (331). Offered only in the spring. Prerequisites: Mus.-Comp. 113 (113) and 228 (228), or consent of instructor. F 13 332 0 1006

345 (345). Jazz Arranging. (2). Arranging for small and large jazz ensembles, with emphasis on current big band styles. Prerequisites: Mus.-Comp. 228 (228) and 230 (230) or consent of the instructor. F 13 345 0 1004

519 (419). Wind and Percussion Scoring. (2). An introductory course in scoring for the wind band, with emphasis on analysis of selected scores related to scoring techniques. The course is designed to acquaint the student with basic arranging techniques, score format and notation problems in scoring for the wind band. Prerequisite: Mus.-Comp. 641 (441) or departmental consent. F 13-519 0 1004

523 (323). Form and Analysis. (2). The elements of structure, form and design in musical composition. Prerequisite: Mus.-Comp. 227 (227). F 13 523 0 1004

559 (359) & 560 (360). Applied Composition. (2 & 2). Individual study in fundamentals of musical composition, with emphasis on the development and expansion of music materials. Prerequisite: Mus.-Comp. 523 (323) or instructor's consent. F 13 559 3 1004 & F 13 560 3-1004

561 (361). Eighteenth Century Counterpoint. (2). Contrapuntal devices of the eighteenth century as found in the works of J. S. Bach. Prerequisite: Mus.-Comp. 228 (228). F 13 561 0 1004

582 (382). Piano Literature. (2). Survey of the historical eras of professional piano repertory. F 13 582 0 1006

597 (397) - 598 (398). Organ Literature and Practice. (1-1). Performance and discussion of works for the instrument of all periods; study of organ-design and construction; and practice in aspects of service playing, such as hymn playing, modulation, accompanying and improvisation. Prerequisite: Mus.-Comp. 228 (228) or departmental consent. Required of all organ majors. May be repeated. F 13 597 0 1004; F 13 598 0 1004

623 (423). Opera Literature. (2). A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the seventeenth century to the present. Not limited to music majors. F 13 623 0 1006

624 (424). Oratorio and Cantata Literature. (2). A study of the solo vocal literature of the larger sacred and secular forms from the seventeenth century to the present. Not limited to music majors. F 13 624 0 1006

626 (426). Voice Literature. (3). A comprehensive survey of early Italian arias, French chansons, German lieder, contemporary English songs, and Russian and
Spanish literature. Open to nonvoice majors. F 13 626 0 1006

641 (441). 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 (227). F 13 641 0 1004

645 (445). Choral Arranging. (2). Scoring for women's, men's and mixed choirs. Performance and analysis of students' arrangements in class are included. Offered only in the fall. Prerequisites: Mus.-Comp. 228 (228) and 230 (230). F 13 645 0 1004

652 (452). Choral Materials. (2). A historical survey of choral literature from the Renaissance to the twentieth century, with emphasis on availability of editions for performance. Offered only in the spring. Prerequisite: Mus.-Comp. 331 (331) and 332 (332), or consent. F 13 652 0 1006

659 (459) & 660 (460). Applied Composition. (2 & 2). Individual study in musical composition, with emphasis on writing for both small ensembles and large groups in the larger forms. Prerequisite: Mus.-Comp. 560 (360) or consent of instructor. F 13 659 3 1004 & F 13 660 3 1004

661 (461). Sixteenth Century Counterpoint. (2). Analysis and application of the contrapuntal composition techniques of the sixteenth century. Prerequisite: Mus.-Comp. 227 (227). F 13 661 0 1004

671 (371). Chromatic Harmony. (2). Advanced study of chromatic harmonic materials of all periods, with special attention to the nineteenth century. Analysis and creative writing are emphasized. Prerequisite: Mus.-Comp. 227 (227). F 13 671 0 1004

672 (372). Contemporary Techniques. (2). Advanced study of music from impressionism to the present, with emphasis on related literature and creative writing. Prerequisite: Mus.-Comp. 228 (228). F 13 672 0 1004

685 (485). String Literature and Materials. (2). A survey and stylistic analysis of music for solo strings and chamber combinations, beginning with the early Baroque period. Prerequisite: consent of instructor. F 13 685 0 1006

690. Special Topics in Music. (1-4). For individual or group instruction. May be repeated with departmental consent. F 13 690 2 1006


755 (555). Basic Musicianship in the Secondary School Curriculum. (2). An examination of approaches to musicianship 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 (558). Teaching of Theory in the Community Junior College. (2). A course designed to prepare the junior college theory teacher. Attention is given to contemporary trends in music theory and their application to planning courses of study, evaluation of texts and pedagogical techniques. F 13 758 0 1004

791 (591)-792 (592). Seminar in Music History. (3-3). Development of areas of interest in music history as time permits. No effort at a chronological survey is made. Ideas evoking the most interest and considered by the instructor to be of the greatest professional benefit are included when interest warrants. Prerequisites: Mus.-Comp. 331 (331) and 332 (332), or consent of instructor. F 13 791 0 1006; F 13 792 0 1006

Graduate Courses

830 (530). Seminar in Music Theory. (3). An analytical study of the materials used in musical composition from antiquity to the present. The student analyzes music in his own medium, with his analysis culminating in a presentation to the class. From these presentations a comprehensive synthesis of the compositional procedures in various style periods is made. The course is designed to de-

202
velop analytical perspective rather than compositional skills. F 13 830 0 1004

840a-c (540a-c). Seminar in the Techniques of Composition. (2). The nature of compositional techniques examined through selected works in different media: (a) large ensembles; (b) small ensembles; (c) solo literature. Prerequisites: Mus.-Comp. 671 (371), 672 (372) and 641 (441), or departmental consent. F 13 840 9 1004

841 (541)-842 (542). Special Project in Music. (1-3). Individually supervised study or research, with emphasis on the professional needs of the student. Prerequisite: consent of instructor. May be repeated for credit. F 13 841 4 1006; F 13 842 4 1006

852 (552). Introduction to Graduate Study. (3). Techniques of research and development of bibliography in music and music education. The course must be elected the first available semester of enrollment. F 13 852 0 1006

Music Education

Lower Division Courses

201 (201). Fundamentals of Vocal Music for Elementary School. (2). The teaching of music in the elementary school, consideration of objectives and examination of materials. The course, for students primarily interested in teaching music in elementary schools, includes observation in public schools. Prerequisite: music education major or consent of instructor. F 11 201 0 0832

202 (202). Fundamentals of Instrumental Music for Elementary School. (2). The teaching of music in the elementary school, consideration of objectives and examination of materials. The course, for students primarily interested in teaching music in elementary schools, includes observation in public schools. Prerequisite: music education major or consent of instructor. F 11 202 0 0832

855 (559)-860 (560). Advanced Composition. (2-2). Original work in the large forms and a continuation and expansion of Mus.-Comp. 659 (459)-660 (460). Prerequisite: Mus.-Comp. 660 (460) or equivalent. F 13 859 3 1004; F 13 860 3 1004

875 (575). Thesis Research. (2). F 13-875 4 1006

876 (576). Thesis. (2). F 13 876 4-1006

983 (593). Music of Antiquity through the Renaissance. (3). F 13 893 0 1006

984 (594). Music of the Baroque Era. (3). F 13 894 0 1006

985 (595). Music of the Eighteenth Century. (3). F 13 895 0 1006

986 (596). Music of the Nineteenth Century. (3). F 13 896 0 1006

987 (597). Music of the Twentieth Century. (3). F 13 897 0 1006

College of Fine Arts 203
guiding student behavior, evaluation, and professional responsibilities. For students primarily interested in teaching instrumental music in the secondary schools. Prerequisite: music education major or consent of instructor. F 11 204 0 0832

235 (135). 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. F 11-235 0 0832

236 (136). 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. F 11-236 0 0832

237 (137). Methods of Teaching Band and Orchestral Instruments (Clarinet and Saxophone). (1). Procedures and materials for class and private teaching. Major emphasis is on clarinet tone quality, embouchure and technique. Band and orchestra laboratory is included. F 11-237 0 0832

238 (138). Methods of Teaching Band and Orchestral Instruments (Flute and Double Reeds). (1). Procedures and materials for class and private teaching. Reed making, application of fundamental techniques and study of more advanced techniques are included. Band and orchestra laboratory is included. F 11-238-0 0832

239 (139). Methods of Teaching Band and Orchestral Instrument (Brass). (1). Procedures and materials for class and private teaching of all brass instruments, emphasizing tone qualities, differences in embouchure and necessary technique for performance. Band and orchestra laboratory is included. F 11 239 0 0832

240 (140). 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 are included. Band and orchestra laboratory is included. F 11 240 0 0832

Upper Division Courses

301 (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 classes and consideration of materials and methods. The course is for students primarily interested in teaching music in the elementary schools. Prerequisite: Mus. Ed. 201 (201). F 11 301 0 0832

302 (302). Survey of Secondary School Music. (3). Methods and materials used in teaching instrumental music in the secondary schools. Included are an overview of vocal and general music problems in junior high school and observation in the public schools. The course is for students primarily interested in teaching instrumental music in the elementary schools. Prerequisite: Mus. Ed. 202. F 11 302 0 0832

303 (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 classes and consideration of material and methods. The course is for students primarily interested in teaching music in the secondary schools. Prerequisite: Mus. Ed. 203 (203). F 11 303 0 0832

304 (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. 204 (204). F 11 304 0 0832

309 (309). Survey of Music for Special Education. (3). For music education special music emphasis candidates only.
Consideration is given to special problems related to preparation for student teaching. Development of plans, examination of materials and consideration of activities appropriate to special music education are included. Prerequisite: Mus. Ed. 201 (201); or 202 (202), 203 (203) or 204 (204) with consent. F 11-309 0 0832

342 (412). Survey of Choral Techniques and Literature. (1). A study of basic techniques of singing and examination of literature for solo voice and large and small ensembles. Prerequisite: one hour of applied voice. F 11 342 0 0832

351 (251). 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 ability in singing, playing piano and classroom instruments. F 11 351 0 0832

352 (252). Music Methods for the Classroom Teacher. (3). For the elementary classroom teacher. The development of children's musical growth through singing, listening, rhythmic and creative activities is emphasized. Prerequisite: Mus. Ed. 351 (251) or consent of instructor. F 11 352 0 0832

401 (401). Advanced Techniques of Vocal Music for Elementary School. (2). Consideration of special problems related to preparation for student teaching: development of lesson plans, examination of materials and consideration of activities appropriate at each grade level. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 201 (201) and 301 (301). To be taken during student teaching semester. F 11 401 0 0832

402 (402). Advanced Techniques of Elementary School Music. (2). Emphasis on special problems related to preparation for student teaching: consideration of the instrumental and the general music programs at the elementary level. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 202 (202) and 302 (302). To be taken during student teaching semester. F 11 402 0 0832

403 (403). Advanced Techniques of Vocal Music for Secondary Schools. (2). Consideration of special problems related to preparation for student teaching: development of plans, examination of materials and consideration of activities appropriate in junior and senior high school music classes. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 203 (203) and 303 (303). To be taken during student teaching semester. F 11 403 0 0832

404 (404). Advanced Techniques of Secondary School Music. (2). Consideration of special problems related to preparation for student teaching and of instrumental and general music programs at the secondary level. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 204 (204) and 304 (304). To be taken during student teaching semester. F 11 404 0 0832

606 (306). Music Methods for Early Childhood Education. (3). Methods and materials for teaching music in the preschool and kindergarten classroom. Included are the development of the child's musical growth through singing, listening, rhythmic and creative activities; a survey of available materials; and continuation of playing, singing and conducting skills. Prerequisite: Mus. Ed. 351 (251) or consent of instructor. F 11 606 0 0832

611 (411). 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 the dysfunctioning child and his problems and current theory and practices in special music education are included. F 11 611 0 0832

632 (432). Teaching of Music Literature. (2). Designed for the teacher preparing to teach music literature or appreciation. Included are aesthetic principles in music listening related to the other fine arts and their application to various levels of teaching. Prerequisite: consent of instructor. F 11 632 0 0832

684 (484). String Teaching Seminar. (2). Historical development of string
instrument teaching. Problems involving traditional and recent techniques are studied as is private study versus class study. School class methods, studio methods, etc. are explored. Prerequisite: consent of instructor. F 11 684 9 0832

690. Special Topics in Music. (1-4). For individual or group instruction. May be repeated with departmental consent. F 11 690 2 0832

706 (406). Comparative Arts for Teachers. (3). Emphasis on the related arts of music, visual art and literature from two approaches: an approach that shows the elements the arts have in common, with an emphasis on creativity, and an approach that examines the relationships of the three areas according to basic philosophies. Attention is given to materials and activities suitable for use in the classroom at various levels. F 11-706 0 0832

737 (337). Advanced Techniques in Woodwind Methods. (1). Special problems and techniques in the teaching of woodwind instruments. Current materials are surveyed. Prerequisites: Mus. Ed. 237 (137) and 238 (138), or equivalent. F 11 737 0 0832

739 (339). Advanced Techniques in Brass Methods. (1). Special problems and techniques in the teaching of brass instruments. Current materials are surveyed. Prerequisite: Mus. Ed. 239 (139). F 11 739 0 0832

740 (340). Advanced Techniques in Percussion Methods. (1). Special problems and techniques in the teaching of percussion instruments. Current materials are surveyed. Prerequisite: Mus. Ed. 240 (140) or equivalent. F 11 740-0 0832

750 (450). Music Education Workshop. (1-4). Prerequisite: consent of instructor. May be repeated for credit. F 11-750 0 0832

772 (472). Contemporary Musical Thought in Music Education. (2). A consideration of imaginative and effective techniques of presenting contemporary musical concepts to all age levels in public school music. Prerequisites: Mus.-Comp. 523 (323) and consent of instructor. F 11 772 0 0832


785 (585). Instrumental Music Organization and Administration. (3). Problems of developing secondary school instrumental music programs. F 11 785 0 0832

786 (586). Charting and Scoring for Marching Band. (2). Applied techniques in arranging or adapting music and planning field maneuvers. F 11 786 0 0832

Graduate Courses

821 (521). 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 (531) or consent of instructor. F 11 821 0 0832

822 (522). Advanced Techniques in Special Music Education. (3). A course for the music education special emphasis MME candidate 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 understandings in the dysfunctioning child are included. Prerequisite: Mus. Ed. 401 (401). F 11 822 0 0832

823 (523). Special Music Education, Practicum. (3). For the music education special music emphasis MME candidate only. Supervised teaching is done in special education classrooms. A companion course to Mus. Ed. 822 (522), this course provides the special music education emphasis MME candidate experience in teaching in special education classrooms. Concurrent or prerequisite: Mus. Ed. 822 (522). F 11 823 2 0832
831 (531). 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. 401 (401). F 11-831 0 0832

832 (532). Music in the Junior High School. (3). Includes administrative structures, the curriculum, adolescent development, teaching as behavior and competencies needed for successful teaching. F 11 832 0 0832


841 (541). Special Project in Music. (1-3). Individually supervised study or research, with emphasis upon the personal needs of the student. Prerequisite: consent of instructor. F 11 841 4 0832

842 (542). Special Project in Music. (1-3). Individually supervised study or research, with emphasis upon the personal needs of the student. Prerequisite: consent of instructor. F 11 842 4 0832

Performance

APPLIED MUSIC (1-2-4 hrs.)

120 (120). Basic instruction may be repeated for credit, lower division. F 12 120 3 1004

220 (220). Prerequisite 120 (120), may be repeated for credit, lower division. F 12 220 3 1004

320 (320). Prerequisite 220 (220), may be repeated for credit, upper division. F 12 320 3 1004

420 (420). Prerequisite 320 (320), may be repeated for credit, upper division. F 12 420 3 1004


851 (551). Psychology of Music. (2). Adapted to the viewpoint of the music educator. Emphasis is placed on the physics of sound, psychology of performance and teaching. Aesthetic principles of listening are included. Prerequisite: consent of instructor. F 11-851 0 0832

854 (554). Research Seminar in Music Education. (3). Continued application of techniques of research. The completion of a major research project is required. Prerequisite: Mus. Ed. 852 (552). F 11-854 9 0832

871 (571). Philosophy of Contemporary Music Education. (2). A study of historical trends and contemporary philosophies relevant to music education, behavioral objectives and curriculum planning. Prerequisite: Mus. Ed. 851 (551). F 11 871-0 0832

875 (575). Thesis Research. (2). F 11-875 4 0832

876 (576). Thesis. (2). F 11 876 4 0832

820 (520). May be repeated for credit, graduate. F 12 820 3 1004

Applied Media Abbreviations

A Bassoon L Piano
B Cello M Saxophone
C Clarinet N String Bass
D Euphonium P Trombone
E Flute Q Trumpet
F French Horn R Tuba
G Harp S Viola
H Oboe T Violin
J Organ V Voice
K Percussion Z Guitar

College of Fine Arts 207
GENERAL PERFORMANCE

Prerequisites: Mus.-Comp. 128 (128) and Mus.-Comp. 130 (130). F 12-218 0-1004

Lower Division Courses

107 (107-108), 207 (207-208). Piano Repertoire. (1-1). Designed to give performing and listening experience to piano majors. May be repeated for credit. F 12-107 2 1004; F 12 207 2 1004

111 (11-112), 211 (211-212). Ensemble. (1-1). (A) orchestra, (B) band, (C) University Chorus, (D) Men's Glee Club, (E) University Singers and A Cappella Choir, (G) string ensemble, (H) brass ensemble, (I) piano accompaniment, (L) Opera Theater, (L) small vocal ensemble, (M) football band, (N) woodwind ensemble, (O) saxophone quartet, (Q) percussion ensemble. May be repeated for credit. F 12 111 1 1004; F 12 211 1 1004

121 (121). Italian Diction. (1). A course designed for the vocal performer, including a comprehensive study of Italian consonant and vowel sounds. F 12-121 0 1004

122 (122). English Diction. (1). A course designed for the vocal performer, including a comprehensive study of English consonant and vowel sounds. F 12-122 0 1004

148 (148). Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Prerequisite: Mus. Ed. 238 (138) or consent of instructor. May be repeated for credit. F 12 148 2 1004

217 (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

218 (218). Choral Conducting. (2). Fundamentals of conducting, score reading and rehearsal techniques. Practical experience conducting classroom groups.

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

Upper Division Courses

307 (307-308), 407 (407-408). Piano Repertoire. (1-1). Designed to give performing and listening experience to piano majors. May be repeated for credit. F 12 307 2 1004; F 12 407 2 1004

311 (311-312), 411 (411-412). Ensemble. (1-1). (A) orchestra, (B) band, (C) University Chorus, (D) Men's Glee Club, (E) University Singers and A Cappella Choir, (G) string ensemble, (H) brass ensemble, (I) piano accompaniment, (L) Opera Theater, (L) small vocal ensemble, (M) football band, (N) woodwind ensemble, (O) saxophone quartet, (Q) percussion ensemble. May be repeated for credit. F 12 311 1 1004; F 12 411 1 1004

400. Recital. (1). Prerequisite: departmental consent. F 12 400 4 1004

548 (448). Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Prerequisite: Music Ed. 238 (138) or consent of instructor. May be repeated for credit. F 12 548 2 1004

581 (381). Piano Materials and Pedagogy. (2). Discussion and analysis of suitable materials and methods for teaching at elementary, intermediate and early advanced levels. F 12 581 0 1004

625 (425). 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 (427). Music Theater Directing. (2). Coaching, mounting and staging music-drama productions, with emphasis on acting and directing techniques. Prerequisite: consent of instructor. F 12-627 0 1004

651 (451). Advanced Conducting and Score Reading. (2). Baton technique, score reading and musicianship. Prerequisite: Mus. Perf. 217 (217) or 218 (218). F 12 651 0 1004

690. Special Topics in Music. (1-4). For individual or group instruction. May be repeated with departmental consent. F 12 690 2 1004

691 (491). 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 (217) or 218 (218). F 12 691 0 1004

Graduate Courses

807 (507-508). Piano Repertoire. (1). Designed to give performing and listening experience to piano performance majors. May be repeated for credit. F 12 807 2-1004

811 (511-512). Ensemble. (1). (A) orchestra, (B) band, (C) University Chorus, (D) Men's Glee Club, (F) University Singers and A Cappella Choir, (G) string ensemble, (H) brass ensemble, (J) piano accompaniment, (K) Opera Theater, (L) small vocal ensemble, (M) football band, (N) woodwind ensemble, (O) saxophone quartet, (Q) percussion ensemble. May be repeated for credit. F 12 811 1 1004

841 (541). Special Project in Music. (1-3). Individually supervised study or research, with emphasis upon the personal needs of the student. Prerequisite: consent of instructor. F 12 841 4 1004

842 (542). Special Project in Music. (1-3). Individually supervised study or research, with emphasis upon the personal needs of the student. Prerequisite: consent of instructor. F 12 842 4 1004

852 (552). Introduction to Graduate Study. (3). See course listing under musicology-composition department. F 13-852 0 1006

873 (573). Graduate Recital. (2). Performance of a full recital featuring the chief performing medium. Prerequisite: consent of instructors in applied area. F 12 873 4 1004

College of Fine Arts 209
The College of Health Related Professions was established in 1970. Eleven programs of study are presently offered, with the following six leading to the Bachelor of Science (BS) degree: nursing, medical technology, physical therapy, health care administration, dental hygiene and medical record administration. In addition, the Associate of Applied Science degree is awarded in dental hygiene, inhalation therapy and cytotechnology. The nurse clinician and physician's assistant programs do not presently receive academic credit, but a certificate of completion is awarded.

All formal health-related programs leading to a degree or certificate from Wichita State University are administered through the College of Health Related Professions. Its staff provides general counseling and assistance in career planning for all of the health-related professions just listed as well as veterinary medicine, dentistry, optometry, pharmacology, osteopathy, occupational therapy, radiologic technology, mortuary science and others.

**Policies**

**ADMISSION**

A student may be admitted to the College of Health Related Professions after he has completed 24 semester hours at Wichita State University or at other academically accredited colleges. Admission into this college does not guarantee that the student will be accepted into any of the professional programs of the college. Admission into a professional program can be granted by applying and being selected by the Admissions Committee of the particular program.

**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.

A student is placed on probation for the next semester in which he enrolls if his cumulative grade point average falls below 2.00. He will
remain on probation even if he earns a 2.00 or better average in the first
semester during which he is on probation but his cumulative grade point
average still does not meet the minimum standards. If, at the end of the
second semester of probation, his cumulative grade point average is 2.00
or above, he will be removed from probation.

A student on probation who fails to raise his cumulative grade point
average to 2.00 in his first probationary semester may be allowed a second
and final probationary semester. Then if he fails to raise his cumulative
grade point average to 2.00 at the end of this second probationary semes-
ter, he is subject to dismissal. A student on probation will also be dis-
missed for poor scholarship if he fails to earn at least a 2.00 grade point
average for any semester on probation.

A student dismissed for poor scholarship may be readmitted with
permission only after appealing to the college's Exceptions Committee.

A student on probation may not enroll for more than 12 semester hours
in a 15-week semester or five hours in Summer Session, excluding one
hour of military or air science, physical education or marching band.
Exceptions to this limitation may be made on the recommendation of the
students' adviser, with the approval of the dean of the college.

Students enrolled in the professional program of a department in the
college are subject to the probation and dismissal standards of that
department.

TRANSFER OF CREDIT WITHIN THE UNIVERSITY

Hours completed in other colleges at Wichita State may be transferred
for credit to the College of Health Related Professions when the work
offered is applicable to the curriculum, as specified by the college, and
if it constitutes progress toward the student's degree goal. Not more than
eight hours of credit for applied music or art courses may be transferred.

Degree Requirements

The Bachelor of Science degree and the Associate of Applied Science
degree are conferred by the college. The general requirements for
graduation listed elsewhere in the Catalog, combined with the require-
ments specified in the curriculum of the department in which the student
majors, apply to students seeking these degrees.

Financial Aid

Scholarships and student loan funds are available for students in health
related professions. Information on these and other scholarships and
loans is available from the Wichita State Office of Financial Aids and the College of Health Related Professions.

Health Professions

The survey course HP 101 (101) is open to anyone interested in the health related fields. This course is structured primarily for freshmen and is especially recommended for all College of Health Related Professions students. HP 208 (208) and 230 (230) are also open to qualified students not enrolled in the college when class space is available.

Lower Division Courses

101 (101). Introduction to Health Professions. (1). 1R. 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. Offered only in the fall. H 15 101 0-1201

208 (208). Pharmacology. (2). 2R. A survey of therapeutic terms, drug actions, dosage, toxicology and the application of drugs. H 15 208 0 1201

230 (230). Nutrition. (3). 3R. A study of human nutrition, composition and classification of foods, vitamins and their function, food and public health laws and disaster and space nutrition. A detailed application of nutrition knowledge to various conditions (prenatal, child, adult and aged) is given. Offered only in the fall. H 15 230 0 0424

BACCALAUREATE PROGRAMS

Dental Hygiene

The baccalaureate program in dental hygiene is designed for the registered dental hygienist who wishes to pursue dental hygiene education (option I), administration (option II) or advanced clinical skills (option III). Through the joint cooperation of the College of Health Related Professions, the College of Education and the College of Business Administration, the student may select one of these three options for his program of specialization. Upon satisfactory completion of two years of study in the selected option, the student is granted the BS degree in dental hygiene education.

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 2R; 3L means two hours of lecture and three hours of lab.
ADMISSION REQUIREMENTS

A student wishing to be admitted into the baccalaureate degree program in dental hygiene must submit an application by April 1 of the year in which he or she plans to enroll. In order to be permitted to enroll in the professional curriculum as a generic baccalaureate candidate, the student must have:

1. Graduated from an accredited school of dental hygiene;
2. Maintained a minimum grade point average of 2.00;
3. Completed all but 18 hours of the Wichita State core curriculum requirements;
4. Submitted the results of the National Board Examination for dental hygienists, a high school transcript, a complete college transcript, a letter of recommendation from the director of the dental hygiene program attended and pertinent medical and dental examination records;
5. Participated in a personal interview with the director of the Department of Dental Hygiene;
6. Applied for and obtained the approval of the Admissions Committee of the Department of Dental Hygiene. (Consideration is given to the applicant’s enthusiasm, interest, personal and professional maturity, and past working experience.)

PROFESSIONAL CURRICULUM

The baccalaureate degree program in dental hygiene has been divided into three options: option I, teaching; option II, administration; and option III, advanced clinical education. The student may select the option most applicable to his or her interest. Wichita State core curriculum requirements must be satisfactorily completed in addition to the courses in the chosen option.

The following courses are required for the appropriate options.

**Option I.** Admin. 683; DH 300, 350, 400, 450, 460; EAS 804 (504), 815 (515); Ed. Psych. 333 (333) or 731 (420), 433 (433), 461 (361); and Sec. Ed. 490 (322) and 752 (452).

**Option II.** Admin. 260 (260), 683; DH 300, 350, 400, 450, 460; EAS 804 (504), 815 (515); Ed. Psych. 333 (333) or 731 (420), 461 (361); Sec. Ed. 490 (322), 752 (452).

**Option III.** Admin. 683; DH 204 (205), 206 (206), 300, 310, 350, 400, 450, 460, 470; EAS 815 (515); Ed. Psych. 333 (333) or 731 (420); PT 360, 410.

PROGRESSION POLICY

A student must maintain a minimum grade point average of 2.00. In those courses in which theory and clinical practice are combined, unsatisfactory performance (D or F) in either category constitutes a failure
in the course. All courses must be taken in sequence unless otherwise approved by the director of the Department of Dental Hygiene. All students are required to purchase professional liability insurance.

**ADDITIONAL COSTS**

In addition to University fees, a student must furnish his or her uniforms, instruments and professional liability insurance.

**Lower Division Courses**

204 (205). Periodontics I. (2). 2R. Lecture and visual aid presentation on the etiology and classification of periodontal disease. Periodical review of current periodontal research is made. Offered only in the fall. Prerequisite: departmental consent. H 12 204 0 5203

206 (206). Periodontics II. (2). 1R; 3L. Treatment of the periodontally involved patient—advanced scaling and root planing procedures are demonstrated and performed on appropriate patients. Offered only in the spring. Prerequisite: departmental consent. H 12 206 0 5203

**Upper Division Courses**

350. Dental Hygiene Practicum II. (2). 6P. A continuation of DH 300. Offered only in the spring. Prerequisite: departmental consent. H 12 350 2 1213

400. Dental Hygiene Practicum III. (4). 12P. A continuation of DH 350. Offered only in the fall. Prerequisite: departmental consent. H 12 400 2 1213

450. Dental Hygiene Practicum IV. (2). 6P. Continuation of DH 400. Offered only in the spring. Prerequisite: departmental consent. H 12 450 2 1213

460. Special Problems in Dental Hygiene. (3). 3R. A study of the requirements and guidelines for establishing dental hygiene schools, including the methods and standards of accreditation and admission procedures for schools of dental hygiene. Offered only in the spring. Prerequisite: departmental consent. H 12 460 0 1213

470. Seminar in Advanced Practice—Pain Control. (4). 3R; 3L. An in-depth study and review of the head and neck anatomy, physiology and pharmacology as they relate to local anesthesia. Laboratory section is provided. Offered only in the spring. Prerequisite: departmental consent. H 12 470 0 1213

**Health Care Administration**

Health care administrators are needed in many types of health facilities—nursing homes; doctors' clinics; community health clinics; federal, state

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture; L stands for laboratory; and P for practicum. For example, 3R; 3L means three hours of lecture and three hours of lab. The hours of practicum per week are given in front of the letter; 6-8P means six to eight hours of practicum per week.

*College of Health Related Professions* 215
and local health agencies; regional planning councils; health insurance organizations; and colleges or other schools. The health care administration program is designed to prepare the student as a qualified health care administrator in one of the selected areas. Upon satisfactory completion of the courses, as outlined, plus eight weeks (one summer) of practicum in a selected area, the student will receive the BS degree. Additional information regarding the selected areas of special emphasis can be obtained from the director of the Department of Health Care Administration, College of Health Related Professions.

PREPROFESSIONAL CURRICULUM

Wichita State core curriculum requirements must be satisfactorily met. In addition the following courses are required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Acctg. 210 (213), Introduction to Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 220 (214), Introduction to Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Admin. 260 (260), Concepts of Administration</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 201 (221), Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 202 (222), Principles of Economics II</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 231 (BA 231), Introductory Business Statistics</td>
<td>3</td>
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<tr>
<td>HP 101 (101), Introduction to Health Professions</td>
<td>1</td>
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<tr>
<td>HP 230 (230), Nutrition</td>
<td>3</td>
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<tr>
<td>Math. 111 (140), College Algebra</td>
<td>3</td>
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<tr>
<td>Psych. 111 (111), General Psychology</td>
<td>3</td>
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<tr>
<td>Soc. 211 (211), Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 100 (100) or 112 (112), Principles of Biology or Introductory Zoology</td>
<td>4</td>
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Students may transfer from a junior or senior college to the Department of Health Care Administration if the above requirements are met.

PROFESSIONAL CURRICULUM

Admission. In order to be permitted to enroll in the health care administration curriculum, the student must fulfill the following requirements.

The student must:
1. Have completed or be enrolled in the required lower division courses;
2. Have an overall grade point average of 2.25 or above in all college work completed;
3. Receive consent from the Admissions Committee of the Department of Health Care Administration.

Students interested in being admitted to the department should apply during the second semester of their sophomore year.

Curriculum. Once admitted, the student must take the following courses to major in health care administration:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 320 (335), Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Admin. 343 (343), Finance</td>
<td>3</td>
</tr>
</tbody>
</table>
PROGRESSION POLICY

A grade of C or better is required in all of the professional courses in health care administration. A student who receives a D or F in a course listed as a required course whose overall academic record remains at 2.25 or above and who desires to continue in the program may petition in writing to the Committee on Admissions of the Department of Health Care Administration. If reinstated the student must satisfactorily repeat all courses in which he received a D or F before he may progress in the program.

Upper Division Courses

410. Analysis of Problems in a Health Care Facility I. (3). 3R. Orientation to a health care facility. The course concentrates on the analysis of the principles of management and the administration, supervision and application of these principles to a nursing home environment. The duties and relationship of the administrator to the governing body, medical staff and social agencies are studied. Current trends of medical care as they relate to the health care facility are also investigated. Prerequisite: senior standing or departmental consent. Offered only in the fall. H 21 410 0 1202

420. Analysis of Problems in a Health Care Facility II. (3). 3R. A continuation of HCA 410. Prerequisite: HCA 410. Offered only in the spring. H 21-420 0 1202

440. Health Care Administration Practicum. (6). 40P. A course providing the student with an opportunity for field experience in the health care system. The student must select, with the consent of his adviser, a specific internship in one of the following special areas of health care administration: nursing home administration, governmental health agency administration, voluntary health agency administration or hospital departmental administration. A written report is required. Offered only in Summer Session. Prerequisite: senior standing or departmental consent. H 21 440 2 1202
490. Independent Study in Health Care Administration. (1-4). Supervised intensive study of special topics and problems relating to health care delivery. Offered only in fall and spring. Prerequisite: departmental consent. May be repeated up to six hours. H 21 490 3 1202

550. Psychology of Illness. (3). The study of an individual in a social context. The course is designed to investigate abnormal behavior caused by disease and to familiarize the student with behavioral patterns in illness and in the process of human aging. The psychological effects of illness on the individual, his family and the community in which he lives are also included. H 21 550 0 2003

590. Legal Aspects of Health Care Administration. (3). 3R. A study of the principles of law as they apply to the health fields. Such items as release of information, subpoena, records and testimony; settlement of claims (insurance); doctor-patient-nursing home relationship and legal consents; and other topics are considered. Prerequisite: junior standing or departmental consent. Offered only in the spring. H 21 590 0 1202

Medical Record Administration

The baccalaureate program is designed to prepare administrators for medical records departments. After completing a three-year preprofessional sequence at Wichita State University, a student 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 either KUMC or Wichita State and that are approved by the American Medical Record Association. After completing these requirements, the student receives the BS degree in medical record administration from Wichita State and is eligible to become registered by successfully completing the registration examination given by the American Medical Record Association.

PREPROFESSIONAL CURRICULUM

The following courses are required for the preprofessional curriculum. In addition the student must satisfy University core requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin. 260 (260), Concepts of Administration</td>
<td>4</td>
</tr>
<tr>
<td>Admin. 366 (462), Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>Admin. 663 (463), Organizational Interactions</td>
<td>3</td>
</tr>
<tr>
<td>Admin. 683, Comparative Institutional Management</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 100 (100) or 112 (112), Principles of Biology or Introductory Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 120 (120), Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 223 (223), Introductory Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 238 (238), Introductory Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101 (111), College English I</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 102 (211), College English II</td>
<td>3</td>
</tr>
<tr>
<td>HCA 550, Psychology of Illness</td>
<td>3</td>
</tr>
<tr>
<td>HP 101 (101), Introduction to the Health Professions</td>
<td>1</td>
</tr>
</tbody>
</table>
IE 440, Statistical Analysis in the Health Service .......................... 3
IE 560, Health Information Systems and Computers in Medicine ............... 3
Math. 111 (140), College Algebra ............................................. 3
Nurs. 311 (311), Community Health Concepts .................................. 3
Phil. 121 (121), Introduction to Philosophy .................................. 3
Phil. 244 (244), Ethics ................................................................ 3
Psych. 111 (111), General Psychology ........................................... 3
Soc. 211 (211), Introduction to Sociology ..................................... 3
Speech 111 (111), Basic Public Speaking, or 112, Basic Interpersonal Communication .............................................................. 3
Science Elective ........................................................................... 3

PROFESSIONAL CURRICULUM

Admission. Graduates of accredited high schools who are eligible for admission to Wichita State may be admitted to the four-year program leading to the BS degree in medical record administration.

Students who have taken college work at Wichita State or other accredited colleges may apply for transfer into the four-year program between February 1 and March 15 of their sophomore year. Notification of acceptance is made by April 1 of the sophomore year. Such students must:

1. Submit original, official transcripts of high school and college work from each institution attended;
2. Present a scholarship record acceptable to the Department of Medical Record Administration Admissions Committee (2.00 grade point average is needed);
3. Appear before the department's admissions committee for a personal interview.

Transfer must be accomplished by the beginning of the junior year or in sufficient time for the student to complete the general degree requirements and obtain the necessary approval for continuing in the medical record administration program at KUMC.

Curriculum. The professional curriculum courses are offered by the University of Kansas and may be found in its catalog. The courses applicable to this program are Medical Terminology, Medical Record Science I and Laboratory, Organization and Administration I, Directed Practice I, Medical Record Science II and Laboratory, Fundamentals of Medical Science, Organization and Administration II, Legal Concepts for the Health Field, Directed Practice II, Medical Record Science III, Directed Practice and Affiliation, Seminar in Medical Record Administration and Laboratory Experience.

Medical Technology

The curriculum in the Department of Medical Technology prepares men and women to become professional medical technologists. The first
three years of the medical technology curriculum are designed to provide a broadly based background in chemistry and the biological sciences. The fourth academic year—12 months in length—is spent in a combined tutorial-didactic experience in an affiliated, approved school of medical technology. Upon the successful completion of the academic course work and directed clinical laboratory experience, the student is granted a BS degree in medical technology and is eligible to take the qualifying examination of the Registry of Medical Technologists, MT(ASCP).

PREPROFESSIONAL CURRICULUM

Wichita State core curriculum requirements must be satisfactorily completed. In addition, the following premedical-technology courses are required.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol. 112 (112), Introductory Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 201 (201), Introductory Cellular Biology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 550 (301), Bacteriology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 584 (401), Genetics</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 590 (424), Immunobiology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 654 (302), Pathogenic Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Courses covering mammalian anatomy and physiology</td>
<td>5-9</td>
</tr>
<tr>
<td>Chem. 111 (111), General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112 (112), General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 523 (323), Introductory Analytical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 531 (331), Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 532 (332), Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 112 (141) or 111 (140) and 123 (139), College Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>Electives (selected from the areas of biology, chemistry, mathematics, physics and others approved by adviser)</td>
<td>12</td>
</tr>
</tbody>
</table>

PROFESSIONAL CURRICULUM

Admission. In order to enroll in the medical technology professional curriculum, the student must:

1. Have completed all University and departmental requirements for graduation;
2. Be accepted by an affiliated school of medical technology of the American Society of Clinical Pathologists.

At the present time, the Department of Medical Technology of the College of Health Related Professions is affiliated with the hospital programs at St. Francis Hospital, St. Joseph Hospital and Rehabilitation Center and Wesley Medical Center—Wichita, Kansas; St. Mary's Hospital—Enid, Oklahoma; and Jane Phillips Episcopal-Memorial Medical Center—Bartlesville, Oklahoma. Revision of the list occurs periodically, and additional information may be obtained from the chairman of the Department of Medical Technology. The student should apply to the hospital of his choice well in advance of the completion of his junior year.
In order to properly certify graduation credits, the dean of the College of Health Related Professions must be kept informed by the student of where he plans to take his final 30 credit hours of professional training. Curriculum. Students enrolled in the hospital-based clinical courses must take them in the designated sequence. Rotation through the clinical areas during the semester may not correspond with the courses in which the student is enrolled. However, by the end of the clinical year, all courses will be covered. Grades are reported to the registrar by the education coordinator of the school.

**PROGRESSION POLICY**

Students must maintain a minimum grade point average of 2.00 in the required premedical-technology courses, and this requirement serves as a prerequisite to clinical training. Students must also maintain a 2.00 (C) average in the courses taught during the 12 months of clinical training.

**Upper Division Courses**

400. Special Topics. (3). A study of general laboratory techniques, including clinical microscopy, cytogenetics, urinalysis, nuclear medicine, histology and a special project, depending upon the clinical facility. Offered only in the fall. H 14 400 2 1223

411. Hematology. (4). A combined theory and practice course that emphasizes the diagnosis of hematologic diseases by laboratory methods. Offered only in the summer. H 14 411 2 1223

413. Coagulation. (2). Combined theory and practice course covering aspects of bleeding disorders and associated diagnostic laboratory procedures utilized in the evaluation of factor deficiencies. Offered only in Summer Session. H 14 413-2 1223

421. Serology. (2). A study of the theory and techniques of various serological procedures dealing with immunologic responses to infectious and autoimmune diseases. Offered only in the fall. H 14 421 2 1223

422. Immunohematology. (4). Course includes the theory and laboratory procedures covering the basic and advanced principles of immunohematology and following AABB-approved transfusion practices. Offered only in the spring. H 14 422 2 1223

430. Clinical Biochemistry. (7). A study of routine and special clinical chemistry procedures and their significance in clinical medicine. Offered only in the fall. H 14 430 2 1223

440. Clinical Microbiology. (8). Includes combined theory and practice covering: (a) morphological, cultural and serological characteristics of the pathogenic bacteria, parasites and fungi; and (b) techniques required for processing specimens and for identifying organisms encountered in clinical material. Offered only in the spring. H 14 440 2 1223

**Nursing**

The baccalaureate program is designed to prepare a practitioner for beginning roles in professional nursing. The nurse may build upon this

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When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
basic professional foundation with additional graduate study and prepare for clinical specialization, teaching, administration or research. Unless indicated, all courses with a nursing prefix are required. The student in nursing is encouraged to develop a minor in a related field, including such fields as anthropology, psychology or sociology. A minor usually consists of 15 hours, but requirements for the minor should be checked with the specific department. Men and women interested in the baccalaureate nursing program should direct their inquiries to the chairman of the Department of Nursing, Wichita State University.

**PREPROFESSIONAL CURRICULUM**

Wichita State core curriculum requirements must be satisfactorily completed, which may include the following required prenursing courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro. 202 (202), Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 100 (100) or 112 (112), Principles of Biology or Introductory Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 120 (120), Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 223 (223), Introductory Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 103 (103) or 111 (111), General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 111 (140) or 331 (121), College Algebra or Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 111 (111), General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 361 (260), Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 211 (211), Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

The student may transfer from a junior or senior college to the Department of Nursing if these requirements are met.

**PROFESSIONAL CURRICULUM**

Admission. A student may apply for admission to the Department of Nursing after satisfactorily completing the first three semesters of college work; the application must be received by March 1 of the year in which enrollment is anticipated. In order to be permitted to enroll in the professional nursing curriculum as a generic baccalaureate candidate, the student must:

1. Have completed or be enrolled in his fourth semester in which he will fulfill the lower division requirements;
2. Have an overall grade point average of 2.00 or above in all collegiate work completed;
3. Receive the consent of the Admission and Progression Committee of the Department of Nursing.

Before being admitted to the Department of Nursing, a registered professional who is interested in completing the baccalaureate degree in nursing must:

1. Have completed all of the Wichita State core curriculum requirements and the required prenursing courses;
2. Have an overall grade point average of 2.00 or above in all college work completed;
3. Submit a photocopy of his or her current license to practice as a registered professional nurse;
4. Submit an official transcript from his or her school of nursing;
5. Receive the consent of the Admission and Progression Committee of the Department of Nursing.

Credit by Examination. Registered nurses who have met all of the necessary requirements are allowed to take advanced standing examinations for credit in some of the required nursing courses. In no instance may the candidate be allowed to obtain more than 33 hours in the nursing major by examination. Credit is granted only if a grade of C or better is obtained on the examination. A fee of $7.00 per credit hour is assessed for the advanced standing examination and must be paid before the student can obtain study material from the Department of Nursing. A total of 124 hours of credit is required of all candidates for the degree in nursing.

Curriculum. The following courses from the nursing professional curriculum are required for the BS degree in nursing: Nursing 301 (301), 311 (311), 315 (421), 322 (322), 324 (312), 326 (314), 328 (413), 330 (411), 432 (432), 442 (442) and 460 (460).

Progression Policy. To progress in the professional sequence, a grade of C or better must be earned in all nursing courses that constitute the nursing major. In those courses in which theory and clinical practice are combined, unsatisfactory performance (D or F) in either category constitutes a failure in the course. Students who receive a D or F in any course in the nursing major may not progress in the professional sequence. A student who receives a D or F in a course in the nursing major whose overall academic record remains at 2.00 or above and who desires to continue in the program may petition in writing to the Department of Nursing Committee on Admissions and Progression. If reinstated, the student must satisfactorily (C or better) repeat the course in which a D or F was received before being permitted to progress in the nursing program.

SPECIAL REQUIREMENTS

Students are required to purchase uniforms and other apparel needed during clinical learning experiences. Students are also required to purchase professional liability insurance in the amount of $100,000/300,000. 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 Department of Nursing office.
Lower Division Courses


Upper Division Courses

301 (301). Core Concepts of Nursing. (6). 3R; 3L. A combined theory and practice course in which the beginning professional student is provided the opportunity to develop the basic knowledge, understanding and skills requisite to professional nursing practice. Emphasis is given to the professional role and responsibilities, technical skills requisite to non-complex nursing care, communication and interpersonal relationships, the community concept of health care, rehabilitation and health teaching. Prerequisite: departmental consent. H 11 301 1 1203

311 (311). Community Health Concepts. (3). An introduction to the foundations of public health, biostatistics, epidemiology, ecology, community organizations and organization for health services. Prerequisite: departmental consent. Open to nonnursing majors. H 11 311 0 1214

315 (421). Ecology of the Profession. (3). A study of the evolution of nursing as a profession and current perspectives appraised historically within the social, cultural, economic and political developments of the times. Prerequisite: departmental consent. H 11 315 0 1203

318 (318). Human Communication in the Health Disciplines. (3). Elective. An examination of the pragmatics of human communication theories and concepts relevant to providing health care. Verbal and nonverbal aspects of interpersonal and interpersonal communication are presented. Included are professional-patient relationships, teaching and interviewing techniques, and health team concepts. Prerequisite: departmental consent. Open to nonnursing majors. H 11 318 0 1203

320 (320). Directed Study in Nursing. (1-3). Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable. Prerequisite: departmental consent. H 11 320 3-1203


324 (312). Nursing Care of the Adult. (6). 3R; 3L. A combined theory and practice course in which the student is assisted in acquiring knowledge and skills requisite to assessing the nursing needs of adult patients with medical and/or surgical problems and in planning for, giving and evaluating the nursing care based on this assessment. Special consideration is given to the prevention of illness, patient teaching, rehabilitation and the effect of individual differences and pathophysiology upon the therapeutic plan of nursing care. Learning experiences are provided in a variety of health care agencies. Prerequisite: departmental consent. H 11-324 1 1203

326 (314). Pathophysiology. (3). A course in which knowledge gained from the basic sciences is utilized in anticipating the physiologic changes associated with gross pathology. The principles underlying selected therapeutic measures are studied as they relate to various pathologic conditions. The student uses this information in predicting health care needs of patients and in planning to meet

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L stands for three hours of lecture and three hours of lab.
these needs. Prerequisite: departmental consent. Open to nonnursing majors. H 11 328 0 1203

328 (413). Nursing Care of the Mother and Infant. (6). 3R; 3L. A combined theory and practice course that is designed to present the childbearing continuum as it involves the entire family. Specific emphasis is placed on the mother and newborn, including both the normal and the deviations from the normal. The student has the opportunity to work with families in selected hospital and community settings. Prerequisite: departmental consent. H 11 328 1 1203

330. (411). Nursing Care of the Child. (6). 3R; 3L. A combined theory and practice course in which the student has opportunity to study the child’s growth and development from infancy through adolescence, with emphasis on the effects of various health problems on the child and his family. The total family organization is studied in relation to its influence on both the well and ill child. Opportunity for nursing practice is provided in selected hospital or community settings. Prerequisite: departmental consent. H 11 330 1 1203

432 (432). Community Health Nursing. (6). 3R; 3L. A combined theory and practice course in which the student has an opportunity to apply concepts and principles of community health previously acquired, utilizing a family-centered approach within the framework of both private and public community health care agencies. Emphasis is given to helping the student develop an understanding and appreciation of an interdisciplinary approach to meeting community health needs. Prerequisites: Nursing 311 (311). H 11 432 1 1203

442 (442). Nursing Leadership. (6). 3R; 3L. A combined theory and practice course in which the senior student studies and applies nursing management and leadership principles in a variety of nursing situations. Included in the course are styles of leadership, performance appraisal techniques and administrative functions necessary to prepare for independent and creative participation in the community’s changing health problems. Prerequisite: senior standing or departmental consent. H 11 442 1 1203

450 (450). Workshop in Health Related Professions. (1-4). Elective. An examination of relevant topics directly and/or indirectly related to the delivery of health care service. Open to nonnursing majors. H 11 450 2 1201

460 (460). Nursing Research. (3). A presentation of introductory research methodology as a basis for investigating special nursing problems. The course also includes critical evaluation of selected nursing studies and utilizes the research process as a basis for developing a questioning attitude toward nursing practices and implementing change. Prerequisite: senior standing or departmental consent. H 11 460 4 1203

Physical Therapy

The baccalaureate degree program in this department is designed to prepare the student as a qualified physical therapist. The program includes two years of prephysical therapy study in the basic sciences, social sciences and humanities plus two years (four semesters plus one summer) in more advanced science courses, professional study and clinical education. This program is not eligible for accreditation until 1975. Following the satisfactory completion of an accredited program, the student is eligible to complete the examination required for state licensure.
PREPROFESSIONAL CURRICULUM

Wichita State University core curriculum requirements must be satisfactorily completed. In addition, the following prephysical therapy courses are required.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro. 202 (202), Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 112 (112), Introductory Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 201 (201), Introductory Cellular Biology</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 111 (111), General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112 (112), General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 112 (141), or 111 (140) and 123 (139), College Algebra and Trigonometry or College Algebra and College Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>Phys. 213 (123), General College Physics</td>
<td>5</td>
</tr>
<tr>
<td>Phys. 214 (124), General College Physics</td>
<td>5</td>
</tr>
<tr>
<td>Psych. 111 (111), General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 311 (211) or 312 (212), or 347 (246) or 361 (260), Advanced General Psychology, or Social Psychology or Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 211 (211), Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

Students pursuing prephysical therapy at a junior or senior college other than Wichita State University are expected to complete comparable course work.

PROFESSIONAL CURRICULUM

Admission. In order to be permitted to enroll in the physical therapy professional curriculum, the student must:

1. Be enrolled or admitted to the University;
2. Have submitted to the Department of Physical Therapy Admissions Committee all application forms distributed by the department by March 1 of the year the student plans to enter the professional curriculum.
3. Have completed or be enrolled in the fourth semester of the prephysical therapy curriculum;
4. Have a minimum cumulative grade point average of 2.50, including a 2.50 minimum grade point average in the required science courses;
5. Be personally interviewed by the Department of Physical Therapy Admissions Committee, submit any additional information requested by the committee and obtain the approval of the committee.

The student may petition the committee for an exception to one of these requirements, provided he is able to show that valid circumstances prevented him from complying with that requirement.

Curriculum. The following courses are required of students accepted into the professional phase of the physical therapy program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol. 534, Mammalian Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 535, Mammalian Physiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>BIOL 538</td>
<td>Neurophysiology and Neuroanatomy</td>
</tr>
<tr>
<td>HCA 550</td>
<td>Psychology of Illness</td>
</tr>
<tr>
<td>HP 208</td>
<td>Pharmacology</td>
</tr>
<tr>
<td>NURSING 311</td>
<td>Community Health Concepts</td>
</tr>
<tr>
<td>PT 301</td>
<td>Introduction to Physical Therapy</td>
</tr>
<tr>
<td>PT 302</td>
<td>Clinical Experience I</td>
</tr>
<tr>
<td>PT 310</td>
<td>Gross Anatomy</td>
</tr>
<tr>
<td>PT 312</td>
<td>Clinical Experience II</td>
</tr>
<tr>
<td>PT 320</td>
<td>Applied Biomechanics</td>
</tr>
<tr>
<td>PT 360</td>
<td>Basic Medical Science I</td>
</tr>
<tr>
<td>PT 370</td>
<td>Theory and Technique of Physical Therapy I</td>
</tr>
<tr>
<td>PT 410</td>
<td>Basic Medical Science II</td>
</tr>
<tr>
<td>PT 420</td>
<td>Theory and Technique of Physical Therapy II</td>
</tr>
<tr>
<td>PT 422</td>
<td>Clinical Experience III</td>
</tr>
<tr>
<td>PT 430</td>
<td>Physical Therapy Evaluation Procedures</td>
</tr>
<tr>
<td>PT 432</td>
<td>Clinical Experience IV</td>
</tr>
<tr>
<td>PT 442</td>
<td>Clinical Internship</td>
</tr>
<tr>
<td>PT 460</td>
<td>Management of Human Disease</td>
</tr>
<tr>
<td>PT 470</td>
<td>Theory and Techniques of Physical Therapy III</td>
</tr>
<tr>
<td>PT 480</td>
<td>The Physical Therapist in Practice</td>
</tr>
</tbody>
</table>

**SPECIAL REQUIREMENTS**

A grade of C or better is required in all physical therapy courses. In those courses in which lecture and laboratory are combined, a grade of D or F in either constitutes failure of the course. A grade of D or F in any physical therapy class disqualifies the student from progression in the professional curriculum. He must reapply to the Department of Physical Therapy Admissions Committee before being allowed to repeat the course.

Progression in the physical therapy curriculum is as follows: PT 301, 302, 310, 312, 320, 360, 370, 410, 420, 422, 430, 432, 460, 470, 480 and 442.

All physical therapy students are required to purchase professional liability insurance that is effective during the two years of the professional program.

**ADDITIONAL COSTS**

Costs in addition to books, supplies and University fees include uniforms, liability insurance and transportation to physical therapy clinics.

**Upper Division Courses**

301. Introduction to Physical Therapy. (1) 1R. Introduction to techniques, personal and professional ethics, opportunities, responsibilities and supportive personnel in physical therapy. Offered only in the fall. Prerequisite: departmental consent. H 17 301 0 1212


emphasis on the skeletal and muscular systems. Laboratory (section A) includes dissection of the human cadaver. Offered only in the fall. Open to nonphysical-therapy majors. Prerequisite: departmental consent. H 17 310 0 0412

312. Clinical Experience II. (1). 4P. Application of the skills acquired in PT 370 to patients in physical therapy clinics in Wichita. Supervision is made by the chief physical therapist at each clinic. Prerequisite: departmental consent. H 17 312 2 1212

320. Applied Biomechanics. (3). 3R. Analysis of the integration of the systems of the body to produce normal motion and the effects of dysfunction on normal motion. Prerequisite: departmental consent. H 17 320 0 1212

360. Basic Medical Science I. (3). 3R. A study of the prevention, etiology, clinical picture, diagnostic procedures, treatment and prognosis of various pathological conditions. Open to nonphysical-therapy majors. Prerequisite: departmental consent. H 17 360 0 1201

370. Theory and Technique of Physical Therapy I. (6). 3R; 9L. The presentation of indications, contraindications, physiological effects and methods of application of physical therapy procedures. Prerequisite: departmental consent. H 17 370 0 1212

410. Basic Medical Science II. (3). 3R. Continuation of PT 360. Additional pathological conditions commonly encountered by physical therapists and other health professionals are studied. Prerequisite: departmental consent. Open to nonphysical-therapy majors. H 17 410 0 1201

420. Theory and Technique of Physical Therapy II. (5). 3R; 6L. Continuation of PT 370. Prerequisite: departmental consent. H 17 420 0 1212

422. Clinical Experience III. (2). 8P. Continuation of PT 312. Prerequisite: departmental consent. H 17 422 2 1212

430. Physical Therapy Evaluation Procedures. (3). 2R; 3L. A presentation of tests and measurements of function utilized by physical therapists, including electrodagnosis and electromyography. Offered only in the fall. Prerequisite: departmental consent. H 17 430 0 1212

432. Clinical Experience IV. (3). 12P. Continuation of PT 422. Prerequisite: departmental consent. H 17 432 2 1212

442. Clinical Internship. (6). 40P. Full-time assignments to physical therapy clinics where the student is responsible for patient evaluation and the planning, administration and evaluation of treatment programs under supervision. Offered only in Summer Session. Prerequisite: departmental consent. H 17 442 2 1212

460. Management of Human Disease. (3). 3R. An exploration of medical, surgical and physical therapy treatment of selected disorders and the criteria used in the selection of specific physical therapy procedures. Offered only in the spring. Prerequisite: departmental consent. H 17 460 0 1212

470. Theory and Technique of Physical Therapy III. (4). 2R; 6L. Continuation of PT 420. Prerequisite: departmental consent. H 17 470 0 1212

480. The Physical Therapist in Practice. (2). 2R. A study of administrative, supervisory, organizational, consultative, educational and research roles of a physical therapist, including professional relationships and communication, current trends in physical therapy and health care, employment opportunities and legal responsibilities. Offered only in the spring. Prerequisite: departmental consent. H 17 480 0 1212

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course’s previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, L for laboratory and P for practicum. For example, 3R; 9L stands for three hours of lecture and nine hours of lab. The hours of practicum per week are given in front of the letter; 4P means four hours of practicum per week.
ASSOCIATE PROGRAMS

Cytotechnology

The curriculum of the cytotechnology department is designed for men and women who wish to become professional cytotechnologists and work with pathologists in the detection of malignancy, or cancer cells, in various body fluids or in the identification of changes in cast-off body cells. The first two years of the program include the University core curriculum and certain science courses that serve as prerequisites for entering the clinical year. The third year of training is spent in an approved hospital under the supervision of a specially trained pathologist and includes formal lectures and laboratory experience in the field. After this year, the student is eligible to take the registry examination in cytotechnology to qualify for certification as a registered cytotechnologist—CT (ASCP).

PREPROFESSIONAL CURRICULUM

As a minimum, a student must have two years of college, or a total of 60 semester credit hours, with 12 hours in the biological sciences in order to be admitted to the clinical year. At least eight hours taken in the biological sciences should include laboratory experience. Although not obligatory for admission into an approved school of cytotechnology, the following program sequence is recommended because of the added emphasis on cellular biology and genetics, which prepares the student for a better understanding of the technical and clinical aspects of cytotechnology.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol. 112 (112), Introductory Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 201 (201), Introductory Cellular Biology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 223 (223), Introductory Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 584 (401), Genetics</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 111 (111), General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112 (112), General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 101 (111), College English I</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 102 (211), College English II</td>
<td>3</td>
</tr>
<tr>
<td>Math. 111 (140), or 112 (141), or 331 (121), College Algebra, or College Algebra and Trigonometry, or Discrete Mathematics</td>
<td>3-5</td>
</tr>
<tr>
<td>Psych. 111 (111), General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 211 (211), Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111 (111), Basic Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

PROFESSIONAL CURRICULUM

Admission. The student must be accepted for the third year of training by an affiliated school of cytotechnology that is accredited by the
Council on Medical Education of the American Medical Association and the American Society of Clinical Pathologists through its Committee on Cytotechnology and Board of Schools of Medical Technology. At the present time, schools of cytotechnology in Wichita are located at St. Francis Hospital and Wesley Medical Center.

**Professional Curriculum.** The courses listed at the end of this section are supplied by the hospital at which the student is accepted for the final year of training.

**SPECIAL REQUIREMENTS**

Students must maintain a minimum grade point average of 2.00 in biology, chemistry and mathematics. Students must also maintain a C (2.00) average in the courses taught during the 12 months of clinical training.

**Upper Division Courses**

401 (401). Introduction to Histology and Pathology. (3). Lectures and demonstrations in basic histology and pathology of anatomical systems studied in diagnostic cytology. Offered only in the fall. H 16 401 2 5299

405 (405). Diagnostic Cytology of Female Reproductive System. (6). Microscopic study and diagnosis of benign and malignant cells found in smears and aspirations from female genital tract. Offered only in the fall. H 16 405 2 5299

411 (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. H 16 411 2 5299

414 (414). Diagnostic Cytology of Effusions. (2). Microscopic study and diagnosis of benign and malignant cells in pleural, peritoneal, pericardial and cerebrospinal fluids. Offered only in the spring. H 16 414 2 5299

416 (416). Diagnostic Cytology of Gastrointestinal System. (2). Microscopic study and diagnosis of benign and malignant cells found in cytological specimens from mouth, esophagus, stomach, colon and rectum. Offered only in the spring. H 16 416 2 5299

418 (418). Diagnostic Cytology of Urinary System. (2). Microscopic study and diagnosis of benign and malignant cells found in urinary specimens. Offered only in the spring. H 16 418 2 5299

420 (420). Diagnostic Cytology of Breast and Other Miscellaneous Sites. (2). Microscopic study and diagnosis of benign and malignant cells found in breast secretions, joint fluids, skin, cysts and other miscellaneous sites. Offered only in the spring. H 16 420 2 5299

423 (423). Journal Seminars and Cytology Research. (3). Participation in journal seminars and research in selected topics of diagnostic cytology. Offered only in the spring. H 16 423 9 5299

427 (427). Methodology. (5). Routine and special methods in collection and processing of specimens for cytology, cytogenetics and histology. Offered only in Summer Session. H 16 427 2 5299

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
Dental Hygiene

The associate program in dental hygiene provides the student with a knowledge of the social, dental and clinical sciences and technical skills applied by the dental hygienist in contributing to the attainment of good oral health for all people. Upon completion of the five-semester program, the student receives the Associate of Applied Science degree in dental hygiene and is eligible to take the national, regional and state examinations for licensure as a dental hygienist. The Wichita State program is fully accredited by the Council on Dental Education of the American Dental Association.

ADMISSION REQUIREMENTS

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 Related Professions does not guarantee admission into the dental hygiene department. An application must be on file in the dental hygiene office not later than February 1 for fall admittance. Men and women interested in the dental hygiene program should direct their inquiries to the chairman of the Department of Dental Hygiene, Wichita State University.

To qualify for admission to the dental hygiene program, the applicant must be a high school graduate or have passed the General Education Development (GED) test. Recommended high school courses are mathematics, biology, chemistry and physical science.

The following admission criteria apply to both high school graduates and the college students. A student must:

1. Have taken subjects relevant to health professions (science, chemistry, physiology, biology and so on);
2. Maintain a minimum grade point average of 2.00 in all college work and high school work completed;
3. Have satisfactory results on the American College Test;
4. Have taken the Dental Hygiene Aptitude Test, administered nationally three times a year (November, February and May);
5. Submit transcripts from all educational institutions attended;
6. Submit the application form provided by the school by February 1.

The student must also have a scheduled personal interview with the department's committee on admissions. The interview is used to determine the 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, the student should obtain experience or observe in a dental office prior to or concomitant with his application to the dental hygiene program.

College of Health Related Professions 231
## CURRICULUM

The following curriculum is followed by dental hygiene students.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Biol. 100 (100), Principles of Biology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 120 (120), Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 223 (223), Introductory Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 103 (103), General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>DH 100 (100), Embryology, Histology and Oral Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>DH 101 (101), Preclinical Dental Hygiene</td>
<td>4</td>
</tr>
<tr>
<td>DH 102 (102), Clinical Dental Hygiene I</td>
<td>4</td>
</tr>
<tr>
<td>DH 104 (104), Clinical Radiology</td>
<td>2</td>
</tr>
<tr>
<td>DH 206 (106), General and Oral Pathology</td>
<td>3</td>
</tr>
<tr>
<td>DH 107 Dental Materials</td>
<td>2</td>
</tr>
<tr>
<td>DH 302 (201), Clinical Dental Hygiene II</td>
<td>4</td>
</tr>
<tr>
<td>DH 303 (202), Clinical Dental Hygiene III</td>
<td>5</td>
</tr>
<tr>
<td>DH 304 (205), Periodontics I</td>
<td>2</td>
</tr>
<tr>
<td>DH 306 (206), Periodontics II</td>
<td>2</td>
</tr>
<tr>
<td>DH 307 (207), Ethics and Jurisprudence</td>
<td>2</td>
</tr>
<tr>
<td>DH 309 (209), Community Dental Hygiene</td>
<td>2</td>
</tr>
<tr>
<td>Eng. 101 (111), College English I</td>
<td>3</td>
</tr>
<tr>
<td>HP 208 (208), Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>HP 230 (230), Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 311 (311), Community Health Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 111 (111), General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 211 (211), Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111 (111), Basic Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

Most college credits previously earned are transferable, and transferred courses need not be repeated. However, this does not shorten the length of the program.

## PROGRESSION POLICY

To progress in the professional sequence, a grade of C or better is required in all dental hygiene courses. In those courses in which lecture and laboratory are combined, a grade of D or F in either constitutes failure of the course. A grade of D or F in any dental hygiene class—whether lecture, laboratory or clinic—disqualifies a student from progression in the professional curriculum. The student must reapply to the Department of Dental Hygiene Admissions Committee before being allowed to repeat the course.

Progression in the dental hygiene curriculum is as follows: DH 100 (100), 101 (101), 102 (102), 104 (104), 107 (107), 206 (106), 302 (201), 303 (202), 304 (205), 306 (206), 307 (207) and 309 (209).

## ADDITIONAL COSTS

The student will incur costs for uniforms and shoes, liability insurance and instruments in addition to University fees and tuition. Upon acceptance by the Admissions Committee, the student is required to submit a $50.00 nonrefundable deposit.
Lower Division Courses

100 (100). Embryology, Histology and Oral Anatomy. (5). 3R; 4L. A study of developmental and microscopic anatomy of the elementary tissues and organs. An introduction to the structure and functions of the head and neck is given. Discussions are held on individual tooth development, eruption, arrangement, function, morphology and characteristics. Laboratory sessions include the identification of landmarks of the oral cavity and specimens of the permanent and deciduous dentitions. Prerequisite: departmental consent. Offered only in the spring. H 12 100 0 5203

101 (101). Preclinical Dental Hygiene. (4). 2R; 9L. 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. Prerequisite: departmental consent. Offered only in the fall. H 12-101 0 5203

102 (102). Clinical Dental Hygiene I. (4). 1R; 8L. Initial instruction of typical emergency medical problems that might be encountered in the dental office. Here the principles taught in the laboratory are applied to both children and adults. Emphasis is placed on instrument techniques and overall treatment of the patient. Lectures and demonstrations are designed to augment the student's clinical practice. Prerequisite: departmental consent. Offered only in the spring. H 12 102 0 5203

104 (104). Clinical Radiology. (2). 1R; 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. Offered only in the spring. H 12 104 0 5203

107 (107). Dental Materials. (2). 1R; 2L. Fundamental instruction in practical laboratory phases of modern technique and the manipulation of materials and equipment used in dental practice. Prerequisite: departmental consent. Offered only in the spring. H 12 107 0 5203

206 (106). General and Oral Pathology. (3). 3R. 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. A consideration of the signs, symptoms and manifestations of oral lesions is accomplished through lectures and visual aids. Prerequisite: departmental consent. Offered only in the fall. H 12-206 0 5203

Upper Division Courses

302 (201). Clinical Dental Hygiene II. (4). 1R; 9L. Students spend three-fifths of their time completing a required amount of work in oral prophylaxis for patients in the dental clinic. The rest of the time is used for: (1) field training in hospitals, in public health institutions and private offices and (2) in the radiographic laboratory until the student has gained proficiency. One lecture a week is devoted to analyzing interesting cases observed in the clinic. Prerequisite: departmental consent. Offered only in the fall. H 12 302 0 5203

303 (202). Clinical Dental Hygiene III. (5). 1R; 12L. During the final semester of clinical dental hygiene, the student has an opportunity to utilize variations in scaling techniques and instruments. Technique seminars are scheduled so that instructors and students can discuss the rationale behind particular techniques, instrument selection, and similar

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The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 4L means three hours of lecture and four hours of lab.
topics. Students complete a patient education notebook, designed to inform patients of cause of dental disease, its prevention and/or corrective measures that can be implemented. Prerequisite: departmental consent. Offered only in the spring. H 12 306 0 5203

304 (205). Periodontics I. (2). 2R. Lecture and visual aid presentation on the etiology and classification of periodontal disease. Periodical review of current periodontal research is made. Prerequisite: departmental consent. Offered only in the fall. H 12 304 0 5203

306 (206). Periodontics II. (2). 1R; 3L. A study of the treatment of the periodontally involved patient. Advanced scaling and root planing procedures are demonstrated and performed on appropriate patients. Prerequisite: departmental consent. Offered only in the spring. H 12 306 0 5203

307 (207). Ethics and Jurisprudence. (2). 2R. A survey of laws governing the practice of dentistry and dental hygiene, types of professional work for which students may qualify; the economics and ethics of the profession; the essentials of banking, bookkeeping, office and personnel management and patient records. Prerequisite: departmental consent. Offered only in the spring. H 12 307 0-5203

309 (209). Community Dental Hygiene. (2). 1R; 3L. A combined theory and fieldwork course in which the student has an opportunity to apply concepts and principles of community health. Prerequisite: departmental consent. Offered only in the spring. H 12 309 2 5203

Inhalation Therapy

Inhalation therapy is a paramedical profession that deals with the treatment and testing of respiratory disorders. Upon successful completion of the 24-month program, the student receives the Associate of Applied Science degree in inhalation therapy and is eligible to take the American Registry of Inhalation Therapists (ARIT) examination.

ADMISSION REQUIREMENTS

Graduates of accredited high schools who are eligible for admission to Wichita State may apply to be admitted to the program. Also, students who have taken college work at Wichita State or at other accredited colleges may apply for transfer to the program. In both cases, however, admittance to the program must be requested through an application submitted to the Department of Inhalation Therapy prior to March 15. Criteria for admission include: (1) a 2.00 grade point average on all previous high school and college work and (2) recommendation of the Department of Inhalation Therapy Admissions Committee based on a personal interview. Applicants will be notified of their acceptance by April 1.

CURRICULUM

The inhalation therapy program curriculum consists of both didactic and clinical work distributed throughout the 24 months of the program. Upon the completion of all academic and clinical courses, the student
is required to spend an eight-week (40 hours per week) internship at one of the affiliated hospitals.

**Academic Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin. 260 (260), Concepts of Administration</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Biol. 112 (112), Introductory Zoology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Biol. 120 (120), Introduction to Microbiology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Biol. 223 (223), Introductory Anatomy and Physiology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Chem. 111 (111), General Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 (111), College English</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Math. 111 (140), College Algebra</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Phys. 111 (103), Introductory Physics</td>
<td>5</td>
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</tr>
<tr>
<td>Psych. 111 (111), General Psychology</td>
<td>3</td>
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</tr>
<tr>
<td>Soc. 211 (211), Introduction to Sociology</td>
<td>3</td>
<td></td>
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<tr>
<td>Speech 111 (111), Basic Public Speaking</td>
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**Clinical Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
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<tr>
<td>IT 112</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>IT 201</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>IT 202</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>IT 203</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>IT 301 (seminar)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>IT 302 (seminar)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>IT 310 (practicum)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>IT 325</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>IT 326</td>
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<td>3</td>
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</tbody>
</table>

**NONCREDIT PROGRAMS**

**Nurse Clinician**

The nurse clinician program, one of the newest programs at Wichita State, is designed to involve the nurse in a formal learning experience focused upon the assessment of the pediatric and adult patient and upon the principles of clinical management of such patients. The program is divided into two phases, phase I consisting of eight weeks of classroom study and selected clinical experiences and phase II requiring ten months in a clinical preceptorship. Upon satisfactory completion of both phases, the nurse is granted a certificate. No college credit is granted for this program.

**Admission Requirements.** The applicant to this program must be a registered nurse and sponsored by a licensed physician, who also serves as preceptor.

**Program.** The program is divided into two phases. Phase I consists of classroom instruction and specified learning experiences in the assessment of patient needs. This phase must be taken in Wichita, and it begins in January, April and September. Phase II is a ten-month preceptorship, during which the sponsoring physician monitors performance of the trainee and participates in periodic seminars.
Physician's Assistant

The Physician's Assistant Program, a 24-month certificate program, is designed to train class A physician's assistants. As defined by the American Medical Association, "The physician's 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 National Board Examination of the American Academy of Physician's Assistants and to be registered in Kansas and other states that have made provisions for the registration of physician's assistants. No college credit is granted in this program.

Admission Requirements. Applicants must be high school graduates and have had at least one year of direct patient contact medical experience. Applicants must be accepted by the Admissions Committee for the Physician's Assistant Program, whose decision is based on the student's previous education, previous medical experience and personal interview. Applications are due May 1 for each fall class.

Special Requirements. Students must acquire professional liability insurance. They must also supply short, white jackets and are responsible for transportation to the affiliated hospitals and clinics.

Additional information may be obtained from the program director of the Physician's Assistant Program, College of Health Related Professions, Wichita State University.
Man is, before all else, a member of a complex civilization, which requires an ever-increasing degree of sophisticated understanding. A study of the liberal arts and sciences is, in essence, a study of the range and scope of man's knowledge about himself and his universe.

Consequently, Fairmount College of Liberal Arts and Sciences aims at fulfilling a number of functions, purposes and responsibilities. Above all, it must provide a broad educational basis for all students, regardless of their specific majors, educational goals or colleges. Each student is urged to strive for a well-balanced and integrated study of the basic areas of human knowledge and creativity.

A student’s education is developed within the college according to his particular interest in one of four main types of study: (1) preparation for professional and technical studies, (2) education in a specified discipline, (3) cross-cultural education and (4) preparation for teaching. The concept of a broad-based education underlies most of the requirements and curricula of the college and hopefully encourages students to explore a variety of possibilities. The college expects all students to become literate in at least one foreign language, as well as English, and to give attention to the natural sciences, social sciences and humanities, regardless of their professional interests. Faculty and students constantly work to maintain flexibility in the face of pressures to conform, to develop leadership in defining issues and to discover, if possible, better answers to continuing problems. Fairmount College of Liberal Arts and Sciences hopes to accomplish these aims while maintaining academic freedom and the right of dispassionate inquiry into all areas of human knowledge. In this manner it is hoped that students will learn to make vigorous responses to all kinds of contemporary, social and academic problems, which do not always lend themselves to traditional solutions.

The liberal arts and sciences college not only provides preparation for teaching, graduate school and professional endeavors but also serves as the college at Wichita State for students who do not aim at a specific career objective but seek to find themselves in the thrill of the discovery of new and challenging ideas and ways of making their life experiences meaningful.
Requirements

ADMISSION

A student may be admitted to Fairmount College of Liberal Arts and Sciences if he has successfully completed 24 semester hours and is not on probation as defined by the college.

PROBATION AND DISMISSAL STANDARDS

Students are expected to make satisfactory progress in their studies, and a student who fails to do so, may be placed on probation at any time and ultimately dismissed from Wichita State.

Since 2.00 is the college's minimum grade point average for graduation, a student is formally placed on probation at the conclusion of any semester in which his overall grade point average falls below 2.00. The student remains on probation even though his grade point average for the semester is 2.00 or better until he reaches a cumulative grade point average of 2.00. If he fails to earn at least a 2.00 for any semester while on probation and if his cumulative grade point average is below 2.00, he will be dismissed for poor scholarship. In no case, however, will a student be dismissed for poor scholarship until he has attempted at least 12 semester hours. A student dismissed for poor scholarship may enroll only with the special permission of the college's Committee on Admissions, Advanced Standing and Exceptional Programs.

TRANSFER OF CREDIT WITHIN THE UNIVERSITY

Credit is transferred when the work offered constitutes progress toward a new degree goal in Fairmount College of Liberal Arts and Sciences, as judged by the academic official in charge of reviewing the student's transcript. Not more than 21 hours may be transferred, except in cases involving state certification requirements.

Credit in courses in industrial education, library science and elementary education (except for children's literature) may not be transferred. In addition, only one credit hour in one semester—and no more than eight hours maximum credit—may be transferred for courses in chorus, band or other ensembles. No more than eight hours of applied art or applied music may be transferred.

DEGREE REQUIREMENTS

The Bachelor of Arts (BA) and Bachelor of Science (BS) degrees are conferred by Fairmount College of Liberal Arts and Sciences. Each degree requires a minimum of 124 credit hours and a grade point average of 2.00. University requirements for graduation are listed earlier in the Catalog, and the following college requirements must also be met in order for the student to receive a degree from the college.
English. The student must complete Eng. 101 (111), 102 (211) or 300 (225) with a grade of C or better and at least three semester hours of American or English literature. The literature course may be chosen to satisfy University core curriculum requirements as well as college requirements.

History—Political Science. The student must demonstrate his proficiency in the field of the American political system and institutions by passing an examination offered once each semester, at an announced time, by the departments of history and political science or by passing one of the following courses: Hist. 131 (131) or 132 (132) or Pol. Sci. 121 (121), 226 (226), 232 (232), 311 (211) or 319 (219). These courses also satisfy core curriculum requirements.

Foreign Languages. The student may fulfill degree requirements in foreign languages by choosing alternatives 1 or 2, as described below.

1. Candidates for a BA degree must satisfactorily complete five semester hours beyond the 112 (112) level. Although high school credit may apply to this requirement, a student must take at least one college course, regardless of the number of high school credits presented, or demonstrate equivalent proficiency through examination.

Candidates for a BS must satisfactorily complete three semester hours beyond the 112 (112) level. While high school credit may apply to this requirement, a student must take at least one college course, regardless of the number of high school credits presented, or demonstrate equivalent proficiency through examination.

2. The 111-112 (111-112) sequence must be satisfactorily completed, or equivalent demonstrated, in a second language, if at least two high school units or two college semesters of another language can be presented. Regardless of the number of high school credits presented, at least one course must be taken in college.

One year of high school foreign language work is considered equivalent to one college semester. A student who has taken one or more units of foreign language will be advised by an appropriate foreign language representative and then permitted to proceed to the proper course level or repeat the beginning course if he feels it is necessary. The intent is to help the student achieve fluency in the language of his choice.

Natural Sciences. A student presenting fewer than two units of high school laboratory science (exclusive of general science) must satisfactorily complete 14 semester hours, including four hours in a laboratory science. A student who has taken two units of high school laboratory science (exclusive of general science) must satisfactorily complete a minimum of nine semester hours, with four in a laboratory science. Except for students majoring in the natural sciences, students must take four semester hours in each of the physical and biological science divisions as listed in the University core curriculum. Courses elected by the student may satisfy core curriculum requirements, as well as the college requirements.

Fairmount College 241
Completion. It is recommended that the student complete six semester hours of English composition, ten hours of foreign language (or the equivalent) and four or five hours of a laboratory science course by the time he achieves 50 hours and 120 credit points or within the next semester thereafter. However, students working toward a BS degree are not expected to be able to fulfill the foreign language requirement within this time limit.

FIELD TRIPS

Student attendance on field trips is mandatory in those courses for which trips are listed in the Wichita State University Catalog description of the course or are identified by the instructor as essential for earning credit in the course. Absences from such trips are permitted only when prior approval is granted by the instructor. Credit may be withheld for the course until the student completes the required field trips.

Field trips constitute an extension of classroom or laboratory instruction into areas removed from the campus, and student behavior, and conduct on trips must be in accord with conduct in classrooms and laboratories on the Wichita State campus.

Major and Minor Offerings

Fairmount College of Liberal Arts and Sciences offers majors in administration of justice, American studies, anthropology, art, art history, biology, chemistry, classical languages, economics, English, French, geology, German, history, journalism, linguistics, logopedics, mathematics, minority studies, music, philosophy, physics, political science, psychology, religion, social work, sociology, Spanish and speech.

Major. Candidates for a BA must elect:

1. A major in one field of study of not less than 24 hours or more than 41 hours; or a combined major consisting of 24 hours from one field of study and 12 hours from an allied field of study (such a combined major must be arranged with the approval of the departments involved by the beginning of the junior year); or a major from a professional field, including art, economics, logopedics and music;
2. At least 12 hours of upper division work in the major field;
3. Work in additional fields of study outside the major field as deemed appropriate by the faculty of the major field of study.

Any hours in one field of study above 41 must be counted in excess of the 124 hours required for graduation.

Minor. Students who major in art, logopedics or music must establish two minors in Fairmount College of Liberal Arts and Sciences. Minors are offered in all fields of study in which a major may be
earned and in geography and Italian. Minors acceptable from outside the college are engineering, accounting and education (courses necessary for certification).

Candidates for a BS degree should consult with their major adviser concerning requirements. A BS degree is available in administration of justice, biology, chemistry, geology, mathematics and physics. The degree normally requires 43 hours for the major, and any more hours in one field of study must be counted as in excess of the 124 hours required for graduation.

**Special Programs of Study**

Fairmount College of Liberal Arts and Sciences provides courses basic for certain professional fields and for subsequent professional studies. The liberal arts studies are recognized as vital in establishing background resources for such areas. Many similarities can be found in the broad pattern of preprofessional education, but marked differences in specific requirements may also occur.

**ART HISTORY**

The program in art history is designed to prepare students for the whole range of activities related to the art of the past: criticism, connoisseurship, college- and secondary-level teaching, and conservation.

*Major.* An art history major leading to a BA degree in the college of liberal arts and sciences requires a minimum of 30 hours of art history and must include Art Hist. 121 (101), 122 (102) and 526 (463). In addition, SA (Painting) 255 (229), Introduction to Methods and Media of Painting, must be taken. Because of the international nature of the study, the student must become proficient in reading French, Italian or German. (A minimum of 13 hours in one language is required.)

*Minor.* Students must complete 15 hours in art history, including Art Hist. 121 (101) and 122 (102).

All art history courses are listed under the College of Fine Arts, Division of Art, section of the Catalog.

**COMPUTER SCIENCE**

A number of courses in computer science—listed in the mathematics department section of the Catalog—are available to all students at Wichita State. In addition, students majoring in mathematics may earn a bachelor of science degree in mathematics with an emphasis in computer science by including some of these courses in their degree program, as described in the mathematics section of the Catalog.
A proposal to offer a bachelor of science degree in computer science has been approved by the Kansas Board of Regents. Students who are interested should direct their inquiries regarding the computer science degree program to the director of the computer science program or to the mathematics department office.

FIELD MAJOR

A student may major in a field of study that correlates three or more fields of study and receive a broader appreciation of the cultural and dynamic factors of human conduct. Selection of courses must be made with an adviser and with the approval of the dean of the college. Although such a major cuts across departmental lines and is determined by the field of specific interest, the combination of courses must be acceptable. Normally 36 hours is required for the major, with 18 hours in the major department and not less than nine in each of two allied departments. Field studies may be taken in such areas as international studies, Latin American studies and urban studies.

**International Studies.** The program for the international field major is flexible and designed to meet the need for specialists in foreign areas, international government or international economics in government, business and international organizations. Students are prepared for careers in international affairs by integrating selected courses in the departments of economics, German (and Russian), geography, history, political science, romance languages and anthropology. The major is open to candidates for the BA degree and consists of 36 semester hours. A core program of 21 semester hours is required of all majors, including three semester hours of a modern foreign language beyond the liberal arts requirement (except Russian) and 12 semester hours of specialization in economics, international law, government and politics, or a foreign area in Latin America, Russia or western Europe. Although work in the major begins in the junior year, the student needs to consult the major adviser earlier in order to complete certain basic courses and satisfy prerequisites. Special interests may be satisfied through consultation with the major adviser. No minor is required.

For specific information, see Dr. John E. Dreifort, Department of History.

**Latin American Studies.** The curriculum in Latin American studies consists of courses from several departments and provides a broad-based program of study leading to a better understanding of both historic and contemporary Latin America. Two alternatives are offered, an emphasis on Spanish language or an emphasis on social sciences. A minor is also provided.

For information about the Spanish major emphasis, contact Dr. Eugene Savaiano, chairman of the Department of Romance Languages, and for
the social sciences emphasis, contact Dr. Randall Hudson, Department of History, or Dr. James McKenney, Department of Political Science.

Urban Studies. Majors in urban studies follow a flexible interdepartmental program that provides a broad understanding of the modern city. The program offers expert preparation for urban vocations. While courses may be combined and selected from any three departments in the University according to the provisions of a field major, basic course selection should be largely in economics, political science and sociology, with additional courses selected from administration of justice, anthropology, history, minority studies, psychology and geology/geography. Students may design their programs to emphasize urban economic systems, urban form and technology, urban art and literature, historical and comparative urbanization, urban political and social systems, and urban communications.

Actual courses and course patterns are selected in close consultation with special urban studies advisers, Dr. Glenn Fisher (economics), Dr. Richard Zody (political science), Dr. Loyal Gould (journalism), Dr. George Rogers (minority studies) and Dr. Kay Camin (economics).

MUSIC

Requirements and curriculum for a major in music in the college of liberal arts and sciences are given in the College of Fine Arts, Division of Music, section of the Catalog.

Special Programs of Preprofessional Nature

Advisers in the various preprofessional fields and closely related departments provide specific information relative to courses and requirements.

PRELAW

The philosophy given in a statement of policy by the Association of American Law Schools underlies the prelaw emphasis on general undergraduate studies: studies should provide "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 a BA degree provide the student with both a general education and concentration in a field of major study. The prelegal adviser can supply the student with information about requirements for entrance to law school so that he can arrange his undergraduate program to meet the law school requirements.
PREMEDICAL, PREDENTAL, PREVETERINARY, PREPHARMACY, PREOPTOMETRY

The College of Health Related Professions offers general counseling and assistance in career planning for a variety of health related professions not offered on the Wichita State campus, including medicine, veterinary medicine, dentistry, optometry, pharmacology, osteopathy, occupational therapy, radiologic technology and mortuary science. Students interested in professional study in these health related fields must enroll through University College for their first year and in most cases must complete their undergraduate study in Fairmount College of Liberal Arts and Sciences. Faculty from University College and the departments of the college of liberal arts and sciences advise students regarding specific course selection and scheduling for professional programs not administered by the College of Health Related Professions.

Schools of medicine encourage students to have a broad education as well as prescribed studies in the sciences. Prospective physicians should also possess qualities of character that make them effective citizens and professionally competent. Preparation for the study of medicine should include courses of study to develop disciplined thinking, intelligent appreciation of values and sympathetic understanding of man and society. Since vital aspects of the study of medicine are associated with scientific knowledge and techniques, courses in biology, chemistry, physics and allied fields are required. Students may choose to major in these fields, but other majors may be selected in preparation for the study of medicine.

While the four-year degree program is definitely preferable, it is possible in some medical schools to gain admission on the basis of a three-year program of studies. Wichita State students may be granted a BA degree by Wichita State if they have taken 94 hours of preparation (the last 30 must be taken at Wichita State) within the prescribed fields of study requirements, taken 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 are eligible for admission the second year. The candidate must apply for the degree. Students with a major in biology are required to complete 94 hours plus either the zoology or microbiology option listed under the Department of Biology section in the Catalog.

Dentistry schools require prescribed preparation in the sciences as well as general education. Entrance requirements are generally similar, but the student should give careful attention to the pattern in each school of his choice. Emphasis on the sciences—generally a major in biology—is recommended. The counselor for predental studies 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 basic education and an emphasis upon science, with special reference to biology. The counselor for preveterinary medicine studies can provide a specific program of course work.

Schedules may also be arranged to meet entrance requirements of the various schools of optometry, osteopathy, pharmacy, mortuary science and related professional fields.

PRETHEOLOGICAL

Students interested in pursuing graduate theological work should consult with the chairman of the religion department for specific requirements set forth by individual seminaries.

PUBLIC SERVICE

The field of public service increasingly needs college graduates. The foreign service of the United States offers an attractive field to a limited number of young men and women who desire a career abroad. The federal government and an increasing number of cities and states use the principles of the merit system for their employees. Related fields open to properly trained college graduates are found in municipal research bureaus and legislative reference bureaus. Preparation for such service is not confined to any one department. Students interested in public service as a career should consult with their advisers or department heads as to the courses that will best prepare them for their work. Students interested in public administration should also consult the civil service bulletins.

SOCIAL WORK

A major and minor are provided in the sociology department for training in various areas of social work. Courses are designed for four types of students:

1. All students, as preparation for intelligent and responsible community participation;
2. The student who, upon graduation, may accept a position not now requiring professional graduate training;
3. The student who plans to go to a graduate school of social work;
4. The student preparing to enter another of the helping professions.

The curriculum requirements for social work are given under the Department of Sociology section of the Catalog. Wichita State is a member of the Council on Social Work Education, which helps to strengthen the program offered to the students.
TEACHING

Students in the college of liberal arts and sciences may qualify for secondary teaching certificates in Kansas and several other states. Those who plan to qualify for the standard secondary teaching certificate must complete the program as outlined in the College of Education section of the Catalog.

Honors Program

The following courses are designed for use by students in the University's Honors Program. The precise content of each of these courses for a given semester must be approved by the Honors Committee. A student may not take a course more than twice and receive academic credit toward a degree for it.

A 1 occurring as the final digit in the course number indicates that the course may apply as credit for Group I core curriculum requirements; a 2 as the final digit indicates the course may apply as credit for Group II core curriculum requirements; a 3 as the final digit indicates the course may apply as credit for Group III core curriculum requirements; and a 4 as the final digit indicates the course may apply as credit for Group IV core curriculum requirements. The general course titles are worded according to these core curriculum group titles.

Lower Division Courses

101 (100A). Special Studies in Mathematics and Natural Science. (1-4). P 11 101 0 4905
102 (100B). Special Studies in Communications. (1-4). P 11 102 0 0601
103 (100C). Special Studies in Humanities. (1-4). P 11 103 0 1599
104 (100D). Special Studies in Social Sciences. (1-4). P 11 104 0 2201
201 (200A). Proseminar in Mathematics and Natural Sciences. (1-4). P 11 201 5 4905
203 (200C). Proseminar in Humanities. (1-4). P 11 203 5 1599

Upper Division Courses

204 (200D). Proseminar in Social Sciences. (1-4). P 11 204 5 2201

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
Administration of Justice

The program in administration of justice provides a broad, multidisciplinary background for preservice and in-service students seeking course work to increase their ability as practitioners in the American system of justice. The program provides for specialization in a field of the student's particular interest, including law enforcement, courts or corrections, and for those students preparing for advanced study in law.

**Major.** The major in administration of justice consists of at least 33 hours, including AJ 100 (101), 201 (201), 510 (310) or 512 (312), 521 (321) and 403 and 18 hours in one of the following areas of specialization:

I. General Administration of Justice—18 hours
   This area offers an overview of administration of justice and an exposure to a variety of specializations. A student must choose 18 elective hours in administration of justice course work (all of which must be upper division), including a minimum of 12 hours to be distributed among at least three of the four specialty areas listed below. Any course listed in two areas fulfills only the distribution requirement for one area.

II. Agency Administration—18 hours
   This area concerns the management of law enforcement and corrections agencies' line and staff services. Courses in this area include AJ 501 (301), 633 (433), 636 (436), 639 (439) and six elective hours in administration of justice upper division course work.

III. Corrections Services—18 hours
   This area involves rehabilitative casework and court-directed supervision of convicted offenders in both correctional institutions and the community. Courses in this area include AJ 560 (360), 606 (406), 653 (453), 656 (456) and six elective hours of administration of justice upper division course work.

IV. Investigation—18 hours
   This area encompasses scientific and traditional criminal investigation services provided by law enforcement agencies. Courses in this area include AJ 343 (243), 344 (244), 643 (443), 646 (446) and six elective hours in administration of justice upper division course work.

V. Prevention Programs Development—18 hours
   This area concerns the development of community-based law enforcement and corrections, as well as crime and delinquency prevention programs. Courses in this area include AJ 560 (360), 606 (406), 633 (433), 636 (436), 660 (460) and six elective hours in administration of justice upper division course work.

In addition to specific course requirements, all students seeking a Bachelor of Science degree with a major in the Department of Administration of Justice must complete at least 24 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, which is considered by Wichita State and the Department of Administration of Justice to be of upper division academic quality.
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 departments: sociology, social work, psychology, minority studies, American studies, political science, anthropology, chemistry, biology, geology or physics. With his adviser’s assistance and approval, the student may select courses from these departments that best relate to his particular administration of justice specialty area. (NOTE: These courses may be chosen to satisfy certain sections of the Wichita State core curriculum requirements as well as the administration of justice requirements.)

**Minor.** The minor consists of at least 18 hours of administration of justice courses, including AJ 100 (100) and three upper division courses.

**Certificate.** An Associate of Applied Science Certificate in administration of justice is awarded by University College to students who complete the 64-hour, two-year program. (See University College for details.)

**Prerequisites.** AJ 100 (100) or departmental consent is a prerequisite for all other administration of justice courses. Additional requirements are noted in the course descriptions when needed.

### Lower Division Courses

100 (100). Introduction to the Administration of Justice. (3). An introduction to the philosophy and history of law enforcement, identifying multiple facets of the administration of justice system, including the police, the courts, correctional agencies and the offender. The administration of justice role is studied as it relates to the individual and to society. Through visitation and contact with administration of justice agencies, the student is acquainted with the responsibilities and problems of his personal development for an administration of justice career. A 29 100 0 2105

103 (103). Law Enforcement 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 29 103 0 2105

201 (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

### Upper Division Courses

303 (101). Criminal Justice Operations and Procedures Seminar. (3). An analysis of criminal justice operations and procedures. Topics are explored that are most relevant to contemporary issues and trends in law enforcement, courts and corrections. Prerequisite: none; recommended for non-AJ majors. A 29 303-9 2105

306 (106). Traffic, Transportation and Highway Safety. (3). Enforcement problems created by modern transportation in society. Traffic control, engineering, education, enforcement procedures, as well as accident investigation, and use of traffic records and statistics for selective enforcement are included. A 29 306 0-2105

320 (221). Criminal Law. (3). History, scope and nature of law; parties to crime; classification of offenses; act and intent; capacity to commit crime and defenses. Elements of major criminal statutes and an overview of criminal processes and rules of evidence are examined. A 29-320 0 2105

250
324 (124). Dactyloscopy and Personal Identification. (3). Physical descriptions emphasizing the science of fingerprints and personal identification. The Henry system of classification, including individual characteristics, patterns and classifications. Comparison procedure is studied. A 29 324 1 2105

343 (243). Special Investigation. (3). Care, collection and preservation of evidence. Sources of information and locating subjects, crime scene recording and investigative techniques applicable to specific offenses are studied. A 29 343 1 2105

344 (244). Criminalistics and Scientific Crime Detection. (3). Scientific aids available to law enforcement officers, including forensic chemistry, physics and microanalysis. Investigative procedures from crime scene, through laboratory analysis, to court presentation are studied. A 29 344 1 2105

345 (245). Investigative Photography. (3). Photography as applied in law enforcement. This encompasses the use of specialized equipment and field experience, including diagramming the crime scene. A 29 345 1 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 29 603 0 2105

421. Independent Study. (1-3). Study in a specialized area of the administration of justice system, with emphasis on the student's research project. Prerequisites: 15 hours in the administration of justice core and departmental consent. May be repeated for credit not to exceed a total of six hours. A 29 621 3 2105

422. Internship. (6). (A) Law enforcement, (B) corrections, (C) courts. Faculty supervised field placement with a governmental or private law enforcement, court or correction agency 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 serve a minimum of eight hours per calendar week during two semesters at the agency in which they have been accepted. Prerequisites: 15 hours in administration of justice, departmental consent and consent of the criminal justice agency in which the internship is applied. Credit is not to exceed a total of six hours. A 29 422 3 2105

501 (301). 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 agency and its individual practitioners are explored. Prerequisite: AJ 201 (201) or departmental consent. A 29-501 0 2105

510 (310). ADP in Administration of Justice. (3). A survey of use and potential of automated data processing in police, courts and correctional agencies. The ethical and legal problems confronting society and the agencies of the justice system occasioned by the use of computers as information-gathering and storage instruments are examined, as well as the advantages of using ADP in basic and applied research in the administration of justice. A 29 510 1 2105

512 (312). 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

521 (321). Law and the Administration of Justice Process. (3). Examination of recent judicial interpretations affecting legal process, rules of evidence, substantive law and administrative law. An in-

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

Fairmount College 251
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

560 (360). Community Prevention Programs. (3). An analysis of the 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 contribute to the administration of justice process. Program categories to be analyzed include citizen involvement (volunteer practitioners and civilian advisory groups) and educational, religious and family welfare and youth services. A 29 560 0 2105

606 (406). 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

633 (433). 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 (201) or departmental consent. A 29 633 0 2105

636 (436). 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 (439). 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 (201). A 29 639 0 2105

643 (443). 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 (416). 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 (243) and 344 (244). A 29 646 0 2105

653 (453). Field Corrections Techniques. (3). An analysis of the techniques of probation, parole, after-care supervision and related services. Special emphasis is placed on field corrections techniques as they relate to other segments of the administration of justice system. A 29 653-0 2105

656 (456). 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 as they relate to other segments of the administration of justice system. A 29 656 0 2105

660 (460). Techniques of Prevention Program Development. (3). An analysis of the techniques utilized to organize and develop traditional and projected crime prevention and related governmental and nongovernmental sponsored programs. Special emphasis is placed on the techniques of identifying existing community service resources and subsequently increasing their level of involvement in the administration of justice process. Prerequisite: AJ 560 (360) or departmental consent. A 29 660 0 2105

252
Graduate Courses

800 (500). 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 (501). Judicial Process and the Administration of Justice. (3). The review and discussion of local, state and federal criminal statutes and court decisions as they apply to the administration of justice process. A 29 801 0 2105

802 (502). 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 (503). Advanced Institutional Corrections Methods. (3). A course analyzing basic methods utilized in the organization and accomplishment of objectives in correctional institutions. Along with the more traditional corrections institutions, the seminar reviews methods utilized in diagnostic centers, halfway houses and other treatment models. A 29 803 0 2105


805 (505). Seminar on Principles of Evidence and Proof. (3). An in-depth examination of different types of legal proof that are presented at court trials. Included in the examination are the mediums of witnesses, records, documents, concrete objects, etc. A 29 805-9 2104

806 (506). Seminar on Agency Administration. (3). A comparative survey and analysis of administrative philosophy, problems, procedures, organizations and functions of effective agency organization. Administrative skills related to operations and personnel both within and outside the agencies are considered. A 29 806 0 2105

811 (511). Research Methods for the Administration of Justice. (3). The advanced study of selection and formulation of research problems; the study of design in the research project, including hypotheses and scale construction and sampling procedures; and a review of methods and the nature of research process, analysis and interpretation. A 29 811 0 2105

812 (512). Seminar on the Application of Criminological Theory. (3). An in-depth analysis of the major theories of criminology and of their importance to the administration of justice process. Emphasis is placed on the integration of a consistent, valid and individual frame of reference being developed by the student. A 29 812 9 2105

814 (514). Seminar on the Interdisciplinary Aspects. (3). An interdisciplinary team effort to bring forth for discussion purposes major theoretical perspectives along with past and current research in related disciplines that have implications for present and future policy and procedure in the administration of justice. A 29 814 9 2105

821 (521). Seminar in Criminalistics. (3). Review and discussion concerning techniques and ethics involved in the application of the physical sciences, including chemistry, biology, mathematics and physical anthropology, to the investigation of crime. A 29 821 9 2105

822 (522). Automated Data Processing in the Administration of Justice. (3). An advanced seminar concerning the methods, purposes, possibilities and problems encountered in the establishment and utilization of automated information and computerized data-processing systems.
Special attention is given to the implications that automated information systems have upon police-public relationships. A 29 822 9 2105

823 (523). Forensic Science Seminar. (3). The extensive examination of the wide field of issues in which medicine comes into relation with the law. It involves certification of the dead, the study of violent and unnatural deaths, scientific criminal investigation, drug detection, the duty of the medical examiner, procedures in courts of law and considerations of medical ethics or proper standards. A 29-823 9 2105

824 (524). Seminar on Administration of Justice Education and Training. (3). Analysis of the specialized methods and techniques and technological innovations utilized in the administration of justice educational and training process. A 29-824 9 2105

827 (527). Seminar on Environmental Protection. (3). An in-depth analysis of emerging federal, state and local legislation; judicial decisions; and administrative policy as related to environmental protection. The roles of the administration of justice agency and a variety of governmental and nongovernmental protective agencies are explored as related to prevention, investigation and enforcement processes of environmental protection. Special emphasis is placed upon the contribution administration of justice agencies can make toward development and implementation of effective environmental public education and assistance programs. A 29-827 9 2105

832 (532). Seminar on Agency-Community Relations. (3). An in-depth analysis of the role of agency administrators in community relations and related public officials in existing community programs. Special emphasis is placed upon a multiplicity of approaches for developing new and redefining existing lines of communication between the agency and its community. A 29-832 9 2105

833 (533). Seminar on Youth and the Administration of Justice. (3). An analysis of the criminal justice process as related to the youthful offender. Emphasis is placed upon functional components, such as training of corrections personnel, community coordination for delinquency prevention and control, police-school relations and ethical, administrative and operational aspects of the administration of justice agency’s effort as in the juvenile court. A 29-833 9 2105

851 (551). Individual Directed Study in the Administration of Justice. (3-6). Individually directed advanced reading and/or research in special areas of interest in the field of administration of justice. Prerequisite: departmental consent. A 29-851 3 2105

852 (552). Thesis, Practicum or Internship. (3-6). Preparation of either an acceptable master’s thesis, or a suitable practicum or completion of an internship program. Prerequisite: consent of departmental graduate committee. A 29-852 3 2105

American Studies

The program in American studies provides a broad cultural background and proportionately a specialization in a field of the student’s particular interest.

Major. 37 hours minimum, consisting of two or four hours of Am. Stud. 301 (301); nine hours from Am. Stud. 511 (311), 512 (312), 521 (321), 522 (322), 611 (411) or 612 (412); and three to six hours from Am. Stud. 698 (498) and 699 (499) required. In addition, 18 hours can be chosen from at least three of the following groups: Eng. 252 (252), 362
(262), 502 (302a, b), 503 (303), 540 (440); Hist. 131 (131), 132 (132), 501 (331), 502-503 (333-334), 519 (437), 520 (438), 535 (441), 536 (444), 537 (445); Pol. Sci. 121 (121), 311 (211), 315 (315), 316 (316); Anthro. 511 (311), 535 (335), 538 (338), 540 (340), 611 (411), 690 (490), 698 (498); Phil. 556 (356); Econ. 627 (307); Speech 632 (432); and Geog. 520 (302).

Minor. A minor in Fairmount College of Liberal Arts and Sciences consists of 15 hours, including two to four hours from Am. Stud. 301 (301) plus at least six other upper division hours.

Upper Division Courses

301 (301). Introduction to American Studies. (2). An examination of the American background from an interdisciplinary perspective. The intent is to show how the humanities and social sciences can be linked in the study of America. Prerequisite: departmental consent. This course may be repeated for a total of four hours of credit. A 11 301 0-0313

511 (311). Patterns of Development of Early Americans. (3). The study of the records of Americans from settlement to the closing of the frontier. A 11 511 0-0313

512 (312). Twentieth Century Problems in American Studies. (3). An analysis and a study of problems in various disciplines that influence American development. A 11 512 0 0313

521 (321). The Midlands and the High Plains. (3). The background, the factors in the settlement of this vast area and the results of this settlement. A 11 521 0-0313

522 (322). The American Southwest. (3). The background of the settlement of the American Southwest, the impact of the commingling of three different cultures and the evolving of a fourth culture. A 11 522 0 0313

611 (411). The Romantic Revolution. (3). The impact of the Romantic Revolution on the nation's civilization as a liberating force in the period of its greatest change. A 11 611 0 0313

612 (412). The Growth of Nationalism. (3). American civilization during the period of its awakening to its place as a nation and the problems encountered. A 11 612 0 0313

698 (498). Introduction to Research. (3). Bibliography, methodology and the philosophy of research. Prerequisite: departmental consent. This course may be repeated for a total of six hours of credit. A 11 698 9 0313

699 (499). Seminar in American Studies. (3). Seminar and individual conferences organized around a problem or problems presented by a representative figure, theme or period, i.e., the Industrial Revolution, Reconstruction, Westward Migration, Mark Twain and the Mississippi. Prerequisite: departmental consent. This course may be repeated for a total of six hours of credit. A 11 699 9 0313

701 (501). Directed Readings in American Studies. (1-3). Prerequisite: consent of instructor. A 11 701 3 0313

702 (502). Directed Readings in American Studies. (1-3). Prerequisite: consent of instructor. A 11 702 3 0313

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

Fairmount College 255
Anthropology

A major in anthropology consists of at least 30 hours, including Anthro. 124 (124) or 202 (202), 201 (201) and 647 (447); an area course, such as 505 (305), 506 (306), 507 (307), 511 (311) or 512 (312); and one course in archaeology, 501 (501), 508 (308), 535 (335) or 538 (338). Students who expect to pursue graduate work in anthropology should also take Anthro. 526 (326). Anthro. 749 (449) does not count toward the major.

Certain courses in related departments may be counted toward an anthropology major if they meet the particular needs of the student and are approved by his adviser. No more than six hours from another department may be counted.

Lower Division Courses

124 (124). General Anthropology. (3). An introduction to the fields of physical anthropology, archaeology and linguistics and an analysis of the concepts of society and culture, with special emphasis on nonliterate peoples of the world. A 28 124 0 2202

130 (130). Afro-American Heritage. (3). The West African and New World heritage of Black America. An analysis is made of Afro-American contributions to the social, cultural, economic and political life of the United States. A 28 130 0 2211

201 (201). Paleanthropology. (3). The study of man's biological and cultural development from early Paleolithic times through the rise of Bronze Age civilizations. A 28 201 0 2202

202 (202). 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 28 202 0 2202

Upper Division Courses

501 (301). Approach to Archaeology. (3). An introduction to the problems of studying past cultures. Special attention is focused on methodology and techniques available to archaeologists and the theoretical rationale leading to sound interpretations of the structure of extinct cultures. Prerequisite: Anthro. 124 (124) or 201 (201), or equivalent. A 28 501-0 2203


505 (305). African Ethnohistory. (3). Human origin, migration patterns, subsistence and technological developments in Africa. An analysis is made of African societies from European discovery through the emergence of modern nations. Prerequisite: Anthro. 124 (124) or 202 (202). A 28 505 0 2202

507 (307). Peoples of Africa. (3). A description and analysis of the culture areas of Africa south of the Sahara Desert. Prerequisite: Anthro. 124 (124) or 202 (202). A 28 507 0 2202

508 (308). High Cultures of Central and South America. (3). A cultural survey of the Aztec, Maya and Inca Indian civilizations. Prerequisite: Anthro. 124 (124) or 202 (202). A 28 508 0 2212

511 (311). The Indians of North America. (3). A survey of tribal societies and native confederations north of Mexico from the protohistoric through the historic period. Prerequisite: Anthro. 124 (124) or 201 (201), or equivalent. A 28 511 0 2212

512 (312). Peoples of Asia. (3). Study of tribal cultures and civilizations of Asia in terms of major culture areas, racial varieties and linguistic patterns. Prerequisite: Anthro. 124 (124) or 201 (201) or 202 (202). A 28 512 0 2202

518 (318). Culture and Personality. (3). The relationship of individual personality, both normal and abnormal, to group membership and cultural configuration. Prerequisite: Anthro. 124 (124) or 202 (202), or departmental consent. A 28 518 0 2202

519 (319). Applied Anthropology. (3). The application of anthropological knowledge in the solution of social problems in industry, public health and public administration. Prerequisite: Anthro. 124 (124) or 202 (202). A 28 519 0 2202

522 (322). Primitive Aesthetics. (3). A survey of the arts of preliterate peoples with special attention to their function in the cultural setting. Prerequisite: Anthro. 124 (124) or 202 (202). A 28 522 0 2202

523 (323). Primitive Folklores. (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. Prerequisite: Anthro. 124 (124) or graduate standing. A 28 523 0 2202

525 (325). Social and Cultural Change. (3). A critical examination of the processesual dynamics of social and cultural change the world over with special emphasis on contemporary non-European areas. Prerequisite: six hours of anthropology. A 28 525 0 2202

526 (326). Social Organization. (3). A survey of the varieties of social organization among nonindustrialized peoples throughout the world. This course deals with family systems, kinship, residence patterns and lineage, clan and tribal organizations. Prerequisite: six hours of anthropology. A 28 526 0 2202

527 (327). Primitive Religion. (3). An examination of various concepts concerning the realm of the supernatural as held by primitive people. This course relates such religious and magical beliefs—and the resultant practices—to the larger patterns of cultural context. Prerequisite: six hours of anthropology. A 28 527 0 2202

535 (335). Prehistory of North America. (3). A survey of the prehistoric cultures of North America north of Mexico from the earliest peopling of the continent to the time of European colonization. Prerequisite: Anthro 201 (201) or equivalent. A 28 535 0 2203

538 (338). Early Man in the New World. (3). A critical examination of facts and theories concerning early man in the New World, from the peopling of the continent to the beginning of the Archaic Tradition, and of the role of cultural contacts between eastern Asia and North America. Prerequisite: Anthro. 124 (124) or 201 (201), or equivalent. A 28 538 0 2203

540 (340). The Indians of the United States: Conquest and Survival. (3). An anthropological inquiry into four centuries of cultural contact, conflict, resistanse and renascence. Prerequisite: Anthro. 124 (124) or 201 (201), or equivalent. A 28 540 0 2212
545 (345). Economics of Preindustrial Societies. (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 units of consumption and production. Prerequisite: six hours of anthropology. A 28 545 0 2202

546 (346). Peasant Society. (3). A cross-cultural survey of anthropological studies of peasant societies in Asia, Europe, Latin America and other areas. Emphasis is placed on the nature of peasant societies as compared with tribal or industrial societies. Prerequisite: six hours of anthropology. A 28 546 0 2202

555 (355). Fossil Evidence for Human Evolution. (3). A detailed examination of man's evolutionary history as evidenced by fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite: Anthro. 201 (201), or Biol. 223 (223), or equivalent. A 28-555 1 2202

556 (356). Human Variability. (3). A critical examination of the biological and genetic aspects of human variation and of various classifications of man. Prerequisite: Anthro. 201 (201), 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 archaeology. Topics in lecture and extensive laboratory sessions include bone and tooth identification, measurement and analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: Anthro. 201 (201) or equivalent. A 28 557 0 2202

560 (360). Anthropology of Law. (3). Organizational structures and processes that maintain social order in preindustrial societies. Prerequisite: six hours of anthropology. A 28 560 0 2202

561 (361). Political Anthropology. (3). The study of political organization in non-Western societies. Topics covered include the origin of the state, precolonial politics, the impact of colonialism upon these politics and problems in postcolonial political development. Emphasis is placed upon African political systems. A 28-561 0 2202


611 (411). Cultural History of the Southwest. (3). A comprehensive survey of the prehistoric, historic and living cultures of the American Southwest, with particular emphasis on the cultural continuities and changes covering 12,000 years. Prerequisite: nine hours of anthropology or departmental consent. A 28 611 0 2212

612 (412). Indians of the Great Plains. (3). An investigation of the cultural dynamics of the Indian occupation of the Great Plains region, from the beginning to the present. Prerequisite: nine hours of anthropology. A 28 612 0 2212

636 (436). Advanced Studies in Archaeology and Ethnohistory. (3). Special area and theory problems in a historical approach to culture. Prerequisite: 12 hours of anthropology. A 28 636 0 2202

647 (447). Theories of Culture. (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: six hours of anthropology. A 28 647 0 2202

651 (451). Language and Culture. (3). An introduction to historical and descriptive linguistics. The course deals with the ethnography of communications, lexicostatistics and linguistic determinism. Prerequisite: six hours of anthropology. A 28 651 0 2202

662 (462). Aspects of Linguistic Theory. (3). Same as Eng. 667 (462) and Ling. 667 (462). Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: Eng. 315 (215), or Ling. 577 (327), or Anthro. 577 (328), or consent of instructor. A 28 662 0 1505
690 (490). Field Methods in Anthropology. (3-8). A course that instructs the student in archaeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific Summer Session and varies from year to year. Prerequisite: consent of instructor. A 28 690 2 2202

698 (498). Readings in Anthropology. (2-3). Special problems in anthropology. Prerequisites: 12 hours of anthropology. This course may be repeated up to six hours. A 28 698 3 2202

705 (505). 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 museological philosophy concerning purpose, function and relevance of museums, as well as career opportunities. Prerequisite: consent of instructor. A 28 705 5 2202

706 (506). Museum Exhibition. (3). Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisites: Anthro. 705 (505) and consent of instructor. A 28 706 5 2202

730 (455). Seminar: Perspective on Human Design and Expression. (3). Surveys of concepts from anatomy, medicine, biology, anthropology and neuropsychology concerned with human form and behavior. Discussion of individual differences is held. Prerequisites: PE 730 (419) and departmental consent. A 28 730 5 2202

749 (449). Educational Anthropology. (3). Same as Fd. Ed. 749 (449). A course dealing with the basic concepts of anthropology and their application to social science units in elementary and secondary grades. The course explores the nature of subcultures in American society and the problems they pose for the classroom teacher. A course for education majors and graduate students. Cannot be used to meet requirements of the core curriculum for anthropology. A 28 749 0 2202

750 (450). Workshop. (1-4). Short-term courses with special focus on anthropological problems. Prerequisite: consent of instructor. A 28 750 2 2202

Graduate Courses

800 (500). Comprehensive Seminar in Anthropology. (3). A review of the important concepts in archaeology, physical anthropology and cultural anthropology in preparation for graduate comprehensive examination. Prerequisite: open only to graduate majors in anthropology. A 28 800 9 2202

801 (501). Seminar in Archaeology. (3). Comprehensive analysis of archaeological data, with emphasis on theoretical problems of interpretation and reconstruction. Prerequisite: Anthro. 501 (301) or departmental consent. This course may be repeated up to six hours. A 28 801 9 2202

802 (502). Methods in Anthropology. (2-3). A course 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. Prerequisite: departmental consent. This course may be repeated up to six hours. A 28 802 9 2202

837 (537). Seminar in Cultural Anthropology. (3). Intensive study on advanced theoretical questions in cultural anthropology. Prerequisite: five hours of anthropology. This course may be repeated up to six hours. A 28 837 9 2202

848 (548). Recent Developments in Anthropology. (3). A review of the latest discoveries and interpretations in the science of man. Prerequisite: five hours of anthropology. This course may be
course may be repeated up to a total of six hours. A 28 870 3 2202
875 (575)-876 (576). Thesis. (2-2). A 28-875 4 2202; A 28 876 4 2202

Art Studio—Major

See College of Fine Arts for requirements and curriculum.

Art History—Major

See College of Fine Arts for requirements and curriculum.

Biology

A major in biology leading to a Bachelor of Arts (BA) degree requires 30 hours of biology and must include Biol. 111 (111), 112 (112) and 201 (201), or the equivalent. Chem. 111 (111), 112 (112) and 531 (331) and 532 (332), or the equivalent, are also required.

A major in biology leading to a Bachelor of Science (BS) degree requires 40 hours of biology and must include Biol. 111 (111), 112 (112) and 201 (201), or the equivalent; Phys. 213 (123) and 214 (124), and the courses listed in one of the three options below. The student must select his option by the beginning of his junior year.

**Botany option:** Biol. 500 (329), 502 (330) and 504 (322).

**Microbiology option:** Biol. 550 (301), 658 (324) and 590 (424), 659 (325) or 756 (460). Students planning to do graduate work in microbiology are expected to complete satisfactorily Math. 142 (242).

**Zoology option:** Biol. 427 (225) or 524 (310) and 520 (309) and 534.

A minor in biology requires 15 hours, including Biol. 111 (111), 112 (112) and 201 (201).

Several of the courses offered in the biology department are service courses and are so designated. Service courses are designed to meet the needs of students in another department and cannot be taken for credit toward a biology major or minor.

When two course numbers are given at the beginning of a course description, the first number refers to the current course number and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of lab.
Lower Division Courses

100 (100). Principles of Biology. (4). 3R; 2L. A general course in biology designed for students not majoring in sciences. Credit will not count toward a major or minor in biology. Credit will not be given for both Biol. 100 (100) and Biol. 102 (102), Biological Science. A 12 100 0 0401

102 (102). Biological Science. (5). 5R. Man in the living world: an introduction to the basic concepts of the biological sciences, with emphasis upon man himself. A 12 102 0 0401

111 (111). Introductory Botany. (4). 3R; 3L. Fundamentals of plant science including plant structure, development and physiology; relationships of major plant groups; and biological principles illustrated with plant materials. Concurrent enrollment in freshman chemistry is recommended. A 12 111 0 0402

112 (112). Introductory Zoology. (4). 3R; 3L. Fundamentals of animal science, including animal structure, development and physiology; relationships of major animal groups; and biological principles illustrated with animal materials. Concurrent enrollment in freshman chemistry is recommended. A 12 112 0 0407

201 (201). Introductory Cellular Biology. (3). 3R. Fundamentals of cellular biology, including basic constituents, structure, metabolism, responsiveness, coordination and reproduction. Prerequisites: Biol. 111 (111) and 112 (112) and Chem. 112 (112) or concurrent enrollment. A 12 201 0 0417

223 (223). Introductory Anatomy and Physiology. (5). 4R; 2L. Service course. An introduction to the structure and functions of the human body. Prerequisite: Biol. 100 (100) or 112 (112). A 12 223-0 0412

Upper Division Courses

427 (225). Comparative Anatomy. (5). 3R; 4L. An intensive study of representative chordates, with emphasis on vertebrate anatomy. Prerequisite: Biol. 201 (201). A 12 427 0 0412

500 (329). Nonvascular Plants. (4). 2R; 6L. An introduction to the structure, reproduction and evolution of the algae, fungi and bryophytes. Special emphasis is placed on cytology and physiology. Prerequisite: Biol. 201 (201). A 12 500-0 0402

502 (330). Vascular Plants. (4). 2R; 6L. An introduction to the structure, reproduction and evolution of the major groups of living and extinct vascular plants. An introduction to flowering plant systematics is included. Prerequisite: Biol. 201 (201). A 12 502 0 0402

504 (322). Plant Physiology. (5). 3R; 6L. The functional dynamics of plant metabolism and growth, including water relations, nutrition, translocation, photosynthesis, respiration and various aspects of development. Prerequisite: Biol. 201 (201) and Chem. 531 (331). A 12 504 0 0406

520 (309). Invertebrate Zoology. (4). 3R; 3L. A comparative study of the morphology and phylogeny of the invertebrates, with emphasis on the basic body types and their major variations. Prerequisite: Biol. 201 (201). A 12 520 0 0407

524 (310). Vertebrate Zoology. (4). 2R; 4L. Evolution, distribution, systematics, natural history and special characters of vertebrate animals. Prerequisite: Biol. 201 (201). Biol. 427 (225) is also recommended. A 12 524 0 0407

528 (312). Parasitology. (3). 1R; 6L. The parasites of man and other vertebrates. Prerequisite: Biol. 201 (201). A 12 528 0 0407

532 (381). Entomology. (5). 3R; 4L. An introduction to the morphology, physiology, life cycles, behavior, ecology and economic significance of insects. Prerequisite: Biol. 201 (201). A 12 532 0-0421
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lecture</th>
<th>Lab</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>534</td>
<td>Mammalian Physiology</td>
<td>3R</td>
<td>3</td>
<td></td>
<td>A survey of mammalian physiology, with emphasis on human systems. Prerequisite: Biol. 201 (201) or departmental consent. A 12 534 0 0410</td>
</tr>
<tr>
<td>535</td>
<td>Mammalian Physiology Laboratory</td>
<td>2L</td>
<td>4</td>
<td></td>
<td>A practical approach to the basic physiology of mammalian systems. Prerequisite or concurrent enrollment in: Biol. 534. A 12 535 1 0410</td>
</tr>
<tr>
<td>538</td>
<td>Neurophysiology and Neuroanatomy</td>
<td>3R</td>
<td></td>
<td></td>
<td>An examination of the anatomy and physiology of the nervous system, with special emphasis on man. Prerequisite: Biol. 534 or departmental consent. A 12 538 0 0410</td>
</tr>
<tr>
<td>540</td>
<td>Comparative Embryology</td>
<td>2R; 4L</td>
<td></td>
<td></td>
<td>Gametogenesis, fertilization and developmental processes in animals, with emphasis on vertebrates. Prerequisite: Biol. 201 (201). Biol. 427 (225) is also recommended. A 12 540-0 0427</td>
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<tr>
<td>544</td>
<td>Histology</td>
<td>2R; 6L</td>
<td></td>
<td></td>
<td>Microscopic anatomy of animal tissues, with practical experience in laboratory histological techniques. Prerequisite: Biol. 201 (201). A 12 544 0 0413</td>
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<tr>
<td>550</td>
<td>Bacteriology</td>
<td>3R; 6L</td>
<td></td>
<td></td>
<td>An introduction to growth, development and metabolism of bacteria and related forms. Prerequisites: Biol. 201 (201) and Chem. 531 (331), or concurrent enrollment. A 12 550 0 0411</td>
</tr>
<tr>
<td>552</td>
<td>Mycology</td>
<td>2R; 4L</td>
<td></td>
<td></td>
<td>The structure, development and reproduction of fungi, with emphasis on the cytology and physiology of forms of scientific and economic importance. Prerequisite: Biol. 201 (201). A 12 552 0 0411</td>
</tr>
<tr>
<td>570</td>
<td>Ecology and Man.</td>
<td>3R</td>
<td></td>
<td></td>
<td>Service course. An introduction to the fundamentals of ecology, with emphasis on man as a part of the environment. Not for core credit. A 12 570 0 0420</td>
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<tr>
<td>574</td>
<td>Ecology</td>
<td>3R</td>
<td></td>
<td></td>
<td>Principles underlying the interrelationships of living organisms and their environments. Prerequisite: Biol. 201 (201) or departmental consent. A 12 574 0 0420</td>
</tr>
<tr>
<td>575</td>
<td>Field Ecology</td>
<td>9L</td>
<td></td>
<td></td>
<td>Techniques for analysis of systems consisting of living organisms and their environments. Field trips are required. Prerequisite or corequisite: Biol. 574 (419) or consent of instructor. A 12 575 1 0420</td>
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<tr>
<td></td>
<td>Field Ecology Laboratory</td>
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<td></td>
<td>Introduction to the biological and physical processes that operate in lakes, streams and estuaries. Assigned readings, individual projects and field trips are required. Prerequisites: Biol. 201 (201) and consent of instructor. A 12 578 0 0420</td>
</tr>
<tr>
<td>580</td>
<td>Cytology</td>
<td>3R; 3L</td>
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<td>The structure, chemistry, development and function of the cell with particular reference to chromosomes and their bearing on genetics. Prerequisite: Biol. 201 (201). A 12 580 1 0417</td>
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<tr>
<td>584</td>
<td>Genetics</td>
<td>4R</td>
<td></td>
<td></td>
<td>The mechanisms of heredity and variation in plants and animals with a critical review of the concept of the gene. Prerequisite: Biol. 201 (201). A 12 584 0 0422</td>
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<tr>
<td>590</td>
<td>Immunobiology</td>
<td>3R</td>
<td></td>
<td></td>
<td>The nature of antigens and antibodies and their interactions; cellular and humoral aspects of immunologic phenomena. Prerequisite: Biol. 201 (201). A 12 590 0 0416</td>
</tr>
<tr>
<td>591</td>
<td>Immunobiology Laboratory</td>
<td>2L</td>
<td></td>
<td></td>
<td>Methods of immunization and techniques for qualitative and quantitative determinations of antibody production and antigen-antibody reactions. Prerequisites or corequisites: Biol. 590 (424), Chem. 532 (332), or consent of instructor. A 12 591 1 0416</td>
</tr>
<tr>
<td>594</td>
<td>Analytical Methods in Biology</td>
<td>1R; 6L</td>
<td></td>
<td></td>
<td>The principles, capabilities and applications of modern techniques of instrumental measurement in biological research and teaching. Prerequisites: Biol. 201 (201), Chem. 531 (331) and Phys. 214 (124). A 12 594 1-0499</td>
</tr>
<tr>
<td>600</td>
<td>Physiological Plant Ecology</td>
<td>2R; 6L</td>
<td></td>
<td></td>
<td>Principles and patterns of plant distribution and of adaptations of plants to particular habitats. Emphasis</td>
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</table>
is put on the experimental approach to ecology. Field trips are an integral part of the laboratory. Prerequisite: Biol. 504 (322) or consent of instructor. A 12-600 0 0420

610 (482). Topics in Botany. (2). Prerequisite: consent of instructor. May be repeated once for credit. A 12 610 4-0402

620 (413). Animal Behavior. (3). 3R. A survey of animal behavior, including human, with major emphasis on the analysis of behavior as a concert of physiological processes. Prerequisite: Biol. 201 (201) or departmental consent. A 12 620 0 0407

621 (414). Animal Behavior Laboratory. (2). 6L. Individual or team research projects in the area of behavior. Prerequisite or corequisite. Biol. 620 (413). A 12 621 1 0407

640 (483). Topics in Zoology. (2). Prerequisite: consent of instructor. May be repeated once for credit. A 12 640 4-0407

650 (422). Protozoology. (4). 2R; 6L. Survey of the free living and parasitic protozoa, with identification, life cycles and host-parasite relationships emphasized. Prerequisite: Biol. 520 (309), or 528 (312), or 550 (301). A 12 650 0 0411.

654 (302). Pathogenic Microbiology. (4). 3R; 3L. An introduction to the important pathogenic microorganisms and their relations to health and disease in man. Prerequisite: Biol. 550 (301). A 12 654 0 0411

658 (324). Microbial Physiology. (3). 3R. The physiology and metabolism of microorganisms. Prerequisites: Biol. 550 (301) and Chem. 531 (331). A 12 658-0 0411

659 (325). Microbial Physiology Laboratory. (2). 6L. An introduction to the basic techniques involved in the study of microbial physiology. Prerequisite: Biol. 550 (301) and Chem. 531 (331). A 12 659 1 0411

660 (484). Topics in Microbiology. (2). Prerequisite: consent of instructor. May be repeated once for credit. A 12 660-4 0407

670 (490). Biological Literature. (2). 2R. An introduction to the use of biological literature and the preparation of reports. Prerequisite: 20 hours of biology. A 12 670 0 0499

684 (421). Genetics Laboratory. (3). 9L. Use of viruses, bacteria, fungi and Drosophila to illustrate principles of mutation, gene action, recombination and population dynamics. Prerequisites: Biol. 550 (301) and 584 (401). A 12 684 1-0422

724. (502). Special Problems in Animal Behavior. (3). 3R. Topics such as spontaneity, drive, rhythms, instinct, behavioral plasticity, behavioral genetics and the evolution of behavior receive special emphasis. Prerequisite: Biol. 620 (413) or consent of instructor. A 12 724 0 0407

728 (510). Physiological Basis of Behavior. (3). 3R. A modern approach to coordinating mechanisms that stresses the essential unity of nervous and endocrine function. Prerequisite: Biol 730 or consent of instructor. A 12 728 0 0410

730. Comparative Animal Physiology. (3). 3R. A phylogenetic examination of the homologous and analogous ways in which animals perform similar functions. Prerequisite: Biol. 534 or departmental consent. A 12 730 0 0410

752 (507). Microbial Metabolism. (3). 3R. Studies of the degradative and biosynthetic metabolic pathways of representative bacteria, yeasts and higher fungi. Prerequisite: Biol. 550 (301) or consent of instructor. A 12 752 0 0411

756 (460). Microbial Genetics. (4). 4R. The relationship between development, metabolism and genetics in microorganisms. Prerequisites: Biol. 550 (301) and 584 (401), or departmental consent. A 12-756 0 0422

770 (503). Special Problems in Ecology. (5). 2R; 6L. Emphasis on conservation
of natural resources, land and water use, wildlife and fisheries management and effects of pollution. Assigned readings, individual projects and field trips are required. Prerequisites: Biol. 547 (419), 575 (420) and 578 (415), or consent of instructor. A 12 770 1 0420

780 (505). Physiological Genetics. (3). 3R. Studies of the physiochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. A 12-780 0 0422

790 (504). Advanced Immunology. (3). 3R. Contemporary problems in immunologic research. Lectures, assigned readings and reports are included. Prerequisites: Biol. 590 (424) and consent of instructor. A 12 790 0 0416


Prerequisite: Biol. 670 (490) or consent of instructor. May be repeated once for credit. A 12 798 9 0401

Graduate Courses

880 (520). Radiation Biology. (3). 3R. Mechanisms of the genetic and non-genetic effects of radiations on unicellular and multicellular systems. Surveys of the physical properties of radiations and of radiation chemistry are included. Prerequisite: consent of instructor. A 12-880 0 0423

890 (561). Research. (2-5). Research opportunities offered in botany, microbiology and zoology. A maximum of eight hours may be taken for credit. A 12 890 4 0499

891 (576). Thesis. (2). A 12 891 4 0499

Chemistry

Major. A student desiring a Bachelor of Arts degree must take Chem. 524 (324), 532 (332), 546 (346), 547 (347), and their necessary prerequisites, which include Math. 344 (244), and Phys. 312 (244), or their equivalents. Students with a substantial interest in the biological sciences may satisfy the BA requirements by substituting Chem. 661 (461) for Chem. 524 (324) or Chem. 546 (346). If substitution is made for Chem. 524 (324), then Chem. 523 (323) is required.

A student desiring a Bachelor of Science degree must take the BA requirements, have a reading knowledge (or two semesters) of German and take a minimum of eight hours of 600 level courses, which must include Chem. 611 (411). Chem. 661 (461) cannot be substituted for Chem. 524 (324) or 546 (346) in meeting the BS requirements. It is recommended that at least one credit hour of laboratory work be included in the 600 level courses. Additional physics and mathematics beyond the minimum requirements is strongly recommended.

The curriculum for the BS degree meets the standards of the American Chemical Society in the professional training of chemists, and students receive certification from the American Chemical Society. Students who meet the requirements of the BA degree program may be certified by the American Chemical Society if they also take Chem. 611 (411).

All students majoring in chemistry should consult closely with the chemistry department in planning their programs.

Minor. The chemistry minor consists of at least 14 hours of chemistry and must include at least four hours from Chem. 523 (323), 531 (331) and 545 (345).
Lower Division Courses

103 (103). General Chemistry. (5). 3R; 4L. 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 Chem. 111 (111)-112 (112). Credit will not be granted for both Chem. 103 (103) and Chem. 111 (111). A 13 103 0 1905

111 (111). General Chemistry. (5). 3R; 4L. An introduction to the general laws of chemistry. Atoms, molecules, chemical arithmetic, gas laws, reactions, acids, bases, titrations, thermochemistry, phase equilibria, solutions and atomic and molecular structure are included. The Chem. 111 (111)-112 (112) course sequence is designed to meet the needs of natural science majors and is not recommended for students who plan to take only one course in chemistry. Students who have had good high school preparation in chemistry and mathematics should consider the alternate afforded by Chem. 123 (123)-124 (124). Prerequisite: 1½ units of high school algebra or Math. 011 (052). Credit will not be granted for both Chem. 103 (103) and Chem. 111 (111). A 13 111 0 1905

112 (112). General and Inorganic Chemistry. (5). 3R; 4L. Continuation of Chem. 111 (111). Thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative analysis and an introduction to organic chemistry are included. Prerequisite: Chem. 111 (111) with a grade of C or better. A 13 112 0 1905

123 (123). General and Analytical Chemistry. (5). 3R; 6L. An introduction to atoms, molecules, chemical arithmetic, gas laws, phase and ionic equilibria, and electrochemistry. A laboratory introduction to quantitative analysis, includes much of the material ordinarily present in Chem. 523 (323) and the use of a small digital computer in chemical computations. Students who successfully complete the Chem. 123 (123)-124 (124) sequence are not required to take Chem. 523 (323). Prerequisites: 1½ units of high school algebra and one unit of high school chemistry. A 13 123 0 1905

124 (124). General and Analytical Chemistry. (5). 3R; 6L. Atomic and molecular structure, thermodynamics, kinetics and nuclear chemistry. Prerequisite: Chem. 123 (123) with a grade of C or better. A 13 124 0 1905

201 (201). Glass Blowing. (1). 2L. 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 13 201 1-1905

Upper Division Courses

499 (499). Independent Study and Research. (2-3). Studies performed must be directed by a faculty member in the chemistry department. Prerequisite: consent of the chemistry department. This course may be repeated for credit, a maximum of three credit hours may be counted toward graduation. A 13 499 4-1905

523 (323). Analytical Chemistry. (4). 2R; 6L. Evaluation of data, theory and applications of gravimetric analysis and precipitation, neutralization and oxidation-reduction volumetric analysis. Prerequisite: Chem. 112 (112) with a grade of C or better. A 13 523 0 1909

524 (324). Instrumental Methods of Chemical Analysis. (4). 2R; 6L. Introduction to electroanalytical chemistry and optical methods of analysis and analysis and separation of complex mixtures, both inorganic and organic. Prerequisite: Chem. 523 (323) or 124 (124). A 13-524 1 1909

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 4L means three hours of lecture and four hours of lab.
An introduction to the study of carbon compounds, with emphasis upon reaction mechanisms, stereochemistry and spectroscopic analysis. Prerequisite: Chem. 112 (112) or 124 (124) with a C or better. A 13 531 0 1907

A continuation of Chem. 531 (331), with emphasis upon the structures and reactions of principle functional groups and compounds of biological interest. Prerequisite: Chem. 531 (331). A 13 532 0 1907

Thermodynamics. Gases, first law, thermochemistry, second and third laws, phase equilibria, solutions, chemical equilibria, electrochemistry and surface chemistry are studied. Prerequisites: Chem. 112 (112), Math 243 (243), or its equivalent, and one semester of college physics. A 13 545 0 1908

Kinetic theory, kinetics, transport phenomena, quantum mechanics, spectroscopy and statistical thermodynamics. Prerequisites: Chem. 545 (345), and one year of college physics. Math. 344 (244) is strongly recommended. A 13 546 0-1908

Physical chemistry experiments that illustrate principles learned in Chem. 545 (345) and 546 (346). Corequisite: Chem. 546 (346). A 13 547 1 1908

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; computer programming. Prerequisite: departmental consent. A 13 602 0 1905

Trends and periodicity of the elements. Symmetry, structure and theories of bonding. Prerequisite: Chem. 545 (345). A 13 611 0 1906

Systematic Inorganic Chemistry. (2). Descriptive inorganic chemistry. Prerequisite: Chem. 545 (345). A 13 612 0 1906

Inorganic Chemistry Laboratory. (2). Experimental methods of inorganic chemistry. Prerequisite: Chem. 611 (411) or concurrent enrollment. A 13 613 1 1906

Advanced Analytical Chemistry. (3). Fundamentals of absorption and emission spectroscopy, light scattering techniques, mass spectrometry, nuclear magnetic resonance, polarography, voltammetry and coulometry. Prerequisite: Chem. 524 (324). A 13 624 0 1909

Electronics. (2). Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: consent of instructor. A 13 625 0 1909

The theory and practice of organic chemical preparations. The methods of separation and purification by crystallization, distillation, extraction and chromatography are emphasized. Physical methods of characterization of pure compounds are covered. Prerequisites: Chem. 532 (332) and consent of instructor. At least one semester of physical chemistry is recommended in addition to the prerequisites listed. A 13 633 0 1907

Qualitative Organic Analysis. (3). Identification of organic compounds. Prerequisite: consent of instructor. A 13 634 0 1907

Advanced Physical Chemistry. (3). Introduction to quantum chemistry, atomic and molecular spectra, statistical thermodynamics and reaction rate theory. Prerequisite: Chem. 546 (346). A 13 641 0 1908

An introduction to protein, lipid and carbohydrate chemistry. Prerequisites: Chem. 532 (332) and 523 (323), or equivalent, or consent of instructor. At least one semester of physical chemistry is
recommended in addition to the pre-
requisites listed. A 13 661 0 0414

700 (500). Chemistry Seminar. (1). Sem-
inars are given by students on either papers recently published in the litera-
ture or on their own research. This course may be repeated for credit. A 13 700 9-
1905

701. Chemistry Colloquium. (1). Speak-
ers for the colloquium consist of out-
standing chemists from other institutions and faculty. This course may be repeated for credit. A 13 701 9 1905

705. Molecular Symmetry. (1). A study of the chemically relevant aspects of group theory. Topics include sym-
metry elements, character tables, sym-
metry classification of molecules and representations of groups. A 13 705 0-
1905

709 (509). Special Topics in Chemistry. (2-3). A discussion of topics of a special significance and interest to faculty and students. Offerings will be announced in advance. This course may be repeated for credit. A 13 709 0 1905

711 (511). Theoretical Inorganic Chem-
istry. (3). A presentation of the theories of bonding, including the application of group theory to valence bond hybridiza-
tion, molecular orbital theory, crystal field theory, ligand field theory, electronic spectra of coordination compounds and space group symmetries. Prerequisite: Chem. 705 or its equivalent. A 13 711 0-
1906

712 (512). Coordination Chemistry. (3). Some aspects and applications of coordination chemistry. An introduction to chemical bonding and absorption spectra in coordination complexes, methods for the determination of stability constants and structure, substitution reactions and stereochemical changes of octahedral and square planar complexes, oxidation-re-
duction reactions and metal-ion catalysis are given. A 13 712 0 1906

723 (523). Analytical Spectroscopy. (3). 2R; 3L. Absorption (UV, visible, IR and atomic) and emission (arc, spark and flame), nuclear magnetic resonance and mass spectroscopy. Lectures and discus-
sions on theory and practice are given. Selected laboratory experiments illustrate applications to quantitative and qualita-
tive analysis. Particular emphasis is placed upon instrumentation and the acquisition of artifact-free data. A 13-
723 0 1909

724 (524). Electroanalytical Chemistry. (3). 2R; 3L. Topics covered in this course are voltammetry, polarography, chronoamperometry and coulometry; reversible and irreversible diffusion con-
trolled processes; CE (chemical reaction before electrical reaction), EC (electrical reaction before chemical reaction) and catalytic reaction; and organic polarog-
raphy 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 dig-
tal logic, data acquisition techniques and the on-line digital computer in instru-
mentation. Laboratory experience covers the design of digital logic circuits, inter-
acing chemical instruments to the digital computer and programming the small digital computer. A 13 725 0 1905

731 (531). Advanced Organic Chemistry. (3). A survey of topics of current interest in organic chemistry. Discussions include nomenclature, aromaticity and anti-
aromaticity, valence-bond isomerization and fluxional structures, name reactions and their mechanisms and species with divalent and trivalent carbon. A 13-
731 0 1907

732 (532). Heterocyclic Chemistry. (3). A study of syntheses and typical reac-
tions of saturated and unsaturated het-
erocycles of various sizes. Emphasis is placed on recent advances in this field. A 13 732 0 1907

735 (535). Physical Organic Chemistry. (3). An examination of molecular orbital theory, conservation of orbital symmetry, linear free energy relationships, acid-
bate catalysis, acidity functions and their applications to a critical examination of
the mechanistic details of a variety of organic reactions. Prerequisite: Chem. 705 or its equivalent. A 13 735 0 1907

736. Structure and Reactivity of Organic Compounds. (3). A study of basic techniques for elucidation of organic reaction mechanisms. Topics include kinetic methods, kinetic isotope effects, medium and salt effects, conformational analysis and other methods for studying the relationship between structure and reactivity. A 13 736 0 1907

737. Synthetic Methods in Organic Chemistry. (3). A study of basic techniques for elucidation of organic reaction mechanisms. Topics include kinetic methods, kinetic isotope effects, medium and salt effects, conformational analysis and other methods for studying the relationship between structure and reactivity. A 13 737 0 1907

738. Structure Determination and Spectral Analysis of Organic Compounds. (3). A lecture course that covers degradative and spectral techniques used for structure determination of organic compounds. The interpretation of ultraviolet, infrared, nuclear magnetic resonance, electron spin resonance and mass spectra receive special attention. A 13 738 0 1907

741 (541). 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 wavefunctions and virial and Hellmann-Feynman theorems. Prerequisite: Chem. 705 or its equivalent. A 13 741 0 1908

742 (542). Chemical Kinetics. (3). A description of reacting systems, including the mathematical and experimental characteristics of simple and complex kinetic systems. The theories of chemical kinetics are discussed, as well as the kinetics of homogeneous reactions in the gas phase, the kinetic aspects of solution reactions, heterogeneous reactions and selected topics of current interest. A 13 742 0 1908

743 (543). Introductory Statistical Mechanics. (3). Topics considered in this course include Fermi-Dirac statistics, Bose-Einstein statistics, imperfect gases, grand partition functions and nonequilibrium thermodynamics. A 13 743 0 1908

745 (545). 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 thermodynamics and statistical mechanics is discussed. A 13 745 0 1908

746 (546). 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, vibration and rotation of diatomic molecules, vibration and rotation of polyatomic molecules, electronic spectra and magnetic resonance spectroscopy. Prerequisite: Chem. 741 (541) or its equivalent; Chem. 705 or its equivalent. A 13 746 0 1908

761 (561). Advanced Biochemistry. (3). Enzyme mechanisms, metabolic feedback, transport phenomena, hormones, porphyrins and nucleic acids. Prerequisite: Chem. 661 (461) or its equivalent. A 13 761 0 0414

790 (590). Research in Chemistry. (2-12). Research for the student planning to receive a PhD degree. Research is to be directed by a faculty member. This course may be repeated for credit. A 13-790 4 1905

Graduate Course

990 (690). Research in Chemistry. (2-16). Research for the student planning to receive a PhD degree. Research is to be directed by a faculty member. This course may be repeated for credit. A 13-990 4 1905
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. 201 (221), 202 (222), 231 (BA 231), 340 (340), 601 (424) and 602 (421) are required along with Math. 111 (140) and 340 (245). Math. 112 (141) may be accepted in lieu of Math. 111 (140).

Minor. A minor in economics in Fairmount College of Liberal Arts and Sciences consists of 15 hours exclusive of Econ. 100 (100) and 102 (190). Econ. 201 (221) and 202 (222) must be included.

Economics courses are listed in the College of Business Administration section of the Catalog.

English Language and Literature

Major. A major consists of 33 hours and must include Eng. 300 (225), 360 (260), 361 (261), 362 (262) and 690 (446). In addition, courses must be selected from three groups, as indicated below.

I. Period Courses
   1. One of the following—Eng. 610 (401), 620 (402), 625 (370), 635 (371), 637 (375), 640 (373), 641 (374)
   2. One of the following—Eng. 252 (252), 530 (341), 531 (342) or 532 (343)

II. Major Author Courses
   One of the following—Eng. 501 (301), 515 (433), 516 (434), 601 (431), 602 (430)

III. Studies in Literary Types
   One of the following—Eng. 324 (324), 333 (333), 440 (331), 441 (332), 502 (302), 503 (303), 510 (321), 511 (323). Eng. 101 (111) and 102 (211) are not counted towards an English major. Also, only six hours from the following will be credited toward the major—Eng. 285, 301 (311), 302 (312), 303 (313), 304 (314), 305 (316), 306 (317)—except as noted below for the major with a creative writing sequence.

Minor. A minor consists of 15 hours and requires two of these courses—360 (260), 361 (261), 362 (262) and at least six hours of upper division work. Eng. 101 (111) and 102 (211) are not counted toward a minor.

CREATIVE WRITING

Major with a creative writing sequence. With the written permission of the chairman of the department, a student desiring a creative writing sequence will fulfill the requirements for the regular major with the following exceptions:

1. Required courses are Eng. 285, 300 (225), 361 (261) or 362 (262), and 690 (446). Group requirements remain as stated above.
2. The student must also select at least 12 hours from the following—Eng. 301 (311), 302 (312), 303 (313), 304 (314), 305 (316), 306 (317) and University Honors (2-6).

TEACHING

Major for students planning to teach English in secondary schools. The teaching major in either Fairmount College of Liberal Arts and Sciences or the College of Education is 51 hours distributed as follows.

I. Language—Eng. 315 (215), and one of these—Eng. 399, 665 (461), 667 (462), 670 (463), 672 (491), 674 (492), 676 (493) or 678 (494)

II. Composition—Eng. 300 (225) and 680

III. Literature
1. Foundations of British and American literature—Eng. 360 (260), 361 (261), 362 (262) and one of these—Eng. 340 (240), 515 (433) or 516 (434)
2. Modern literature—two of these—Eng. 252 (252), 324 (324), 333 (333), 503 (303), 530 (341), 531 (342) or 532 (343)
3. Cross-cultural literature—one of these—Eng. 365, 540 (440), 545 (471), 546 (472) or 550 (473)

IV. Literary criticism—Eng. 690 (446)

V. Speech Arts—Speech 675 (475) and one of these—Speech 143 (143) or Speech 221 (221)

VI. Electives—nine hours to be selected in consultation with an English-education adviser.

Minor for students planning to teach English as a second subject in secondary schools. The teaching minor requirement is 24 hours, including the following—Eng. 300 (225), 315 (215); 360 (260) or 361 (261); 252 (252) or 362 (262); 324 (324) or 511 (323); 515 (433) or 516 (434).

A 2.50 grade point average in English is required of all majors and minors applying for admission to the professional semester of student teaching in secondary school English.

Minor for others in the College of Education. The English minor requirement for those planning to teach in elementary school is 18 hours, including the following—Eng. 102 (211), 315 (215); 360 (260) or 361 (261); 362 (262); 324 (324) or 502 (302) or 511 (323) or 531 (342); 515 (433) or 516 (434).

A 2.00 grade point average in the minor field is required for admission to the elementary professional semester in the College of Education.

Lower Division Courses

101 (111)-102 (211). College English I and II. (3-3). Communication skills (reading, listening, library skills and especially, writing). Eng. 101 (111) is prerequisite for Eng. 102 (211). A 14 101 0 0601; A 14 102 0 0601

103 (103) & 104 (104). Masterworks of European Literature I and II. (3 & 3). Literary classics in translation. I: from the Greeks to the Renaissance. II: from the Renaissance to the modern world. A 14 103 0 1503 & A 14 104 0 1503
223 (223). Books and Ideas. (3). Reading, discussing and some writing about literature from all periods and cultures (fiction, poetry, drama and essays). This course is designed especially for non-English majors and is not credited toward an English major or minor. A 14 223 0-1502

224 (224). Twentieth Century British and American Literature. (3). Designed especially for non-English majors; not credited toward an English major or minor. A 14 224 0 1502

252 (252). Modern American Writers. (3). A 14 252 0 1502

280 (280). Literary Studies. (3). Course content varies from one semester to another. This course may be repeated for credit. A 14 280 0 1502

285. Introduction to Creative Writing. (3). An introductory course for students interested in the techniques and practice of imaginative writing in its varied forms. Prerequisite: Eng. 101 (111) and 102 (211). A 14 285 0 1507

Upper Division Courses

300 (225). Literary Theory and Critical Writing. (3). Instruction in critical reading and critical writing through the study of representative works in drama, poetry and prose fiction. The course is limited to English majors or minors and is required of all English majors. Prerequisites: Eng. 101 (111) and 102 (211). A 14 300 0 1502

301 (311) & 302 (312). Creative Writing: Prose Fiction. (3 & 3). These courses may not be repeated for credit. Prerequisites: Eng. 101 (111), 102 (211) and consent of instructor. A 14-301 0 1507 & A 14 302 0 1507

303 (313) & 304 (314). Creative Writing: Poetry. (3 & 3). These courses may not be repeated for credit. Prerequisites: Eng. 101 (111), 102 (211) and consent of instructor. A 14 303 0 1507 & A 14 304-0 1507

305 (316) & 306 (317). Playwriting I and II. (3 & 3). These courses may not be repeated for credit. Prerequisites: Eng. 101 (111), 102 (211) and consent of instructor. A 14 305 0 1507 & A 14 306-0 1507

307 (201). Narrative in Literature and Film. (3). 2R; 2L. A comparative aesthetic analysis of the art of narration in literature and especially in film. A 14-307 0 1501

309 (309). Theme and Idea in Literature. (3). Reading, discussion and some writing on literature from all periods and genre, centered on themes of human thought and action. This course is not credited toward an English major. A 14-309 0 1502

315 (215). Introduction to English Linguistics. (3). Same as Ling. 315 (215). Introduction to linguistic principles, including phonological and grammatical concepts. A 14 315 0 1505

324 (324). Contemporary Drama. (3). Continental, English, Irish and American plays of the twentieth century. A 14-324 0 1503


340 (240). Major Plays of Shakespeare. (3). Designed for English majors and nonmajors who wish to study the best works of Shakespeare's whole career in one semester. This course may not be credited toward an English major by students who attain credit in Eng. 515 (433) or 516 (434). A 14 340 0 1502

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of lab.
355 (255). American Democracy. (3). Same as Pol. Sci. 311 (211). (See Political Science for description). A 14 355-0 1501

360 (260) & 361 (261). Major British Writers I and II. (3 & 3). I: from the beginnings through the eighteenth century. II: from the nineteenth century to the present. The courses are required of all English majors. A 14 360 0 1502 & A 14-361 0 1502

362 (262). Major American Writers. (3). From Poe to James. This course is required of all English majors. A 14 362-0 1502

365. Afro-American Literature. (3). A survey course designed to acquaint the student with the most significant Afro-American writers from the 1700's to the present. Lectures cover early slave narratives and early slave poetry to the Harlem Renaissance; student reading, discussion and writing begin with the Harlem Renaissance and end with the 1970's. Prerequisites: Eng. 101 (111) and 102 (211). A 14 365 0 1502

390 (399). The Bible as Literature. (3). A 14 390 0 1501

399. Linguistics and Language Variation. (3). Preparation for the study of language, survey of minority dialects in America, methods of studying them and discussion of special problems experienced by speakers of minority dialects. A 14 399 0 1501

440 (331) & 441 (332). The English Novel I and II. (3 & 3). I: from Defoe through Thackeray. II: from George Eliot through Galsworthy. Prerequisite: one college literature course. A 14 440 0-1502 & A 14 441 0 1502

450 (475) & 451 (476). Independent Reading. (2-3 & 2-3). Designed for majors and nonmajors who wish to pursue special reading or research projects in areas not normally covered in course work. Admission to courses is by departmental consent only. Prerequisite: one college literature course. A 14 450 3-1502 & A 14 451 3 1502

501 (301a, b, c, d, e, f). American Authors. (3). Subjects to be announced each semester. This course may be repeated for credit. Prerequisite: one college literature course. A 14 501 0 1502

502 (302a, b). American Fiction. (3). Subjects to be announced each semester. This course may be repeated for credit. Prerequisite: one college literature course. A 14 502 0 1502

503 (303). American Drama. (3). Prerequisite: one college literature course. A 14 503 0 1502

510 (321) & 511 (323). British Drama I and II. (3 & 3). I: from the beginning to 1660. II: from 1660 to present. Prerequisite: one college literature course. A 14 510 0 1502 & A 14 511 0 1502

515 (433) & 516 (434). Shakespeare I and II. (3 & 3). I: Shakespeare's work to 1600. II: Shakespeare's work after 1600. Prerequisite: one college literature course. A 14 515 0 1502 & A 14 516 0-1502

530 (341). Modern British and American Literature from 1900 to 1922. (3). Prerequisite: one college literature course. A 14 530 0 1502

531 (342). Modern British and American Literature from 1923 to 1945. (3). Prerequisite: one college literature course. A 14 531 0 1502

532 (343). Modern British and American Literature from 1946 to present. (3). Prerequisite: one college literature course. A 14 532 0 1502

540 (440). Folklore. (3). A 14 540 0-1502

545 (471). Comparative Literature: Ancient and Pre-Renaissance. (3). A study of contrastive 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 drama, with emphasis on appreciation and on the affinity and the uniqueness of the works compared. Prerequisite: one college literature course. A 14 545 0 1503
546 (472). Comparative Literature: Renaissance and Modern Europe. (3). A study of some controlling themes and moods in Renaissance and modern European literature. Readings may vary: fiction, drama and poetry, with emphasis on appreciation, critical awareness and the real similarities and differences between works. Prerequisite: one college literature course. A 14 546 0 1503

550 (473). Comparative Literature: Myths, Ancient and Modern. (3). A study of representative man-centered myths from various traditions: classical, pre-Renaissance and contemporary, with emphasis on significant relations between individual works or contrasted traditions. Prerequisite: one college literature course. A 14 550 0 1503

580 (480) & 581 (481). Special Studies. (2-3 & 2-3). Topic selected and announced by the individual instructor. These courses may be repeated for credit. Prerequisite: one college literature course. A 14 580 3 1502 & A 14 581 3-1502

601 (431). Chaucer. (3). Prerequisite: two college literature courses. A 14 601-0 1502

602 (430). Milton. (3). Prerequisite: two college literature courses. A 14 602-0 1502

610 (401). Old English. (3). Prerequisite: two college literature courses. A 14 610 0 1502

620 (402). Medieval Literature. (3). Middle English poetry, prose and drama from the twelfth to the fifteenth century. Prerequisite: two college literature courses. A 14 620 0 1502

625 (370). Sixteenth Century English Literature. (3). Prerequisite: two college literature courses. A 14 625 0 1502

635 (371). Seventeenth Century English Literature. (3). Prerequisite: two college literature courses. A 14 635 0 1502

637 (375). Eighteenth Century English Literature. (3). Prerequisite: two college literature courses. A 14 637 0 1502

640 (373) & 641 (374). Nineteenth Century English Literature I and II. (3 & 3). I: Romantic writers. II: Victorian writers. Prerequisite: two college literature courses. A 14 640 0 1502 & A 14 641 0 1502

665 (461). History of the English Language. (3). Same as Ling. 665 (461). Linguistic and cultural investigation of the development of English. Prerequisite: Eng. 315 (215) or Ling. 577 (327), or departmental consent. A 14 665 0-1505

667 (462). Aspects of Linguistic Theory. (3). Same as Ling. 667 (462). Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: Eng. 315 (215) or Ling. 577 (327), or departmental consent. A 14 667 0 1505

670 (463). The English Language in America. (3). Same as Ling. 670 (463). Investigation of English, both past and present, in the Western Hemisphere. Prerequisite: Eng. 315 (215) or Ling. 577 (327), or departmental consent. A 14 670 0 1505

672 (491). Dialectology. (3). Same as Ling. 672 (491). An introduction to the study of dialect in language, with special attention to regional dialect in America and methods of studying it. Prerequisite: Eng. 315 (215) or Ling. 577 (327), or departmental consent. A 14 672 0 1505

674 (492). The Study of Social Dialects. (3). Same as Ling. 674 (492). A study of dialectal variation in relation to social classes. Prerequisite: Eng. 315 (215) or Ling. 577 (327), or departmental consent. A 14 674 0 1505

676 (493). Afro-American English. (3). Same as Ling. 676 (493). A detailed study involving the analysis of samples of the language, of the characteristics of urban Afro-American speech and writing. Prerequisite: Eng. 672 (491) or departmental consent. A 14 676 0 1505

678 (494). Standard English as a Second Dialect. (3). Same as Ling. 678 (428). Bibliography, survey and evaluation of methods and materials; contrastive analysis and dialect distribution and com-
comparisons; and the nature of language learning. Prerequisite: Eng. 674 (492) or 676 (493), or departmental consent. A 14 678 0 1505

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 processes of writing, analyze varieties and samples of school writing and develop their own writing skills by writing, revising and evaluating their own and others' work. The course is designed especially for prospective teachers and may not be taken for credit by students with credit in Eng. 780. A 14 680 0 1501

690 (446). Senior Seminar in Literary Criticism. (3). Explores various historical and modern approaches to literary criticism and research. This course is required of all English majors and may not be offered for graduate credit. Prerequisite: Eng. 300 (225) and at least 15 hours of English completed, not counting Eng. 101 (111) and 102 (211). A 14 690 0 1502

740 (504e). Graduate Studies in Linguistics. (3). Selected topics in theories of language and methods of linguistic study. With departmental consent, the course may be repeated for credit. A 14 740 0 1505

750 (450). Workshop. (2-4). May be repeated for credit. A 14 750 2 1502

780. Advanced Theory and Practice in Composition. (3). Review of new theories of rhetoric, recent research in composition and new and promising developments in composition programs in schools and colleges. Students are given practice in advanced writing problems, situations and techniques and may propose projects for further special study. A 14 780 0 1501

Graduate Courses

800 (506). Introduction to Graduate Study in English. (3). A course especially designed to prepare students to perform effectively in graduate classes in English. The course is concerned with: (1) basic bibliographical tools; (2) terminology, both technical and historical; (3) various approaches to the study of literature, such as intrinsic analysis of a literary work, the relationships of biography to literary study and the relevance of other disciplines, such as psychology, to literature; (4) the writing of interpretative and research essays. Throughout the semester a balance between criticism and research is maintained. A 14 800 0 1502

801 (509a) & 802 (510a). Creative Writing: Fiction. (3 & 3). Advanced work in creative writing. Students who plan to offer creative writing in prose fiction as a thesis are required to complete two semesters. Prerequisite: consent of coordinator for creative writing. With departmental consent, these courses may be repeated for credit. A 14 801 9 1507 & A 14 802 9 1507

805 (509b) & 806 (510b). Creative Writing: Poetry. (3 & 3). Advanced work in the writing of poetry. Students who plan to offer creative writing in poetry as a thesis are required to complete two semesters. Prerequisite: consent of coordinator for creative writing. With departmental consent, these courses may be repeated for credit. A 14 805 9 1507 & A 14 806 9 1507

811 (501a). Graduate Readings in Pre-Renaissance Literature. (3). Early and middle English poetry, prose and drama to the fifteenth century. A 14 811 9 1502


Fairmount College 275
815 (501e). Graduate Readings in Roman-
tic Literature. (3). Wordsworth, Cole-
ridge, Byron, Shelley, Keats, Scott and
their contemporaries. A 14 815 9 1502

816 (501f). Graduate Readings in Victo-
rian Literature. (3). Writers from Carlyle
to Yeats studied in relation to political
events and the social, scientific and reli-
gious thought of the age. A 14 816 9-
1502

817 (501g). Graduate Readings in Twen
tieth Century British Literature. (3).
Yeats, Joyce, Lawrence, Auden, Spender,
and their contemporaries. A 14 817 9-
1502

821 (502a). Graduate Readings in Amer-
ican Literature I. (3). From the begin-
nings to 1870 with emphasis on Emerson,
Thoreau, Hawthorne, Melville, Whitman
and Dickinson. A 14 821 9 1502

822 (502b). Graduate Readings in Amer-
ican Literature II. (3). From 1870 to
1920, with emphasis on James, Twain,
Crane, Dreiser, Robinson and Frost. A 14-
822 9 1502

823 (502c). Graduate Readings in Amer-
ican Literature III. (3). From 1920 to
1970, including Eliot, Stevens, Heming-
way, Faulkner and their contemporaries.
A 14 823 9 1502

830 (504a). Graduate Studies in Drama.
(3). Selected topics in the history and
nature of dramatic literature. With de-
partmental consent, this course may be
repeated for credit. A 14 830 9 1502

832 (504b). Graduate Studies in Fiction.
(3). Selected topics in the development
of the form and content of prose fiction.

With departmental consent, this course
may be repeated for credit. A 14 832-
9 1502

834 (504c). Graduate Studies in Poetry.
(3). Selected topics in forms, techniques
and history of poetry. With departmental
consent, this course may be repeated for
credit. A 14 834 9 1502

840 (504d). Graduate Studies in Criti-
cism. (3). Selected topics in the theory
and practice of literary criticism. With
departmental consent, this course may be
repeated for credit. A 14 840 9 1502

845 (531). 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. This course may be repeated
for credit with change of content. A 14-
845 9 1502

855 (511). Directed Reading. (2-3).
Designed for graduate students who want
to pursue special research in areas not
normally covered in course work. Pre-
requisite: departmental consent. With
departmental consent, this course may be
repeated for credit. A 14 855 3 1502

860 (520). Graduate Seminar in Special
Topics. (3). Intensive study of selected
texts, writers or literary problems.
Seminar discussions, reports and research
projects. With departmental consent, this
course may be repeated for credit. A 14-
860 9 1502

870 (575). Master's Essay. (2-3). A 14-
870 4 1502

875 (575). Master's of Fine Arts Essay.
(2-6). A 14 875 4 1507

French (See Romance Languages)

Geology and Geography

The Bachelor of Science degree program in geology provides in-depth
training for professional work in industry or government as well as for
graduate study. The Bachelor of Arts degree program in geology pro-
vides greater latitude for a liberal arts or teacher preparation background.
The geology program emphasizes field and laboratory skills in sedimentary geology and related fields. Particular attention is directed to solving problems of mineral fuel and mineral resources depletion and of environmental improvement.

Students who expect to achieve either bachelor's degree in geology within a minimum period should have completed geometry, trigonometry and two years of algebra in high school. Chemistry and physics are also recommended.

No major is offered in geography.

**Geology Major.** A major with a BA degree requires a minimum of 33 units in geology and must include Geol. 212 (111), or its equivalent, and the following:

1. Geol. 320 (225), mineralogy; 324 (226), petrology; 520 (302), optical mineralogy; 523 (225, 226, 530), igneous and metamorphic geology; and 526 (347), sedimentary geology;
2. Geol. 552 (350), physical stratigraphy; 544 (333), structural geology;
3. Geol. 570 (337, 436, 438, 439), biogeology;
4. Six more hours of upper division geology electives or other sciences with prior written approval of the department.

Required supporting sciences for the BA consist of:

1. Any course in biology;
2. One of the following groups
   (a) Chem. 111 (111) or 123 (123) and Phys. 213 (123) and 214 (124) or 311 (243) and 312 (244)
   (b) Chem. 111 (111) and 112 (112) or 123 (123) and 124 (124) and Phys. 213 (123) or 311 (243);
3. Math. 242 (142) and 243 (243);
4. Geog. 540 (335), field mapping methods.

A major with a BS degree requires a minimum of 42 units in geology and must include Geol. 212 (111), or its equivalent, and the following:

1. Geol. 320 (225), mineralogy; 324 (226), petrology; 520 (302), optical mineralogy; 523 (225, 226, 530), igneous and metamorphic geology; and 526 (347), sedimentary geology;
2. Geol. 552 (358), physical stratigraphy, and 944 (333), structural geology;
3. Geol. 570 (337, 436, 438, 439), biogeology;
4. Geol. 640 (464), field geology;
5. At least one course from 312 (112), historical geology; 560 (331), geomorphology; 562 (405), regional geology of the United States; and 564 (440), map and air photo interpretation;
6. At least one course from 650 (470), geohydrology; 680 (361), economic geology; 682 (444), petroleum geology; or 684 (443), subsurface geology;
7. At least one other upper division course in geology or another science with prior written approval of the department.

Required supporting sciences for the BS degree consist of:

1. All those courses listed for the BA degree;
2. Chem. 112 (112) or 124 (124) or Phys. 214 (124) or 312 (244), to complete a one year sequence each in chemistry and physics;
3. Math. 344 (244).
A sequence in statistics or computer science courses can, with prior departmental approval, be substituted for the mathematics requirements in either bachelor program. Upon consultation with the department and with prior approval of all departments concerned, field majors in geology can be defined in the areas of geobiology, geochemistry, geomathematics, geophysics, engineering geology and earth science teaching.

Geology Minor. A minor in geology consists of at least 15 hours, including Geol. 212 (111) or its equivalent and 12 units of upper division courses.

Geography Minor. A minor in geography consists of at least 15 hours, including Geog. 201 (201) or its 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. 111 (111), general, and 312 (112), historical. Similar advice is offered to the potential major whose decision to elect geology is still pending. Any student who later majors in geology will find that the completion of Geol. 312 (112) will meet an elective requirement for either degree.

GEOLOGY

Lower Division Courses

101 (101). Physical Science, Environment and Man. (5). 5R; D. A study of man and his physical environment. Basic concepts in the physical sciences and current problems with which physical scientists are concerned. A 16 101 0 1901

111 (111). General Geology. (5). 3R; 1D; 2L. 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 16 111 0 1914

212 (111). General Geology. (3). 2R; 3L. The materials and structure of the earth, the physical and chemical processes at work upon and within it and its evolutionary history. The course is designed for geology and other science majors and minors. Field trips are required. Not open to students with credit in Geol. 111 (111). A 16 212 0 1914

Upper Division Courses

302 (102). Earth and Space Science. (4). 3R; 2L. 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. 111 (111) or 212 (111) or Geog. 201 (201). A 16 302 0 1917

312 (112). Historical Geology. (3). 2R; 3L. A systematic review of earth history and its preservation in the rock record using field evidence for sequences of biological and tectonic events in selected areas. Also included is the origin and evolution of life. Field trips are required. Prerequisite: Geol. 111 (111) or 212 (111) or 302 (102), or equivalent. A 16-312 0 1914

320 (225). Mineralogy. (3). 1R; 6L. Elementary crystallography. A study of the origin, composition and structure of the common rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrences, associa-
tions and identification. Prerequisite: Geol. 212 (111) or equivalent. Field trips are required. A 16 320 0 1914

324 (226). Petrology. (3). 1R; 6L. The origin, distribution, occurrence, description and classifications of the common igneous, metamorphic and sedimentary rocks with laboratory emphasis on the identification of common rocks. Prerequisite: Geol. 320 (225). Field trips are required. A 16 324 0 1914

330 (211). Astrogeology. (3). Flow of energy in the cosmos; evolution of stellar and galactic systems as they relate to the origin and cosmic abundance of the elements; origin of solar—planetary systems, including satellites, meteorites and comets; and elements of lunar geology. A 16-330 0 1911

520 (425). Optical Mineralogy. (3). 1R; 6L. Optical properties of amorphous and crystalline materials in polarized light. Use of the petrographic microscope in the quantitative determination of common rock-forming minerals and mineraloids in thin section is used, and immersion oil methods are introduced. Prerequisite: Geol. 320 (225). A 16 520 0 1914

523 (225, 226, 530). Igneous and Metamorphic Geology. (3). 2R; 3L. The evolutions of igneous and metamorphic rocks, their structures and the physiochemical 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 (302). A 16 523 0 1914

526 (347). Sedimentary Geology. (3). 2R; 3L. Origin, classification, primary structures and physiochemical processes controlling deposition of clastic and nonclastic sedimentary rocks, especially carbonates. An analysis of modern and ancient sedimentary depositional environments is included, as is a systematic petrographic study of sedimentary rocks in thin section, insoluble residues and heavy mineral analysis. Prerequisite: Geol. 523 (225, 226, 530). A 16 526 0 1914

531 (460). Planetary Geoscience. (3). 2R; 3L. Planetary astrogeology, nature and origin of the solar and planetary system, imagery mapping of lunar and planetary surfaces, geochemistry and geophysics of planets and meteorites, lunar geology and petrology. Prerequisites: Geol. 111 (111), or 212 (111), or 302 (102), or 330 (211). A 16 531 0 1914

540 (335). Field Mapping Methods. (3). 9L. Field mapping methods, with special reference to use of level, compass, barometer, alidade and air photos. Prerequisite: Geog. 201 (201) or Geol. 111 (111), or equivalent. Field trips are required. A 16 540 0 1914

544 (333). Structural Geology. (3). 2R; 3L. Stress-strain theory and mechanics of rock deformation; description and genesis of secondary structural features in crustal rocks resulting from diastrophism; elements of global tectonics; laboratory solution of geologic problems in three dimensions and time. Field trips and field problem are required. Prerequisite: Geol. 552 (350). A 16 544 0 1914

552 (350). Physical Stratigraphy. (3). 2R; 3L. Description, classification, correlation and relative ages of stratigraphic rock units, and the origin of primary structures of clastic sedimentary rocks. Laboratory emphasis is on binocular microscopic examination and physical properties of unconsolidated sediments and clastic sedimentary rocks. Field instruction in stratigraphic mapping methods is required. Prerequisites: Geol. 320 (225) and Geog. 540 (335), or equivalent. A 16 552 0 1914

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, D stands for demonstration and L stands for laboratory. For example, 3R; 1D; 2L means three hours of lecture, one hour of demonstration and two hours of laboratory.
560 (331). Geomorphology. (3). 2R; 3L. Identification and interpretation of the genesis of landforms and a critical examination of processes producing the landforms, including elements of quantitative geomorphology. Field trips are required at the option of the instructor. Prerequisite: Geol. 111 (111) or equivalent. A 16 560 0 1914

562 (405). Regional Geology of the United States. (3). A detailed regional survey of the general geology, geomorphology, stratigraphy and structural geology and their interrelationship in the United States. Prerequisite: Geol. 560 (331) or consent of instructor. A 16 562 0 1914

564 (440). Map and Air Photo Interpretation. (3). 2R; 3L. Elements of map and aerial photograph composition; interpretation and application of maps and photos in geology, geography, urban planning, land use inventory and engineering works. Remote sensing methods are introduced. Field trips are required at the option of the instructor. Prerequisite: Geol. 111 (111), Geog. 201 (201) or equivalent. A 16 564 0 1914

570 (387, 436, 438, 439). Biogeology. (3). 2R; 3L. Systematic survey of major fossil biogeological materials, analysis of the origin and evolution of life and paleoecological interpretation of ancient environments and climates. Hand lens and binocular microscopic examination is made of major fossil biogeological materials. Application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, paleoclimatology and paleoecography is included. Examples are cited from fields of invertebrate, vertebrate and micro-paleontology, and palynology. Museum and field trips are required. Prerequisites: Geol. 312 (112) or 552 (350). A 16 570 0 1918

574 (387, 436, 438, 439). Special Studies in Biogeology. (3). 2R; 3L. A systematic study in selected areas of biogeology and paleontology. Course content varies, upon demand, to provide in-depth analysis in the fields of: (a) invertebrate paleontology, (b) vertebrate paleontology, (c) micropaleontology, (d) palynology and (e) paleoecology. Appropriate laboratory instruction is given in the systematics, taxonomy and biogeological relationships within the selected fields listed. Field trips are required. This course may be repeated for credit to cover all five areas listed. A 16 574 1 1918

620 (480). Geochemistry. (3). 3R. The chemistry of earth materials and the important geochemical processes and cycles operating on and within the earth through time. Prerequisites: Geol. 523 (225, 226, 530), 526 (347) and Chem. 112 (112). A 16 620 0 1915

640 (464). Field Geology. (6). Field investigation of sedimentary, igneous and metamorphic rock units and their structures. The application of mapping methods in solving geologic problems is included. This course is held at an off-campus field camp for five weeks (including weekends). Preparation of geologic columns, sections, maps and an accompanying professionally written report are due on campus during the sixth week. Prerequisite: 12 credits of advanced geology, preferably including a field methods mapping course, or consent of instructor. Offered jointly with Kansas State University. (Identical with Kansas State's Geol. 640.) A 16 640 1-1914

650 (470). Geohydrology. (3). 2R; 3L. The hydrologic cycle, physical and chemical properties of water; fluid flow through permeable media; exploration for and evaluation of ground water; water quality and pollution and water law. Prerequisites: Geol. 552 (350) and Math. 243 (243), or consent of instructor. A 16 650 0 1914


680 (361). Economic Geology. (3). 2R; 3L. Occurrence of metallic and non-
metallic economic mineral deposits and the physiochemical principles governing their origin. Included also are a laboratory examination of common ores and industrial minerals, and elements of mineral beneficiation. Field trips are required. Prerequisites: Geol. 523 (225, 226, 530) and 526 (347). A 16 680 0-1914

682 (444). Petroleum Geology. (3). 2R; 3L. The origin, migration and accumulation of oil and gas on the earth’s crust, as well as the distribution and significant features of modern fields. Field trips are required. Prerequisite: Geol. 544 (333). A 16 682 0 1914

684 (443). Subsurface Geology. (3). 2R; 3L. All subsurface methods, including laboratory, logging, testing and treatment, valuation and mapping methods. Field trips are required at the option of the instructor. Prerequisite: Geol. 682 (444) and Phys. 214 (124) or equivalent. A 16 684 0 1914

690 (490). Special Studies in Geology. (2-3). Systematic study in selected areas of geology. Course content varies and may be repeated for credit. Laboratory work or field trips might be required at the option of instructor. This course is offered upon demand. Prerequisite: consent of instructor. A 16 690 4 1914

699 (499). Independent Study in Geology. (2-3). Independent study on special problems in the field of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) petroleum, (i) stratigraphy and (j) geophysics. Independent study in selected areas of geology with a written final report required. Prerequisite: consent of sponsoring faculty. A 16 699 2 1914

Graduate Courses

800 (500). Research in Geology. (3). 9L. Research in special areas of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) petroleum, (i) stratigraphy and (j) geophysics. A written final report is required. Prerequisite: consent of sponsoring faculty. A 16 800-4 1914

823 (530). Igneous and Metamorphic Petrology. (3). 1R; 6L. Mineral paragenesis, bulk chemical compositions, physical-chemical relationships, textures, structures, origins and classifications of igneous and metamorphic rocks. Thin-section studies to facilitate rock identifications and the determination of petrogenetic relationships. Field trips are required. Prerequisite: Geol. 523 (225, 226, 530). A 16 823 0 1914

826 (532). Sedimentary Petrology. (3). 2R; 3L. 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 (347). A 16 826 0 1914

840 (534). Geotectonics. (3). 2R; 3L. Physical and geological principles of crustal deformation and tectonic interpretation. The relationship of interior earth processes to crustal deformation is studied, with special reference to global tectonics. Field trips are required. Prerequisite: consent of instructor. A 16 840 0 1914

850 (521). Stratigraphy. (3). 2R; 3L. Advanced concepts and principles of stratigraphic analysis and interpretation with emphasis on original sources and current research investigations. Field problem is required. Field trips are required. Prerequisite: Geol. 544 (333) or consent of instructor. A 16 850 0 1914

870 (537). Biogeology. (3). 2R; 3L. Paleoeological reconstruction of ancient plant/animal communities and environments with emphasis on community structure, biostratigraphy, synthesis of total raw data and problem-solving. Field trips are required. Prerequisite: a course in biogeology or equivalent. A 16 870 0-1918

880 (542). Ore Deposits. (3). 2R; 3L. An advanced treatment of the occurrence, classification and origin of metalliferous
ore deposits; applied petrography of selected ore and host rock suites; mineral-ogy of opaque ore minerals and their textures. Prerequisite: Geol. 680 (361). A 16 880 0 1914


GEOGRAPHY

Only courses 201 (201), 235 (235) and those cross-listed with geology are intended as physical science courses. All other geography courses are intended as social science offerings.

Lower Division Courses

125 (125). Principles of Geography. (3). An introductory course on college geography, emphasizing the relationship between human activities and natural environment. A 16 125 0 2206

201 (201). Physical Geography. (3). 2R; 3L. Emphasis upon the physical basis of geography, including climate, terrain, soils, landforms and the seas; economic resources; cartographic elements; introduction to regional studies. Field trips are required at the option of the instructor. A 16 201 0 1917

235 (235). Meteorology. (3). 2R; 2L. 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. Prerequisite: consent of instructor. This course does not apply toward a major or minor in geology. Field trips are required at the option of the instructor. A 16 235 0 1913

Upper Division Courses

510 (210). World Geography. (3). A general survey of world geography, including an analysis of the physical, political, economic, historical and human geography of the major world regions. A 16 510 0 2206

520 (302). 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 (364). Geography of Latin America. (3). Physical, political, economic, historical and human geography of Latin America. A 16 530 0 2206

540 (335). Field Mapping Methods. (3). 9L. See Geol. 540 (335). A 16 540 1 2206

542 (342). Geography of Europe. (3). Physical, political, economic, historical and human geography of Europe. A 16-542 0 2206

550 (402). Geography of Africa. (3). Physical, political, economic, historical and human geography of Africa. A 16-550 0 2206

560 (331). Geomorphology. (3). 2R; 3L. See Geol. 560 (331). A 16 560 0 2206

564 (440). Map and Air Photo Interpretation. (3). 2R; 3L. See Geol. 564 (440). A 16 564 0 2206

572 (422). Geography of Asia. (3). Physical, political, economic, historical and human geography of Asia. A 16-572 0 2206

580 (223). Economic Geography. (3). A geographical analysis of the distribution and utilization of basic world resources. A 16 580 0 2206

585 (361). Economic Resources. (3). Economic geography of the earth's resources; distribution and utilization of metals, industrial and chemical minerals, fertilizers, building materials, fossil fuels and water. A 16 585 0 2206

670 (470). Urban Geography. (3). 2R; 3L. Geography of cities; the origin, growth, functions, characteristics and environmental problems of urban areas; structure and dynamic elements of intra-urban space; land use analysis and approaches to urban planning; problems of urban ecology. A 16 670 0 2214

695. Special Studies in Geography. (3).
German

Major A. A major in German consists of a minimum of 24 hours beyond the level of Ger. 112 (112), including Ger. 525 (325) and 577 (327). It is strongly recommended that the major program include at least two of the survey courses offered. In addition, the student should elect courses in one other foreign language, English language and literature, linguistics, history or philosophy.

Native speakers of German are not normally permitted to enroll in 100-200 (100-200) level German courses or to receive credit in such courses by advanced standing examination. A minimum of 12 hours in upper division courses, including Ger. 577 (327) and 525 (325), is normally required for a native speaker to earn a German major. Native speakers of German should consult with the department before enrolling in German courses.

Minor. A minor in German consists of a minimum of 11 hours beyond the 112 (112) level, including Ger. 225 (225) and one upper division course.

Major B. The teaching major in German in either Fairmount College of Liberal Arts and Sciences or in the College of Education consists of at least 50 semester hours chosen from the three options below. For all categories the student must have at least 24 hours in the language beyond the 111-112 (111-112) level, as listed under Major A. The student must also include one of the three options below:

1. At least 21 hours in a second language;
2. 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 adviser);
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 German and departmental consent in order to be admitted to the professional semester, which includes Sec. Ed. 442 (442) and 447 (447). It is urgent that such students consult with the department's professor in charge of teacher education early in their college careers.

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
Lower Division Courses

010 (60). German for Graduate Reading Examination. (3). Open to upper division and graduate students only. A reading course designed to prepare students to fulfill departmental requirements of a reading knowledge of German for the MA or MS degrees. No previous knowledge of German is required. This course will not count toward a degree. A 17 010 0 1103

111 (111). Elementary German. (5). A 17 111 0 1103

112 (112). Elementary German II. (5). Prerequisite: German 111 (111) or equivalent. A 17 112 0 1103

191 (191). Elementary German Review. (3). Intensive practice and review of basic German structure. This course is designed primarily for students whose study of German has been interrupted or whose preparation in elementary German is inadequate to permit satisfactory performance in Ger. 223 (223) or 225 (225). This course does NOT apply on liberal arts and sciences language requirement for graduation or on German major or minor. Prerequisites: Ger. 112 (112) or equivalent and departmental consent. A 17 191 0 1103

223 (223). Intermediate German I. (3). Intensive reading and discussion of short works; grammar review. Prerequisite: Ger. 112 (112) or equivalent. A 17 223-0 1103

225 (225). German Conversation and Composition I. (2). Development of oral and written skills. Prerequisite: Ger. 223 (223) or consent of instructor. A 17 225-0 1103

226 (226). German Conversation and Composition II. (2). Continuation of Ger. 225 (225). Prerequisite: Ger. 225 (225). A 17 226 0 1103

244 (224). Intermediate German II. (3). Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: Ger. 223 (223) or equivalent. Ger. 244 (224) satisfies the core curriculum literature requirement. A 17 244 0 1103

Upper Division Courses

Except as noted, all upper division literature courses have as a prerequisite or corequisite Ger. 540 (340) or consent of instructor.

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 (112) or consent of instructor. A 17 301 0 1103

521 (321). German in Technical Fields. (3). Supervised individual readings in the student's field of specializations: humanities, social sciences or natural sciences. Prerequisite: Ger. 223 (223). Does not satisfy core curriculum literature requirement. A 17 521 0 1103

525 (325). Advanced Composition and Grammar. (2). Prerequisite: Ger. 226 (226) or departmental consent. A 17 525-0 1103

526 (326). Advanced Composition and Grammar II. (2). Prerequisite: Ger. 525 (325) or departmental consent. A 17 526-0 1103

540 (340). Introduction to the Study of German Literature. (3). Basic introduction in literary methodology. Theory of genres and literary movements. Prerequisite: Ger. 244 (224). A 17 540 0 1103

541 (311). 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 inter-relation of cultural trends. A knowledge of German is desirable but not required. Prerequisite: upper division standing. A 17 541 0 0312

551 (351). Survey I. (3). Medieval period through the eighteenth century, with special emphasis on storm and stress and classicism. A 17 551 0 1103
552 (352). Survey II. (3). Nineteenth century: romanticism and realism. A 17-552 0 1103

553 (353). Survey III. (3). Modern literature: naturalism to the present. A 17 553 0 1103

577 (327). Introduction to Linguistics. (3). Same as Ling. 577 (327) and Anthro. 577 (328). 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: completion of liberal arts foreign language requirement. A 17 577-0 1505

579 (329). Linguistics in the Teaching of German. (3). Same as Ling. 579 (329). 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 (327) or consent of instructor. A 17 579 0 1505

641 (331). Modern German Literature in English Translation. (3). Consideration of the works of one major author, of a literary movement or trend or of a specific genre. This course may be repeated once for credit. Prerequisite: upper division standing. A 17 641 0 1103

651 (435). Drama. (3). A 17 651 0-1103

652 (436). Contemporary Literature. (3). A 17 652 0 1103

653 (437). Goethe. (3). Intensive study of some significant works of Goethe, predominantly Werther and Faust. A 17-653 0 1103

654 (438). Lyric. (3). The reading, interpretation and appreciation of selected lyric poetry of leading German poets. A 17 654 0 1103

659 (441). Seminar in Special Topics. (3). Special studies in (a) a particular period, (b) a specific genre, (c) the works of one outstanding author or (d) stylistics and literary translation. Prerequisite: two upper division literature courses or departmental consent. This course may be repeated once for credit. A 17 659 0 1103

678 (428). Middle High German Language and Literature. (3). The guided reading of Middle High German epic and lyric poetry and shorter verse narratives; fundamentals of Middle High German grammar. Prerequisite: Ger. 577 (327) or consent of instructor. A 17-678 0 1103

RUSSIAN

Lower Division Courses

111 (111). Elementary Russian. (5). A presentation of the sounds and structure of Russian, with the purpose of developing the four basic skills of understanding, speaking, reading and writing. A 17-111 0 1106

112 (112). Elementary Russian. (5). A continuation of Russian 111 (111) in order to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: Russian 111 (111) or equivalent. A 17-112 0 1106

210 (210). Intermediate Russian. (5). Cultural readings and grammar review presented audiologically and designed to enhance the four skills of understanding, speaking, reading and writing. Prerequisite: Russian 112 (112) or equivalent. A 17 210 0 1106
History

Major. A major in history requires a minimum of 35 hours. History majors must specialize in one of the following areas:

1. Ancient and medieval history—requires Hist. 101 (101) plus one additional lower division course;
2. Modern European history—requires Hist. 102 (102) plus one additional lower division course;
3. English history—requires Hist. 113 (113) or 114 (114) plus one additional lower division course;
4. U.S. history—requires Hist. 131 (131) or 132 (132) plus one additional lower division course;
5. Latin American history—requires Hist. 111 (225) plus one additional lower division course;
6. General history—requires eight lower division hours.

Nine upper division hours are to be selected from courses in each appropriate area, chosen in consultation with an adviser. All history majors must take Hist. 699 (498) and 300 (300). In addition, sufficient hours need to be elected to bring the total to 35. At least six of these hours should not be in the area of specialization.

Minor. A minor in history consists of 17 hours, including eight lower division hours, and at least three upper division hours.

Lower Division Courses

101 (101) & 102 (102). History of Western Civilization. (4 & 4). 101 (101): prehistory to 1648. 102 (102): 1648 to the present. A 18 101 0 2205 & A 18 102 0 2205

103 (103) & 104 (104). Evolution of the Non-Western World. (4 & 4). 103 (103): an examination of the political, social and cultural roots of the non-Western peoples, including Africa, Near East, inner Asia, China, Japan, India and southeast Asia. 104 (104): a study of the non-Western world in modern times, including Africa, Near East, inner Asia, China, Japan, India and southeast Asia. A 18 103 0 2205 & A 18 104 0 2205

111 (225) & 112 (226). History of Latin America. (3 & 3). 111 (225): a study of Spanish and Portuguese colonization of America. 112 (226): an examination of the national period from the wars of independence to the present. Prerequisite: sophomore standing. A 18-111 0 2205 & A 18 112 0 2205

113 (113) & 114 (114). English History. (3 & 3). 113 (113): from the earliest times to the beginning of the Stuart period, emphasizing the origin and development of institutions, customs and nationalism. 114 (114): from the beginning of the Stuart period to the present. A 18 113 0 2205 & A 18 114 0 2205

131 (131) & 132 (132). History of the United States. (4 & 4). 131 (131): survey from the colonial period through the Civil War. 132 (132): survey from Reconstruction to the present. A 18 131-0 2205 & A 18 132 0 2205

Upper Division Courses

300 (300). Introduction to Historical Research and Writing. (2). Basic instruction in research methodology, composition and criticism. This course is required of history majors. A 18 300 0 2205

310 (495). Special Topics in History. (3 in an area). A 18 310 3 2205

322 (271) & 323 (272). The Far East. (3 & 3). A survey of the social, economic and political development of the Far East, with emphasis on China, India and Japan. Prerequisite: sophomore standing. A 18 322 0 2205 & A 18 323 0 2205

501 (331). The American Colonies. (3). Colonization of the New World, with emphasis on the British peoples and their development. A 18 501 0 2205

502 (333). The American Revolution and the Early Republic. (3). Examination of selected phases of the revolutionary, confederation and federal periods. A 18 502-0 2205

503 (334). The Age of Jefferson and Jackson. (3). Political, economic and cultural development of the United States from the election of Thomas Jefferson to the end of the Mexican War, with emphasis on the growth of American nationalism. A 18 503 0 2205

504 (431). Civil War and Reconstruction. (3). A 18 504 0 2205

505 (432). America's Gilded Age, 1877 to 1900. (3). Emphasis on roots of urban problems, foundations of dissent, policy toward minority groups and evaluation of imperial expansion. A 18 505 0 2205

506 (433) & 507 (434). The United States: The Twentieth Century. (3 & 3). 506 (433): the Progressive Era, World War I and the twenties. 507 (434): the Great Depression, the New Deal, World War II and the postwar era. A 18 506 0 2205 & A 18 507 0 2205

515 (338). Economic History of the United States. (3). Same as Econ. 627 (307). See Economics, College of Business for description. A 18 515 0 2205

516 (436). Origins of the Industrial State. (3). United States economic development and policy, Civil War to present, with emphasis upon changes in the reputation and influence of businessmen in American society. A 18 516 0 2205

517 (429) & 518 (430). Constitutional History of the United States. (3 & 3). 517 (429): the evolution of the American Constitutional system from English and colonial origins through the Civil War. 518 (430): American constitutional development from Reconstruction to the present. A 18 517 0 2205 & A 18 518 0 2205

519 (437) & 520 (438). Social and Intellectual History of the United States. (3 & 3). 519 (437): survey of American thought and society to the end of the Civil War. 520 (438): the significant social and intellectual currents from the middle of the nineteenth century to the present, with special reference to the interaction between ideas and social structure. A 18 519 0 2205 & A 18 520-0 2205

521 (447) & 522 (448). Diplomatic History of the United States. (3 & 3). 521 (447): from independence through the Spanish American War. 522 (448): continues to present. A 18 521 0 2205 & A 18 522 0 2205

523 (390). History of Modern China. (3). History of China from the Ch'ing Dynasty (Manchu) to present, with emphasis on geography, religion, ethics, politics, international relations and the impact of foreign ideologies on Chinese society.

530 (340). The American Woman in History. (3). Examination of the history, status and changing role of women in American society. A 18 530 0 2205

531 (335). Afro-American History. (3). Afro-American life, culture and history from the seventeenth century to the present. A 18 531 0 2205

532 (352). The Indian in American History. (3). Indian life, culture and history

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
from the early sixteenth century to the present, with emphasis on the impact of federal Indian policy since 1800. A 18-532 0 2205

533 (339). The American City: from Village to Metropolis. (3). A study of urbanization and urban life from colonial times to the present—changing life styles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburb, political and ecological adjustments, and the influence of new technology and forms of business organization. A 18 533 0 2205

534 (440). History of the Old South. (3). An examination of Southern civilization prior to the American Civil War. A 18 534 0 2205

535 (441). History of Kansas. (3). History of the Kansas region from Spanish exploration to the present, with principal emphasis on the period after 1854. A 18 535 0 2205

536 (444). The Atlantic and Trans-Appalachian West. (3). Exploration and settlement of the coastal and trans-Appalachian frontiers from colonial times to about 1840. A 18 536 0 2205

537 (445). The Trans-Mississippi West. (3). Spanish, French and Anglo-American penetration and settlement west of the Mississippi River from the sixteenth century to about 1900. A 18 537 0 2205


550 (327). Argentina, Brazil and Chile. (3). From independence to present. A 18-550 0 2205

551 (325). The Bolivarian States. (3). Venezuela, Colombia, Ecuador, Peru and Bolivia from independence to the present. A 18 551 0 2205

552 (329). Central America and the Caribbean. (2). From the independence period to the present, with special attention to U.S. involvement in this area. A 18 552 0 2205

553 (326). Republic of Mexico. (3). Mexico from the independence movement to the present. A 18 553 0 2205

554 (328). Inter-American Relations. (2). Includes economic and cultural as well as political topics. A 18 554 0 2205

558 (301). The Ancient Near East. (3). Political and cultural history on ancient Mesopotamia, Iran, Egypt, Palestine, Syria and Asia Minor to the death of Alexander the Great. A 18 558 0 2205

559 (305) & 560 (306). Greek History. (3 & 3). 559 (305): the Hellenic world from prehistoric times to the end of the Peloponnesian War. 560 (306): the fourth century and the Hellenistic period. A 18 559 0 2205 & A 18 560 0 2205


565 (322). Byzantine History. (3). Survey of Byzantine history from its origins in the late Roman world to its fall in 1453, with an investigation of its major institutions and foreign relations. A 18 565-0 2205

566 (323) & 567 (324). Medieval History. (3 & 3). 566 (323): the history of Europe from the fall of the Roman Empire through the Crusades. 567 (324): history of Europe to 1500. A 18 566 0 2205 & A 18 567 0 2205

568 (321). Medieval Social and Intellectual History. (2). Survey of the social and intellectual history of Europe from the fourth to the fifteenth centuries. A 18 568 0 2205
571 (470 & 471). 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 18 571 0 2205

575 (423). The Italian Renaissance. (3). Italian history from the fourteenth through the sixteenth centuries, with an emphasis on cultural achievements. A 18 575 0 2205

576 (424). The Reformation. (3). The great religious changes in the sixteenth century in the political, social and intellectual contexts. A 18 576 0 2205

579 (462). Europe Under the Old Regime, 1648-1789. (3). The aristocratic Old Regime societies in confrontation with modern forces of royal absolutism, Enlightenment ideology and economic change. A 18 579 0 2205

580 (461). Europe in the Age of Revolution, 1787-1815. (3). Unrest under the Old Regime, processes of revolution and counterrevolution in France, revolutionary and Napoleonic imperialism, and institutional and cultural change. A 18 580 0 2205

581 (464). Europe, 1815-1870. (3). A 18 581 0 2205

582 (455). Europe, 1870-1914. (3). Politics and diplomacy leading to World War I. A 18 582 0 2205

583 (456). Europe, 1914 to Present. (3). Politics and diplomacy leading to World War II. A 18 583 0 2205

594 (442) & 595 (443). History of Eastern Europe. (3 & 3). The development of the Bulgarian, Czech, Magyar, Polish, Rumanian and Yugoslav peoples. A 18 594 0 2205 & A 18 595 0 2205

596 (453) & 597 (454). History of Russian Thought. (3 & 3). A 18 596 0 2205 & A 18 597 0 2205

598 (466). History of the Soviet Union. (3). A survey of Soviet history from the Bolshevik Revolution to the present. A 18 598 0 2205

610 (457) & 611 (458). Social and Intellectual History of Europe. (3 & 3). 610 (457): the social and intellectual history of Europe in the seventeenth and eighteenth centuries. 611 (458): The social and intellectual history of Europe in the nineteenth and twentieth centuries. A 18 610 0 2205 & A 18 611 0 2205

612 (487) & 613 (488). European Diplomatic History. (3 & 3). 612 (487): European international politics and diplomatic practices, with emphasis and actions of the great powers and their statesmen, and the Concert of Europe to World War I. 613 (488): Versailles settlement, totalitarian aggression, appeasement, World War II, the cold war and decolonization of southeast Asia and the Middle East as prelude to major power involvement. A 18 612 0 2205 & A 18 613 0 2205

614 (337). Economic History of Europe. (3). Same as Econ. 625 (305). See Economics, College of Business for description. A 18 614 0 2205

616 (497). Germans and Jews. (3). The history of anti-semitism in central Europe, nineteenth and twentieth centuries. A 18 616 0 2205

630 (411). England under the Tudors. (3). A 18 630 0 2205

631 (412). England under the Stuarts. (3). A 18 631 0 2205

632 (413). Eighteenth Century Great Britain. (3). From the accession of William and Mary to the French Revolution. A 18 632 0 2205

633 (415). The Reign of George III. (3). Political, constitutional, economic and religious developments in England from 1760 to 1820. A 18 633 0 2205

634 (414). Nineteenth Century Great Britain. (3). From the French Revolution to the death of Queen Victoria. A 18 634 0 2205


and medieval science from its beginnings in the Near East to the end of the Middle Ages. 681 (381): rise of modern science from its first formative steps in the medieval world to the twentieth century. A 18 680 0 2205 & A 18 681 0 2205

682 (382). 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 (350). Military History. Major military developments and the conduct of war from antiquity to the mid-twentieth century. A 18 683 0 2205

684. The Impact of Total War, 1939-1945. (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

699 (498). Historiography. (2). Review of the major schools of historical thought, philosophies of history and eminent historians, from the ancient world to the present. A 18 699 0 2205

729 (531). Seminar in American History. (3). Prerequisite: departmental consent. This course may be repeated for credit. A 18 729 9 2205

730 (532). Seminar in American History. (3). Prerequisite: departmental consent.

Humanities

Lower Division Courses

389 (289). Women in Society. (3). A 10 389 0 4903

398 (299). Travel Seminar. (4). An interdisciplinary travel seminar: a study of culture that includes observations of art and architecture; lectures and discussions of political, social and economic problems; and visits to various historic places of interest. A 10 398 9 4903

Italian (See Romance Languages)
Journalism

Major. The major in journalism consists of at least 27 hours, including Journ. 115 (115), 226 (226), 380 (380) and 447 (447), and a concentration of not less than 15 hours in one additional field of study in a school or college of Wichita State. In addition, one of the following sequences must be completed:

2. Radio-television sequence: Journ. 322 (322), 328, 330 (330) and 336 (336).
3. Advertising sequence: Journ. 238 (238); Admin. 300 (300), 305 (305), 407 (407); and GD (graphics) 135 (171) and 234 (297).

Minor. A minor in journalism requires at least 15 hours, including Journ. 115 (115), 226 (226), 330 (330), 336 (336) and/or 380 (380) or 447 (447).

Lower Division Courses

115 (115). Introduction to Mass Communication. (3). Required for the major in journalism. The role of mass communication in media is studied, with emphasis on the history of American journalism. Consideration of the freedom and responsibilities of the mass media is also included. A 19 115 0 0601

226 (226). Beginning Newswriting. (3). 2R; 3L. Required for the major in journalism, the course includes evaluation, reporting and writing of various types of news stories. Prerequisite: Journ. 115 (115). Reasonable typing competence is required. A 19 226 1 0602

232 (232). Introductory Photojournalism. (3). 2R; 3L. Basic photographic theory and technique with emphasis on aspects of the importance to journalists, writers and editors. Using the department's cameras and laboratory facilities, students take, develop and prepare photographs for publication. Prerequisite: Journ. 115 (115). A 19 232 0 0602


Upper Division Courses


327 (327). Sunflower Reporting. (3). Writing for the campus newspaper. This course is optional to students who have completed Journ. 330 (330). Prerequisite: Journ. 330 (330). A 19 327 5 0602

328. Advanced Radio and TV News. (3). A course in the techniques of preparing news for radio and television presentation, with emphasis on actual work in radio and television newsrooms. Prerequisite: Journ. 322 (322). A 19 328-1 0603

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The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 5L means three hours of lecture and five hours of laboratory.

Fairmount College 291
330 (330). Advanced Newswriting and Reporting. (3). 2R; 3L. Reporting and writing the more demanding types of material: feature, interpretive, and public affairs, and stories, editorials, and interviews. Prerequisite: Journ. 226 (226). A 19 330 0 0602

336 (336). Editing. (3). 2R; 3L. Selection, evaluation and preparation of copy and pictures for publication; copyreading, rewriting, headline and caption writing and page makeup. Prerequisite or concurrent enrollment: Journ. 330 (330). A 19 336 0 0602

360 (360). Journalism Internship. (3). On-the-job experience and training in news, advertising or public relations, radio or television broadcasting. Prerequisite: Journ. 330 (330). A 19 360 2 0601

380 (380). History of Communications. (3). Research into the development of mass media, with emphasis on the development and presentation of original research papers. Course includes bibliography and criticism in mass communications. Prerequisite: Journ. 330 (330). A 19 380 0 0601

428. Public Affairs Reporting. (3). Reporting of public, political and governmental events. Prerequisite: Journ. 447 (447) and senior standing or consent. A 19 428 0 0602

445 (445). Editorial Writing. (3). A study of editorial judgment including practice in the writing of editorials and editorial page features; study of research materials available to editorial page writers. Prerequisite: Journ. 336 (336). A 19 445 0 0602

447 (447). Law of the Press. (3). An examination of the statutory laws governing the mass media, with an emphasis on libel, free press vs. fair trial and the fairness doctrine and research into case histories. Prerequisite: Journ. 336 (336). A 19 447 0 0601

448 (448). Special Topics in Journalism. (3). Directed individual research in various aspects of journalism and mass communications or related topics: communications theory, news editorial, advertising and broadcasting. The course includes preparation of a major term paper. Prerequisites: Journ. 380 (380) and senior standing. A 19 448 3 0601

566 (466). World Press. (3). A study of international comparative press and broadcast systems, with emphasis on press freedoms and their relation to historical political freedoms, plus cross-cultural communications. Open to journalism juniors and seniors, and all seniors and graduate students at Wichita State. A 19 566 0 0601

Latin and Greek (See Romance Languages)

Linguistics

Major. A major in linguistics consists of a minimum of 24 hours from the courses listed below, including at least nine hours from Group A and at least one phonetics course—Ling. 223 (223), Fr. 505 (305) or Span. 505 (335). A major must be combined with either a minor in a foreign language or the 111-112 (111-112) sequence in two different foreign languages and three hours beyond 112 (112) in one of them, or the equivalent.

Minor. A minor in linguistics consists of 15 hours from the courses listed below which may not also be counted toward a major. At least six hours must be taken from Group A.
Group A—Basic Linguistic Theory


223 (223). Linguistics. Phonetics and Phonology. (3). The production and transmission of speech sounds and their role in linguistic structure. Principles of articulatory and acoustic phonetics, with transcription exercises; phonemic and distinctive feature phonologies are also studied. A 10 223 0 1505


577 (327). Linguistics. Introduction to Linguistics. (3). Same as Ger. 577 (327). A 10 577 0 1505


672 (491). Linguistics. Dialectology. (3). Same as Eng. 672 (491). A 10 672 0 1505

680 (464). 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 (215) or 577 (327). A 10 680 0 1505

682 (465). 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 may be repeated for credit when different languages are offered. Prerequisite: Ling. 315 (215) or 577 (327). A 10 682 0 1505

Group B—Linguistic Study of Specific Languages or Language Groups

610 (401). English. Old English. (3). A 10 610 0 1505

665 (461). English. History of the English Language. (3). A 10 665 0 1505

670 (463). English. The English Language in America. (3). A 10 670 0 1505

674 (492). English. The Study of Social Dialects. (3). A 10 674 0 1505

676 (493). English. Afro-American English. (3). A 10 676 0 1505

678 (494). English. Standard English as a Second Dialect. (3). A 10 678 0 1505

505 (305). French. Advanced French Phonetics and Diction. (2). A 10 505 0-1102

505 (335). Spanish. Spanish Phonetics and Diction. (2). A 10 505 0 1105

635 (435). French and Spanish. Introduction to Romance Linguistics. (3). A 10 635 0 1105

579 (329). German. Linguistics in the Teaching of German. (3). A 10 579 0-1505

677 (427). German. Comparative Germanic Readings. (3). A 10 677 0 1103

678 (428). German. Middle High German. (3). A 10 678 0 1103

Group C—Areas of Contact Between Linguistics and Other Disciplines

212 (212). Logopedics. The Development of Language. (3). A 10 212 0 0815

651 (451). Anthropology. Language and Culture. (3). A 10 651 0 2202

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example: 3R; 1L means three hours of lecture and one hour of laboratory.
525 (325). Philosophy. Symbolic Logic. (3). A 10 525 0 1509

625 (426). Philosophy. Advanced Symbolic Logic. (3). A 10 625 0 1509

640 (440). Philosophy. Philosophy of Language. (3). A 10 640 0 1509


Others

290 (298). Linguistics. Special Studies. (2-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. This course may be repeated for credit when content varies. A 10 290 2-1505

590 (498). Linguistics. Special Studies. (1-3). Topic selected and announced by individual instructor. Credit is assigned to Group A, B or C depending on content. This course may be repeated for credit when content varies. A 10 590 2-1505

595 (499). Linguistics. Directed Readings. (1-3). Credit assigned to Group A, B or C depending on content. This course may be repeated for credit. A 10-595 3 1505

Logopedics (See College of Education)

Mathematics

Since a satisfactory major depends primarily on a suitable combination of courses, a student majoring in mathematics must have the courses that comprise his major approved by the department. Because of the importance of verbal experience in learning mathematics, a student intending to major in mathematics should also take College English 101 (111) during his first semester at college.

Major. For the Bachelor of Arts (BA) degree in mathematics, the major must take Math. 344 (244) and 18 semester hours of work in the department in courses numbered 500 or above, including Math. 511 (307), 513 (313) and 540 (335). In addition, Phil. 525 (325) or Math. (computer science) 590 (300) is required. The foreign language should be French, German or Russian.

For the Bachelor of Science (BS) degree in mathematics, the major must take Math. 344 (244) and 24 semester hours of work in the department in courses numbered 500 or above, which must include Math. 511 (307), 513 (313), 540 (335), 550 (346) and 640 (336). In addition, Phil. 525 (325) or Math. (computer science) 590 (300) is required. The student must also complete nine semester hours of upper division work in philosophy or in one of the natural or social sciences. The foreign language must be French, German or Russian.

For the BS degree in mathematics with emphasis in computer science, the student must complete Math. 344 (244), 511 (307), 513 (313), 540 (335) and 550 (346); Math. (statistics) 771 (471); Math. (computer science) 199 (199), 297 (228), 590 (300) and six additional hours of upper division course work in computer science. Recommended electives are Math. (statistics) 772 (472), Math. 640 (336) and other computer science courses.

For the BS degree in mathematics with emphasis in statistics, the
student must complete Math. 344 (244), 511 (307), 513 (313), 54 (335), 550 (346) and Math. (statistics) 671 (371)-672 (372) and 77 (471)-772 (472). He must also complete either Phil. 525 (325) or Math. (computer science) 590 (300) and nine semester hours of upper division work in philosophy or one of the natural or social sciences.

Recommended schedules for each of these degree programs are provided in the office of the mathematics department. A calendar indicating when particular courses are to be offered is also available. A student majoring in mathematics should consult closely with his adviser on any of these programs.

Minor. For a minor in mathematics, a student must take a minimum of 15 semester hours of credit courses, including three hours of work in courses numbered 350 or above. Courses may be selected from those listed in the mathematics section of the Catalog, including those under the headings Statistics or Computer Science.

For some curricula in the University, 1½ units of high school algebra and one unit of high school geometry are required. For students lacking such prerequisites, the mathematics department offers two remedial courses, as listed below. Hours for these courses do not apply toward a Wichita State University degree.

STATISTICS AND COMPUTER SCIENCE

The courses in statistics and computer science listed in the back of this section are offered by the mathematics department. A BS degree with a major in computer science is now available. No major or minor is available in statistics. A BS degree in mathematics with emphasis in either statistics or computer science is available as described below. These courses satisfy mathematics core requirements.

As part of the 124 semester hours required for graduation, a student may take up to 15 semester hours of statistics and/or computer science courses in addition to the 43 semester hours of course work allowed in mathematics.

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course’s previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of laboratory.

MATHEMATICS

Remedial Courses

011 (052), Algebra. (5). 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 1½ units of high school algebra. Not applicable to degree. A 20 011 0 1701

021 (060), Plane Geometry. (2). For students without high school credit in plane geometry. This course may be used to meet departmental prerequisites in place of one unit of high school geometry. Prerequisite: one unit of high school algebra, Math. 011 (052) or concurrent enrollment in Math. 011 (052). Not applicable to degree. A 20 021 0-1701

Fairmount College 295
Lower Division Courses

111 (140). College Algebra. (3). A survey of functions, theory of equations and inequalities, complex numbers, and exponential and logarithmic functions. Prerequisites: 1½ units of high school algebra, or Math. 011 (052), and one unit of high school geometry, or Math. 021 (060). Credit in both Math. 111 (140) and 112 (141) is not allowed. A 20 111 0 1701

112 (141). Algebra and Trigonometry. (5). Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions and other standard topics prerequisite to a beginning study of analysis. Prerequisites: 1½ units of high school algebra, or Math. 011 (052), and one unit of high school geometry or Math. 021 (060). Credit in both Math. 111 (140) and 112 (141) is not allowed. A 20 112 0 1701

123 (139). College Trigonometry. (2). A study of the trigonometric functions with applications. Prerequisite: Math. 111 (140) or equivalent high school preparation. Credit in both Math. 123 (139) and 112 (141) is not allowed. A 20 123 0 1701

242 (142). Introductory Analysis I. (5). Analytic geometry and the calculus in an interrelated form. Prerequisites: Math. 112 (141) with a C or better, or two units of high school algebra; one unit of high school geometry and ½ unit of high school trigonometry, or Math. 123 (139) and 111 (140) with a C or better in each. A 20 242 0 1701

243 (243). Introductory Analysis II. (5). A continuation of Math. 242 (142). A study of integration and applications and an introduction to infinite series are included. Prerequisite: Math. 242 (142) with a C or better. A 20 243 0 1701

Upper Division Courses

331 (121). Discrete Mathematics I. (3). A study of set theory, probability and the elements of statistics. Prerequisite: one unit of high school algebra. A 20 331 0 1701

332 (122). Discrete Mathematics II. (3). Linear algebra and related topics. Prerequisite: Math. 331 (121). A 20 332 0 1701

340 (245). Survey of Analysis. (3). A brief, but careful, introduction to mathematical analysis for students of the humanities, the social sciences and business. Prerequisite: Math. 111 (140) or 112 (141), or equivalent high school preparation. Credit in both Math. 340 (245) and 242 (142) is not allowed. A 20 340 0 1701

344 (244). Introductory Analysis 111. (3). A continuation of Math. 243 (243). The course includes a study of multiple integration and partial derivatives. Prerequisite: Math. 243 (243) with a C or better. A 20 344 0 1701

480 (499). Individual Projects. (1-5). May be repeated to a total of 10 credits. Prerequisite: consent of department. Not for graduate credit. A 20 480 3-1701

501 (373)-502 (374). Elementary Mathematics I and II. (3-3). A study of topics necessary to an understanding of the elementary school curriculum, such as set theory, real numbers and geometry. Prerequisite: elementary education major or consent of department. Not for major or minor credit. A 20 501 0 1701; A 20 502 0 1701

503 (303)-504 (304). Topics in Modern Mathematics I and II. (3-3). An investigation of the newer topics in the secondary school curriculum. The course is not open to mathematics majors and may

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 3L means three hours of lecture and three hours of laboratory.
be repeated for credit with the consent of the department. Prerequisite: consent of department. A 20 503 0 1701; A 20 504 0 1701.

511 (307). Linear Algebra. (3). An elementary study of linear algebra, including an examination of linear transformation and matrices over finite dimensional spaces. Prerequisite or corequisite: Math. 344 (244). Not for graduate credit for majors. A 20 511 0 1701

513 (313). Fundamental Concepts of Algebra. (3). Groups, rings and fields. Prerequisite: Math. 511 (307) or consent of department. Not for graduate credit for majors. A 20 513 0 1701

540 (335). Intermediate Analysis I. (3). A detailed study of limits, continuity and integration. Prerequisite: Math. 344 (244) with a C or better. Not for graduate credit for majors. A 20 540 0 1701

550 (346). Ordinary Differential Equations. (3). An investigation of integrating factors, separation of variables, critical points, linear differential equations with constant coefficients, variation of parameters and existence and uniqueness for initial value problems and systems. Prerequisite: Math. 344 (244) with a C or better. Not for graduate credit for majors. A 20 550 0 1701

615 (315). Elementary Number Theory. (3). Properties of the integers studied by elementary means. Prerequisite: Math. 340 (245) or upper division standing, or Math. 344 (244) or consent of department. A 20 615 0 1701

621 (311). Elementary Geometry. (3). A study of the structure of Euclidean geometry. Prerequisite: Math. 243 (243) or 340 (245). A 20 621 0 1701

640 (336). Intermediate Analysis II. (3). An examination of the calculus of functions of several variables and line and surface integrals. Prerequisites: Math. 511 (307) and 540 (335), with a C or better in each. A 20 640 0 1701

651 (447). Engineering Mathematics I. (3). A survey of some of the mathematical techniques most often needed in engineering. The course includes vector analysis, a brief introduction to matrices and determinants, Fourier series, Legendre functions, Bessel functions and the applications of these tools to the solution of boundary value problems. Prerequisite: Math. 550 (346) with a C or better. No credit toward a major in mathematics. A 20 651 0 1703

713 (503). Abstract Algebra I. (3). A treatment of the standard basic topics in abstract algebra. Prerequisite: Math. 513 (313) or consent of the department. A 20 713 0 1701

720 (412). Modern Geometry. (3). A study of fundamental concepts of geometry. Prerequisite: Math. 513 (313) or consent of department. A 20 720 0 1701

725 (507). Topology I. (3). An investigation of point set and algebraic topology. Prerequisite: Math. 540 (335) or consent of department. A 20 725 0 1701

740 (438). Introduction to Complex Analysis. (3). Basic treatment of analytic functions. Prerequisite: Math. 550 (346) with a C or better, or consent of department. A 20 740 0 1701

743 (501). Real Analysis I. (3). A study of the foundations of analysis and the fundamental results of modern real analysis. Prerequisite: Math. 640 (336) or consent of department. A 20 743 0 1701

745 (505). Complex Analysis I. (3). An investigation of the theory of analytic functions. Prerequisite: Math. 640 (336) or consent of department. A 20 745 0 1701

751 (553). Numerical Analysis I. (3). A treatment of numerical approximations of solutions to initial and boundary value problems of ordinary and partial differential equations. Prerequisite: Math. 540 (335) or consent of the department. A 20 751 0 1703

Fairmount College 297
752 (448). Engineering Mathematics II. (3). A study of solution techniques for the partial differential equations of mathematical physics. Methods that are included are Green’s function techniques, separation of variables and integral transform methods. Prerequisite: Math. 651 (447). Not open to mathematics majors. A 20 752 0 1703

Graduate Courses

801 (531)-802 (532). Topics for Mathematics Teachers I and II. (3-3). Topics for secondary school mathematics teachers that relate to the secondary school mathematics curriculum. Topics are chosen according to the needs and interests of individual students. May be repeated for credit with departmental consent. Not applicable toward the MS in mathematics. A 20 801 0 1701; A 20-802 0 1701

813 (504). Abstract Algebra II. (3). A continuation of Math. 713 (503). Prerequisite: Math. 713 (503) or equivalent. A 20 813 0 1701

818 (525C). Selected Topics in Number Theory. (2-3). May be repeated with departmental consent. Prerequisite: consent of instructor. A 20 818 0 1701

819 (525B). Selected Topics in Algebra. (2-3). May be repeated with departmental consent. Prerequisite: consent of instructor. A 20 819 0 1701

825 (508). Topology II. (3). A continuation of Math. 725 (507). Prerequisite: Math. 725 (507) or equivalent. A 20 825-0 1701

828 (525D). Selected Topics in Topology. (2-3). May be repeated with departmental consent. Prerequisite: consent of instructor. A 20 828 0 1701

829 (525C). Selected Topics in Geometry. (2-3). May be repeated with departmental consent. Prerequisite: consent of instructor. A 20 829 0 1701

839 (525F). Selected Topics in Foundations of Mathematics. (2-3). May be repeated with departmental consent. Prerequisite: consent of instructor. A 20-839 0 1701

843 (502). Real Analysis II. (3). A continuation of Math. 743 (501). Prerequisite: Math. 743 (501) or equivalent. A 20 843 0 1701

845 (506). Complex Analysis II. (3). A continuation of Math. 745 (505). Prerequisite: Math. 745 (505) or equivalent. A 20 845 0 1701

849 (525A). Selected Topics in Analysis. (2-3). May be repeated with departmental consent. Prerequisite: consent of instructor. A 20 849 0 1701

850 (546). Ordinary Differential Equations. (3). Existence, uniqueness, stability and other qualitative theories of ordinary differential equations. Prerequisites: Math. 540 (335) and 550 (346), or departmental consent. A 20 850 0 1703

851 (554). Numerical Analysis II. (3). A continuation of Math. 751 (553). Prerequisite: Math. 751 (553) or equivalent. A 20 851 0 1703

855 (555)-856 (556). Partial Differential Equations I and II. (3-3). Existence and uniqueness theory for boundary value problems of partial differential equations of all types. Prerequisite: Math. 540 (335) or departmental consent. A 20-855 0 1703; A 20 856 0 1703

857 (581)-858 (582). Selected Topics in Engineering Mathematics I and II. (3-3). Advanced topics in mathematics of interest to engineering students, including such topics as tensor analysis, calculus of variations and partial differential equations. Not applicable toward the MS in mathematics. A 20 857 0 1703; A 20-858 0 1703

859 (525E). Selected Topics in Applied Mathematics. (2-3). May be repeated with departmental consent. A 20 859-0 1703

880 (520). Proseminar. (1). Oral presentation of research in areas of interest to the students. Prerequisite: major standing. A 20 880 3 1701
881 (521). Individual Reading. (1-5). Prerequisite: departmental consent. May be repeated up to a maximum of five hours with consent of the department. A 20 881 3 1701

885 (575)-886 (576). Thesis. (2-2). Prerequisite: departmental consent. A 20 885 4 1701; A 20 886 4 1701

**COMPUTER SCIENCE**

**Lower Division Courses**

195. COBOL Programming. (3). Same as Admin. 195. An introduction to COBOL business application programming of a digital computer. This course includes basic computer concepts, flowcharting techniques and programming of short business and statistical problems. Prerequisite: 1% units of high school algebra or Math. 011 (052). A 20 195-1 0704

199 (199). Introduction to Computer Science. (3). Same as Engr. 199 (199) and Admin. 199. Automatic data processing, digital computers, flow charting, computer languages, FORTRAN IV, sorting techniques and the solution of elementary problems. Prerequisite: Math. 111 (140) or 112 (141). A 20 199 1 0704

295. Advanced COBOL Programming. (3). Same as Admin. 295. Advanced COBOL programming and an introduction to basic business systems analysis. System design and flow charting of large-scale computer applications are included. Prerequisite: Math. (computer science) 195, Admin. 195 or equivalent. A 20 295 1 0704

297 (228). Computer Organization and Programming. (3). Same as Engr. 228 (228). 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: Math. (computer science) 199 (199), Engr. 199 (199) or equivalent. A 20 297 1 0704

**Upper Division Courses**

498 (498). Individual Projects. (1-3). May be repeated for a total of six hours of credit. Prerequisite: consent of department. A 20 498 4 0701

590 (300). Logic for Computers. (3). A study of symbolic logic and axiomatic development of propositional calculus. Boolean algebra, switching circuits, predicate calculus and formal languages are studied, with emphasis on formalizing mathematical systems. Prerequisite: Math. 511 (307). A 20 590 0 0701

594 (394). Logic Design and Switching Theory. (3). 2R; 3L. Same as EE 594 (394). An introduction to the theory and application of switching devices, with particular emphasis on computer applications. Also examined are combinatorial, sequential and threshold logic concepts and realizations; network minimization methods; hazards; codes; and computerized logic design. Prerequisites: Math. (computer science) 691 (311) and Phys. 214 (124) or equivalent. A 20-594 1 0701

691 (311). Introduction to Discrete Structures. (3). A survey of relations and mappings. Also included are algebraic structures, including semigroups, and theory of graphs, as well as the applications of these concepts to problems in computer science. Prerequisites: Math. (computer science) 199 (199), or equivalent, and Math. 243 (243). A 20-691 0 0701

692 (312). Data Structure. (3). The formal specification of data structures. Linear lists and arrays, orthogonal lists and multilinked structures are studied, and representation via trees and graphs and searching and sorting techniques are explored. Prerequisites: Math. (computer science) 297 (228), or equivalent, and Math. (computer science) 691 (311). A 20 692 1 0701

695 (381). Numerical Methods I. (3). A study of solutions of nonlinear equations, interpolation, numerical differentiation and integration, and solution of
systems of equations. Selected algorithms are implemented on the computer. Prerequisites: Math. 344 (244), 550 (346) and Math. (computer science) 199, Admin. 199 (199) or Engr. 199 with a C or better in each. A 20 695 1 0701

696 (382). Numerical Methods II. (3). Solution of systems of linear equations by direct and iterative methods. The course also includes the solution of the eigenvalue problems, initial and boundary value problems in ordinary differential equations and the introduction to the numerical solution of partial differential equations. Selected algorithms will be implemented on the computer. Prerequisites: Math (computer science) 695 (381) and Math. 511 (307). A 20 696 1 0701

698 (320). Programming Languages. (3). An investigation of the formal definition of programming languages, including syntax and semantics. Also examined are underlying properties of algorithmic languages, including scope of declarations, storage allocation, grouping of statements, binding time of constituents, subroutines and tasks. Prerequisites: Math. (computer science) 297 (228), or equivalent, and Math. (computer science) 691 (311). A 20 698 1 0701

Graduate Courses

898 (527). Special Topics. (2-3). May be repeated with departmental consent. Prerequisite: consent of department. A 20 898 4 0701

899 (523). Individual Reading. (1-5). Prerequisite: consent of department. A 20 899 4 0701

STATISTICS

Upper Division Courses

360 (302). Elementary Probability. (3). Probability functions, random variables and expectation of finite sample spaces. Prerequisite: Math. 111 (140), 112 (141) or 331 (121). Not open to students with credit in Math. 243 (243) or to mathematics majors. A 20 360 0 1701

370 (301). Elementary Statistics. (3). A survey of elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference, linear correlation and regression. Prerequisite: Math. 111 (140), 112 (141) or 331 (121). Not open to students with credit in Math. 243 (243) or to mathematics majors. A 20 370 1 1702

661 (375). Probability. (3). A study of axioms of probability, discrete and continuous random variables, expectation, examples of distribution functions, characteristic functions and sequences of random variables. Prerequisite: Math. 344 (244) with a C or better. A 20 661 0 1701


762 (476). Probability and Stochastic Processes. (3). A study of random variables, expectation, limit theorems, Markov chains and stochastic processes. Prerequisite: Math. 540 (335) and Math. (statistics) 661 (375) or 771 (471), or consent of department. A 20 762 0 1702

771 (471)-772 (472). Probability and Statistics I and II. (3-3). An examination of stochastic independence, distributions of functions of random variables, limiting distributions, order statistics, theory of statistical inference, nonparametric tests and analysis of variance and covariance. Prerequisite: Math. 540 (335) with a C or better or consent of the department. A 20 771 0 1702; A 20 772-0 1702

Graduate Courses

878 (526). Special Topics. (2-3). May be repeated with departmental consent. Prerequisite: consent of department. A 20 878 0 1702

879 (522). Individual Reading. (1-5). Prerequisite: consent of department. A 20 879 4 1702
Minority Studies

The goal of the Department of Minority Studies is to prepare students for service to the entire community through a coherent and socially relevant education—both humanistic and pragmatic—thereby enriching the total society.

The department offers courses and programs that aim to stimulate favorable interaction among people, thus reducing racial tension. Emphasis in the department is on cross-cultural communication. Minority studies also offers experiences that allow students to explore their own uniqueness and provides methods for interacting favorably with other people.

The curriculum is geared to developing the student in three areas: (1) as a unique individual, (2) as a participant-leader in an age of technology and (3) as a trained specialist and humanist. The three overlap, allowing the department to address itself to both curriculum and community.

The department does not agree with those who oversimplify the Black, Chicano or Indian situation by denying that members of these minority groups are any different from other Americans and implying that they should not be singled out for special attention.

The department becomes equally impatient with advocates of a complete restoration of Black, Indian or Chicano cultures. The realities of life prevent the return to idyllic lifestyles, devoid of the technological accomplishments of mass communication, mass production, mass transportation, mass education and mass medical treatment.

Major. The major in minority studies consists of at least 24 hours, including Min. Stud. 210 (210), 330 (330), 336 (336), 440 (440), 445 (445) and 448 (448), and a concentration of not less than 15 hours in one additional field of study in a school or college at Wichita State. 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 exceed six hours.

Minor. A minor in minority studies consists of at least 15 hours. The courses are to be approved by the student's adviser in the department and must include Min. Stud. 210 (210), 330 (330), 336 (336) and 380 (380).

Lower Division Courses

100 (100). Introduction to Minority Studies. (3). Orientation to the nature and scope of minority studies. Emphasis is placed on the unique nature of the experiences of minority groups in this country. A cursory examination of some alternative styles of behavior in dealing with problems peculiar to minority people in the United States is also undertaken. A 30 100 0 2299
210 (210). Fundamentals of Cross-Cultural Communications. (3). An examination of the effects of different cultures on language and methods of communicating. A study of communications and its relationship to behavior in this country is also made. A 30 210 0 4999

Upper Division Courses

330 (330). Individual Group Cross-Cultural Communications. (3). Designed to enable students to explore their own unique characters and behavioral traits as related to their particular ethnic group. The relationship between their particular ethnic group's language and behavior is also explored. Prerequisite: Min. Stud. 210 (210). A 30 330 0 4999

336 (336). Biracial Cross-Cultural Communications. (3). An examination of concepts and behaviors useful in analyzing interpersonal behavior in an organizational setting between two selected ethnic groups. Readings and face-to-face encounters with situations involving progress of morale, productivity, motivation, leadership, authority, communication and the introduction of change are used to bring about an understanding of these areas of human interaction. Prerequisite: Min. Stud. 330 (330). A 30 336 0 4999

380 (380). Multiracial Cross-Cultural Communications. (3). A special laboratory group experience for advanced students. Leadership styles, group development skills and interpersonal competence in a multiethnic setting are developed. Prerequisite: Min. Stud. 336 (336). A 30 380 0 4999

540 (440). Advanced Multiracial Cross-Cultural Communications. (3). An advanced study on special topics in human relations. Prerequisite: Min. Stud. 380 (380) or concurrent enrollment. A 30 540 0 4999

545 (445). Cross-Cultural Communications Theory. (3). Offers specific consideration of important areas of cross-cultural communications. Varying in content, this course probes such topics as current issues, theory of structured exercises and laboratory planning. Prerequisite: Min. Stud. 540 (440) or concurrent enrollment. A 30 545 0 4999

548 (448). Practicum in Cross-Cultural Communications (2-5). An investigation and analysis of methods of experimental research in cross-cultural communications, with emphasis on experimental designs that enable legitimate data on specific ethnic groups to be gathered. Cross-cultural communications and additional skills gained through courses in allied departments, for example, economics, linguistics and political science, are applied in research problems. Credit hours to be determined by the degree of difficulty and time necessary for the project. Prerequisite: Min. Stud. 545 (445) or concurrent enrollment. A 30 548 2 4999

580 (480). Individual Projects in Minority Studies. (3). Required of every student who majors or minors in minority studies. The course is designed to provide the student with coherent and pragmatic educational and experimental background that relates to the minority experience in America. Lectures, written assignments, encounter groups and related research in the minority communities constitute the teaching methodology for the course. This course may be repeated for a total of six hours credit, but only three hours may be earned per semester. A 30 580 3 2299

750 (450). Workshop. (1-4). This course may be repeated for credit. Prerequisite: consent of instructor. A 30 750 2 4999

Music

See College of Fine Arts Section for requirements and curriculum.

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course’s previous number. When only one course number appears, the course is a new course.
Philosophy

The Department of Philosophy offers a wide range of courses in order to enable an undergraduate major to become familiar with the varieties of philosophic inquiry and to pursue in some detail those topics in which he becomes especially interested. The department's graduate program is explained in the Wichita State University Graduate School Bulletin.

Major. A major requires a minimum of 24 semester hours of philosophy courses, at least 12 of which must be upper division courses. Within the 24-hour major, certain required courses must be selected from three areas of study: (1) logic (three hours)—225 (225), or 525 (325) or 625 (426); (2) value theory (three hours)—244 (244), or 513 (313), or 560 (360) or 575 (375); (3) history of philosophy (six hours)—531 (331) and 533 (333) or 534 (334).

When applicable, Phil. 690 (490), Special Studies, can be substituted for one or more of the required courses with departmental approval. Also, with departmental approval, honors courses, having core credit and being taught by the philosophy staff, can be included as part of the 24-hour major requirement.

Minor. A minor consists of 15 hours of philosophy courses selected in consultation with the department. The course selection is based on the philosophic aspects of the student's major field.

Lower Division Courses

121 (121). Introduction to Philosophy. (3). An introduction to the philosophic principles and methods employed in treating the problems of truth and validity, reality and appearance, and good and evil. The classical doctrines of the nature of things, the structure of knowledge and the criteria for moral value are analyzed. A 24 121 0 1509

150 (150). Introduction to Contemporary Philosophy. (3). An introduction to the basic problems and trends in recent philosophy. A 24 150 0 1509

225 (225). Logic. (3). An introduction to the basic principles of rational thinking, with emphasis on argument forms, deductive techniques and methods of proof. A 24 225 0 1509

226 (226). Introduction to Philosophy of Science. (3). A study of the basic philosophic presuppositions of the scientific method, as exemplified in the problems of induction, deduction, hypothesis, evidence, probability, verification, definition and experimental technique. A 24-226 0 1509

244 (244). Ethics. (3). A comprehensive study of the classical and modern theories of social and moral value as they give meaning to the concepts of law, morality, tradition and social reality. A 24 244 0 1509

Upper Division Courses

346 (446). Philosophy of Religion. (3). An examination of some basic religious issues, such as the nature and grounds of religious belief, religious language, the existence and nature of God, human immortality, and the problem of evil. A 24 346 0 1509

504 (304). Analytic Philosophy. (3). A critical examination of various contemporary philosophical problems as seen through the writings of philosophers such as Moore, Carnap, Ayer, Russell, Ryle, Wisdom, Strawson, Quine, Witt-
genstein and others. Prerequisite: three hours of philosophy or consent of instructor. A 24 504 0 1509

505 (305). Philosophy of Education. (3). An examination of educational concepts. Emphasis is placed on the implications 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 (313). Social and Political Philosophy. (3). An examination of various philosophical theories of the state and society. Prerequisite: Phil. 121 (121) or equivalent. A 24 513 0 1509

525 (325). Symbolic Logic. (3). The logic of truth functional and quantitative relations, identity and definite descriptions and Russell's paradox. A 24 525 0 1509

531 (331). Ancient Philosophy. (3). A study of the basic philosophic systems from the pre-Socratic Period to the Hellenistic Period, with an emphasis on the works of Plato and Aristotle. A 24 531-0 1509

532 (332). Medieval Philosophy. (3). An examination of the medieval doctrines of Augustine, Bonaventure, Aquinas, Averroes, Avicenna, Roger Bacon, Duns Scotus, William of Ockham and others. A 24 532 0 1509

533 (333). Early Modern Philosophy. (3). A study of the philosophical thought of the seventeenth century. Selections from such philosophers as Hobbes, Descartes, Spinoza, Leibniz and Locke are surveyed. A 24 533 0 1509

534 (334). Late Modern Philosophy. (3). A study of the philosophical thought of the eighteenth century. Selections from such philosophers as Berkeley, Hume and Kant are included. A 24 534 0 1509

535 (335). Nineteenth Century Philosophy. (3). A study of the philosophical thoughts of the nineteenth century. Selections from such philosophers as Hegel, Fichte, Schelling, Schopenhauer, Mill, Marx, Kierkegaard, Peirce and Nietzsche. A 24 535 0 1509

540 (340). Epistemology. (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 used. Prerequisite: Phil. 121 (121) or equivalent. A 24 540 0 1509

550 (350). 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, essence and being. Prerequisite: Phil. 121 (121) or equivalent. A 24 550 0 1509

556 (356). American Philosophy. (3). A study of philosophy in America. Readings and selections from such authors as Peirce, James, Royce, Santayana, Dewey, Lewis and Quine. Prerequisite: Phil. 121 (121) or equivalent. A 24 556 0 1509

560 (360). Ethical Theory. (3). A concentrated study of ethical theory in the context of certain fundamental ethical problems. Prerequisite: Phil. 121 (121) or 244 (244), or equivalent. A 24 560-0 1509

566 (366). Philosophy of Literature. (3). An exploration of the philosophic themes present in literature. Special attention is devoted to literature as an aesthetic phenomenon and the associated topics 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 or the short story—is the instructor's choice. A 24-566 0 1509

569 (369). Existentialism. (3). An examination of the leading contemporary philosophic movement in Europe as expressed in the writings of Kierkegaard, Nietzsche, Schopenhauer, Heidegger, Sartre, Camus and Jaspers. Prerequisite: Phil. 121 (121) or equivalent. A 24 569-0 1509
575 (375). Aesthetics. (3). A survey of the various philosophic conceptions of the fine arts and an analysis of the notions of imitation, imagination, expression, creativity, feeling, intuition and technique as they relate to the aesthetic context of artist, audience and work of art. A 24-575 0 1509

580 (380). Phenomenology. (3). A study of the phenomenological movement in philosophy, with special attention to its source in Husserl. An introduction to its recent developments in such thinkers as Scheler, Heidegger, Sartre, Merleau-Ponty and Strauss is also given. Prerequisite: Phil. 121 (121) or equivalent. A 24-580 0 1509

625 (426). Advanced Symbolic Logic. (3). An axiomatic development of the propositional and first-order functional calculi. Such topics as proofs of consistency and completeness, prenex and Skolem normal forms, Lowenheim's theorem and the decision problem are included. Prerequisite: consent of the instructor. A 24-625 0 1509

626 (425). Philosophy of Science. (3). An examination of the presuppositions, results and limitations of the natural and social sciences. The relations among the sciences and the nature of the philosophic problems and scientific methods used are also probed. Prerequisite: consent of the instructor. A 24-626 0 1509

640 (440). Philosophy of Language. (3). An examination of philosophical problems concerning the nature and function of language. Traditional and recent theories of meaning are also discussed, and the relevance of philosophy of language to other areas of philosophy is explored. Prerequisite: Phil. 225 (225) or 525 (325) or equivalent, or consent of the instructor. A 24-640 0 1509

675 (475). Philosophy of the Social Sciences. (3). A study of such topics as the relations of social science with natural science and philosophy, methodological problems peculiar to social science, the nature of sound explanation, concepts and constructs and the role of mathematics and formal theories in social science. A 24-675 0 1509

680 (480). 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. This course may be repeated for credit. Prerequisite: consent of instructor. A 24-680 0 1509

690 (490). Special Studies. (3). Topic for study varies with instructor. The course may be repeated for credit. Prerequisite: consent of the instructor. A 24-690 0-1509

699 (499). Directed Readings. (2-3). A course designed for the student interested in doing independent study and research in a special area of interest. Prerequisite: departmental consent. The course may be repeated for credit. A 24-699 3 1509

700 (500). Seminar. (3). A 24-700 9 1509

701 (501). Selected Topics in Epistemology. (3). Topic announced by the instructor. The course may be repeated for credit with departmental consent. Prerequisite: consent of the instructor. A 24-701 0 1509

702 (502). Selected Topics in Metaphysics. (3). Topic varies with instructor. The course may be repeated for credit with departmental consent. Prerequisite: consent of the instructor. A 24-702 0 1509

706 (506). Selected Topics in Ethical Theory. (3). Topic to be announced by instructor. The course may be repeated for credit with departmental consent. A 24-706 0 1509

Graduate Courses

810 (510). Directed Readings. (2-3). Subject varies with instructor. The course may be repeated for up to six hours of credit. Prerequisite: departmental consent. A 24-810 3 1509

875 (575). Research. (2). A 24-875 4-1509

876 (576). Thesis. (2). A 24-876 4 1509
Physics

Major. The following courses are required for a physics major: Phys. 213 (123)-214 (124) or 311 (243)-312 (244), 551 (311), 621 (339)-622 (340), 631 (333)-632 (334) and 711 (454); Math. 540 (335) and 550 (346); and one semester of chemistry. For a Bachelor of Arts degree, two hours of Phys. 516 and three additional hours of physics are required. For a Bachelor of Science degree, six hours of Phys. 516 (421 and 422) and five additional hours of physics are required.

Minor. A minor in physics consists of Phys. 213 (123)-214 (124), or 311 (243)-312 (244), and at least six additional hours of physics.

Lower Division Courses

111 (103). Introductory Physics. (5). 4R; 3L. 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 the prerequisites for Phys. 311 (243). Prerequisite: one year of high school algebra. A 21 111 0 1902

195 (110). Introduction to Modern Astronomy. (4). A general survey course in astronomy intended for the liberal arts major with little or no background in the physical sciences or mathematics. Subjects studied include the characteristics and origin of the solar system; the distribution, characteristics and evolution of stars and associated objects; and the nature and evolution of the universe. This course may be taken separately for core curriculum credit and counts for laboratory science in the core curriculum when Phys. 196 (111) is taken concurrently. A 21 195 0 1911

196 (111). Laboratory in Modern Astronomy. (1). 3L. 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. Prerequisite: two semesters of high school algebra or the equivalent, or the consent of the instructor, and Phys. 195 (110), which may be taken concurrently. A 21-196 1 1911

213 (123). General College Physics I. (5). 4R; 3L. Mechanics, heat and wave motion. This course is intended for students with a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite: high school trigonometry or Math. 112 (141). A 21 213 0 1902

214 (124). General College Physics II. (5). 4R; 3L. Electricity and modern physics. This course is a continuation of 213 (123). Prerequisite: Phys. 213 (123) or 311 (243). A 21-214 0 1902

Upper Division Courses

311 (243). Classical College Physics I. (5). 4R; 3L. Intended for students who have had an introduction to calculus. Mechanics, heat and wave motion are studied. Prerequisite: high school physics, or Phys. 111 (103), or junior standing in the University. Corequisite: Math. 243 (243). Credit will not be given for both Phys. 213 (123) and 311 (243). A 21 311 0 1902

312 (244). Classical College Physics II (5). 4R; 3L. A continuation of Phys. 311 (243) and a study of electricity and optics. Prerequisite: Math. 243 (243)

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course’s previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 4R; 3L means four hours of lecture and three hours of laboratory.
with a grade of C or better and Phys. 213 (123), with departmental consent or Phys. 311 (243). Credit will not be given for both Phys. 214 (124) and 312 (244). A 21 312 0 1902

313 (243E). Classical College Physics Lectures I. (4). 4R; OL. This course is the lecture portion of Phys. 311 (243) and carries the same prerequisites. Open only to engineering students. A 21 313-0 1902

314 (244E). Classical College Physics Lectures II. (4). 4R; OL. This course is the lecture portion of Phys. 312 (244) and carries the same prerequisites. Open only to engineering students. A 21 314-0 1902

316 (261). General Physics Laboratory. (1 or 2). 3L. The general physics laboratory for students who have taken Phys. 313 (243E) and 314 (244E) and wish to transfer to liberal arts. Prerequisite: Phys. 313 (243E). A 21 316 1 1902

400 (350). Special Studies in Physics. (1 or 2). This course may be repeated, but total credit may not exceed two hours for physics majors. Prerequisite: departmental consent. A 21 400 3 1902

407 (300). Seminar. (1). Student reports on topics of general interest in physics. This course may be repeated for credit up to two hours but may not be counted for credit toward a minor in physics. Prerequisites: completion of, or concurrent enrollment in, an upper division physics course and consent of instructor. A 21 407 9 1902

506. Special Studies in Physics for Educators. (5). 4R; 2L. Basic physical concepts that develop for the elementary school educator an understanding of physical science as presented in the modern elementary school science curriculum. Prerequisite: elementary education major or departmental consent. A 21 506 0 1902

516 (421 and 422). Advanced Physics Laboratory. (2). 4L. Experiments in classical and modern physics designed to stress scientific method and experimental techniques. The experiments are open-ended projects requiring individual study. This course may be repeated up to a maximum of eight credit hours. Corequisite: Phys. 551 (311). A 21 516 1 1902

551 (311). Topics in Modern Physics. (3). An introduction to selected areas of modern physics, with emphasis on the features of atomic, nuclear and solid state physics that require modifications of classical physics for their explanation. Prerequisite: Phys. 214 (124) or 312 (244) or 314 (244E) or departmental consent. Corequisite. Math. 344 (244). A 21 551 0 1902

555 (345). Physical Optics. (3). Electromagnetic waves, diffraction and interference, radiation, scattering and optical properties of solids. Prerequisites: Phys. 214 (124) or 312 (244) and Math. 344 (244). A 21 555 0 1902

621 (339). Elementary Mechanics I. (3). Motion of a particle in one and several dimensions and the Lagrangian equations of motion; motion of rigid bodies and mechanics of continuous media. Prerequisites: Phys. 214 (124) or 312 (244) with a grade of C or better and Math. 344 (244) with a grade of C or better. A 21 621 0 1902


625 (425). Electronics. (2). 1R; 4L. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: consent of instructor. A 21-625 0 1909

631 (333). 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. 214 (124) or 312 (244) with a grade of C or better and Math. 344 (244) with a grade of C or better. A 21-631 0 1902

671 (350). Thermophysics. (3). The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena and fluctuations; introduction to statistical mechanics. Prerequisites: Phys. 214 (124) or 312 (244) and Math. 344 (244). A 21 671 0 1902

711 (454). Modern Physics I. (3). Introduction to quantum mechanics, the Schroedinger equation, elementary perturbation theory and the hydrogen atom. Prerequisite: Phys. 551 (311). A 21 711 0 1902


713 (456). Applications of Quantum Mechanics. (3). Applications of quantum mechanics to problems in solid state and nuclear physics. Prerequisite: Phys. 711 (454). A 21 713 0 1902

714 (460). Introduction to Theoretical Physics. (3). Techniques of mathematical physics and their application to boundary value problems in mechanics, electricity and magnetism, wave motion, and similar items. Prerequisite: consent of instructor. A 21 714 0 1902

715 (402). Numerical Methods in Physics. (2). 1R; 3L. Applications of numerical methods to problems in physics. Roots of equations, curve fitting, interpolation, extrapolation and smoothing of experimental data, numerical differentiation and integration and solution of differential equations. The use of computer in numerical methods is included. Prerequisite: consent of instructor. A 21 715 0 1902

Graduate Courses

800 (521). Individual Readings. (1 to 3). Prerequisites: 30 hours of physics and departmental consent. This course may be repeated for credit up to six hours. Prerequisite: departmental consent. A 21 801 0 1902

807 (550). Seminar. (1). Review of current periodicals; reports on student and faculty research. This course may be repeated for credit up to two hours. Prerequisite: 20 hours of physics. A 21 807 0 1902

809 (551). Research and Thesis. (1-3). This course may be repeated for credit up to six hours. A 21 809 0 1902

811 (533). Quantum Mechanics I. (3). Elementary principles, formulations and methods of quantum mechanics, with special application to atomic and molecular phenomena. Prerequisites: Phys. 622 (340) and 711 (454), or departmental consent, and Math. 550 (346). A 21 811 0 1902


831 (535). Classical Electricity and Magnetism I. (3). Vector fields, field equations, stress and energy, static magnetic and electric fields and electromagnetic waves. Prerequisites: Phys. 632 (334) and Math. 550 (346). A 21 831 0 1902


841 (537). Nuclear Physics I. (3). The nuclear two-body problem and nuclear forces, models of the nucleus and nuclear decay. Prerequisite: Phys. 711 (454). A 21 841 0 1902

Prerequisite: Phys. 841 (537). A 21-842 0 1902

571 (512). Statistical Mechanics. (3). An introduction to the basic concepts and methods of statistical mechanics, with applications to simple physical systems. Prerequisites: Math. 550 (346) and Phys. 622 (340). A 21 871 0 1902

881 (515). 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 (311), or departmental consent, and Math. 550 (346). A 21 881-0 1902


Political Science

Major. A major consists of 30 hours, including: Pol. Sci. 345 (345) or 544 (444) and 547 (447) or 549 (449); three hours each from groups 2, 3, 4 and 5 (below); and enough additional hours to complete the 30-hour major requirement.

Minor. A minor consists of three hours from group 1 and 12 additional hours, six of which must be upper division courses.

Group 1. Political theory: Pol. Sci. 232 (232), 345 (345), 544 (444), 546 (446), 547 (447), 549 (449), 558 (458);

Group 2. American political behavior and institutions: Pol. Sci. 121 (121), 315 (315), 316 (316), 317 (317), 318 (318), 319 (319), 390 (490), 540 (440), 551 (451), 552 (452), 554 (454), 687 (477);

Group 3. Comparative government: Pol. Sci. 235 (225), 227 (227), 228 (228), 320 (420), 330 (330), 333 (333), 360 (360), 523 (423), 526 (426), 539 (339);

Group 4. International relations: Pol. Sci. 335 (335), 336 (336), 338 (436), 533 (433), 534 (434);


Lower Division Courses

121 (121). American Political System. (3). An analysis of the basic patterns and structure of the American political system, with emphasis on policies and problems of American politics. A 22 121 0-2207

153. Model United Nations. (2-4). A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model UN in St. Louis. Prerequisite: consent of instructor. A 22 153 0 2207

155. Practical Politics. (2-3). A course focusing on either election campaigns or legislative sessions depending on which is in progress during the specific semester the course is offered. During elections students are assigned to work for candidates and are also involved in a campaign simulation in class. During legislative sessions, both legislators and interest group leaders are involved. In addition, the class attends one of the legislative sessions in Topeka. A 22 155-0 2207

When two course numbers are given at the beginning of a description, the first number refers to the current numbers, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

Fairmount College 309
226 (226). Comparative Politics. (3). An analysis of the basic patterns and structures of Western democratic political systems, transitional systems and dictatorial or totalitarian systems. A 22 226 0 2207

227 (227). Comparative Analysis of Western Democracies. (3). Analysis utilizing experience from Great Britain, France, the British-speaking Commonwealth and Western Europe and analysis of the characteristics of these systems. A 22 227 0 2207

228 (228). Autocracy, Dictatorship and Totalitarianism. (3). An analysis of limited access—mass-participatory—political systems, their traditions and development, with special emphasis on Nazi Germany, Soviet Russia and Mainland China. A 22 228 0 2207

232 (232). Basic Ideas in Political Theory. (3). Introduces the student to recurring themes of political thought, examines their diverse meanings and considers problems that arise when values seem to be in contradiction. A 22-232 0 2207

Upper Division Courses

300 (200). Research Techniques. (3). Introduces the beginning student to research techniques in political science. Recommended for majors. A 22 300 0 2207

301 (400). Ethnic Politics. (3). An intensive analysis of the literature and data on the role of ethnic groups in the political system. Attention is given to the network of relationships that affect and are affected by ethnic groups. Participants in the course are expected to develop and complete a research project for presentation and evaluation. A 22-301 0 2207

311 (211). American Democracy. (3). Currents in the development of American democracy, with emphasis on the ideas and ideals that have contributed to the development of Americanism and the literature that deals with these currents of thought. A 22 311 0 2207

315 (315). The Presidency. (3). The presidency focuses upon the evolution of the presidential office, the recruitment of presidents and the nature of presidential power. A 22 315 0 2207

316 (316). The Legislative Process. (3). Focuses on the Congress, with particular attention to interest articulation at both state and national levels. A 22 316 0 2207

317 (317). Urban Politics. (3). An analysis of politics in urban areas, including such topics as the nature and distribution of community power, influence and leadership, the nature of community conflict, the formation of policy, urban problems and political solutions, and trends in urban politics. A 22 317 0 2207

318 (318). Political Parties. (3). The role of political parties in the American political decision-making process at the national, state and local levels. A 22-318 0 2207

319 (219). State Government. (3). The role of the states in the federal system and the patterns of politics and institutions in the several states. Particular attention is given to the state of Kansas. A 22 319 0 2207

320 (420). Politics of Developing Areas. (3). A survey of the political systems in Latin America, Africa, the Middle East and south and southeastern Asia. Special attention is paid to colonialism as a system, the effects of colonialism and patterns of emerging nations. A 22 320 0 2207

321 (321). Introduction to Public Administration. (3). A general survey of the scope and nature of public administration; policy and administration; administrative regulations and adjudication; organization and management; budgeting and fiscal management; public personnel administration; political, judicial and other controls over the administration. A 22 321 0 2207

330 (330). Soviet Politics and Government. (3). A general introduction to the study of Soviet Russia. Included are
discussions of historic and demographic factors; the Marxist-Leninist ideology; party, state and legal structure; social structure of the USSR; federalism and the nationalities; industry, agriculture and trade unions; policy formulation; political power; and factors of stability and instability. A 22 330 0 2207

333 (333). Comparative Western Democracies. (3). Comparative studies of selected Western political systems. The student is assumed to have basic knowledge of the structure of prototypes of Western democracies. A 22 333 0 2207

335 (335) & 336 (336). International Politics and Institutions. (3 & 3). 335 (335): an analysis of the controls governing the nation-state system; special consideration of such concepts as balance of power, collective security, propaganda and diplomacy. 336 (336): emphasis on international law and the development of international organizations. Either 335 (335) or 336 (336), but not both, may be accepted toward a major in history. A 22 335 0 2207 & A 22 336 0 2207.

338 (436). Soviet Foreign Policy. (3). The concept, content and control of Soviet foreign relations; instruments and tools of Soviet diplomacy; strategy and tactics; change and continuity from Russia to Soviet foreign relations and policy aims; and execution of foreign policy in selected areas. A 22 338 0 2207

345 (345). Classical and Medieval Political Theory. (3). An analytical study of the major offerings of the Greek, Roman and feudal periods. The contributions of Plato, Aristotle, and the Stoics are emphasized in the early period; the works of Seneca, Cicero and the Roman lawyers during the second; and the juridical impact of the feudal system and the philosophical legacy of the ecclesiastical writers during the third. A 22 345 0 2207

353. Model United Nations. (2-4). A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model UN in St. Louis. Prerequisite: consent of instructor. A 22 353 0 2207

354 (454). Judicial Process and Behavior. (3). Focuses upon the behavior and policy-making roles of courts and judges. A 22 354 0 2207

355. Practical Politics. (2-3). A course focusing on either election campaigns or legislative sessions depending on which is in progress during the 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 legislators and interest group leaders are involved. In addition, the class attends one of the legislative sessions in Topeka. A 22 355 0 2207

390 (490). Special Topics in American Politics. (3). An analysis of selected topics in American politics in a seminar setting. Content varies depending upon the instructor, but includes problems of policy (civil rights, business and government, etc.) and of structure (federalism, the party system, etc.). This course may be repeated for credit. A 22 390 0 2207

399 (499). Directed Readings. (3). A course designed for the exceptional student to meet his needs and deficiencies. This course may be repeated for credit. Prerequisite: senior standing and departmental consent. A 22 399 3 2207

523 (423). 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 psychocultural factors that affect these institutions and processes. In addition, students are given an opportunity to participate in an original research experience. A 22 523 0 2207

526 (426). Comparative Politics of the Middle East. (3). An examination of the political institutions and processes of Middle Eastern governments. The social, economic and Islamic cultural factors that affect these institutions and processes are studied. A 22 526 0 2207

533 (433). Policy Development in Foreign Relations. (3). The process of for-

* Prerequisite may be waived by departmental consent.
eign policy making in the American structure of government. Particular attention is given to the problems of federalism and separation of powers in foreign policy development. A 22 533 0 2207

534 (434). Problems in Foreign Policy. (3). An analysis of the alternative courses of action open to the United States in the present international political system. A 22 534 0 2207

539 (339). Government and Politics in Asia. (3). The breakdown of the colonial systems during and after World War II. Japan, China, India, southeast Asia and southwest Asia. The continuing political instability in Asia is also studied. A 22 539 0 2207

540 (440). American Political Behavior. (3). An intensive examination of the patterns of political behavior in the United States through primary and secondary analysis of existent data. Emphasis is given to the development and presentation of an original research paper. A 22 540 0 2207

544 (444). Modern Political Theory. (3). A description and analysis of the works of the principal political theorists of the modern state. Beginning with Machiavelli, the most persistent problems of early and modern nationalism are examined through the writings of Hobbes, Locke, Rousseau, Hegel, Burke, Marx and others. A 22 544 0 2207

546 (446). Seminar on Comparative Marxism. (3). An examination and evaluation of the ideas that have helped to shape the ideologies of the various party-states. The contributions of Marx, Engels, Kautsky, Bernstein, Luxemburg Lenin, Trotsky, Stalin, Mao, Khrushchev, Tito, Togliatti, etc., are included. A 22 546 0 2207

547 (447). Contemporary Political Theory. (3). Major patterns and developments in political thought in the twentieth century. The course emphasizes controversies over the role and purpose of political philosophy in modern society. A 22 547 0 2207

549 (449). Approaches to the Study of Political Science. (3). Scope and methods of political science and research techniques designed to prepare the student for either graduate work in political science or administrative research. Prerequisite: senior standing. A 22 549 0 2207

551 (451). Public Law I. (3). An analysis of the role of appellate courts—especially of the U. S. Supreme Court—in the American political system. Emphasis is placed upon judicial review of state and federal legislation, the separation of powers, federalism, the taxing power and the commerce clause. A 22 551 0 2207

552 (452). Public Law II. (3). An analysis of the role of the appellate courts—especially of the U. S. Supreme Court—in the American political system. Emphasis is placed upon the guarantees of the Bill of Rights and the Fourteenth Amendment. A 22 552 0 2207

558 (458). American Political Thought. (3). Consideration of selected topics in the development of political ideas in the United States. A 22 558 0 2207

564 (464). Comparative Public Administration. (3). A study of the administrative systems of selected developed and developing countries, with special attention to the various methods and approaches of comparative analysis and to the relationships between administrative institutions and their environmental settings. A 22 564 0 2207

580 (480). Administration and the Policy Making Process. (3). The problems of government encountered in the administration of public policy. The approach is analytical rather than descriptive. This course may be repeated for credit. A 22 580 0 2207

587 (487). Theory of Administration. (3). A study of organizational theory and the various approaches to the study of organization. A 22 587 0 2207


* Prerequisite may be waived by departmental consent.
Same as Econ. 655 (455). A 22 655 0-2207

687 (477). Introduction to Urban Affairs. (3). Same as Econ. 687 (477) and Soc. 687 (477). An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 202 (222), Principles of Economics, and a course in sociology or political science. A 22 687 0 2207

750 (450). Workshop. (2-4). Prerequisite: consent of instructor. A 22 750 2-2207

Graduate Courses

800 (500). Advanced Directed Readings. (3). Prerequisite: departmental consent. This course may be repeated for credit. A 22 800 3 2207

801 (501). Method and Scope of Political Science. (3-3). 801 (501): emphasizes philosophy of science and methodology (as distinguished from method and technique) and exposes the student to recent works of methodological import in the various subfields within the discipline. Prerequisite: departmental consent. A 22 801 0 2207

802 (502). Statistical Applications. (3). Emphasizes applications of data in political science. Prerequisite: departmental consent. A 22 802 0 2207

810 (510). Seminar in Comparative Government. (3). The comparative study of selected aspects of the politics and institutions of foreign governments. Prerequisite: departmental consent. A 22 810 9 2207

820 (520). Seminar: The Administrative Process. (3). Consideration of the process and environment of administration, with special attention given to the role of the executive in policy formulation, organization, planning, budgeting, staffing, coordination, communications and administrative responsibility. Prerequisite: departmental consent. A 22 820-9 2207

821 (521). The Budgetary Process. (3). Analysis of the development and utilization of the budgetary process in government administration, with special attention given to the budget in relation to its role in policy formulation. Prerequisite: departmental consent. A 22 821-9 2207

835 (535). Seminar in International Relations. (3). Analysis of special problems in, and approaches to, the study of international relations. Prerequisite: departmental consent. A 22 835 9 2207

837 (537). Seminar in Soviet Government. (3). An analysis and evaluation of approaches to the study of the Soviet political system, including an in-depth examination of selected facets of the system. Prerequisite: departmental consent. A 22 837 9 2207

841 (541). Seminar in Urban Politics. (3). An intensive analysis of urban politics, with emphasis on individual research projects. Prerequisite: departmental consent. A 22 841 9 2207

844 (544). Seminar in Political Theory I. (3). Emphasizes topics selected for their significance in the development and content of political theory. Prerequisite: departmental consent. A 22 844 9 2207

845 (545). Seminar in Political Theory II. (3). Detailed study of the relevant works of a major political philosopher and his contribution to contemporary thought. Prerequisite: departmental consent. A 22 845 9 2207

851 (551). Seminar in Public Law and Judicial Behavior. (3). Analysis of special problems in and approaches to the study of legal systems. Emphasis is given to developing the student's awareness of research in the field. Prerequisite: departmental consent. A 22 851 9 2207

856 (556). Seminar in American Politics and Institutions. (3). Analytical study, with emphasis on individual research, of selected topics in American political behavior. Prerequisite: departmental consent. A 22 856 9 2207

874 (574). Internship. (3-6). An intensive applied learning experience supervised by a University department or committee. To receive credit, a student must secure approval of a written report from his own department. Prerequisite: departmental consent. A 22 874 2 2207

Fairmount College  313
Psychology

Courses are offered to provide (1) for students who elect to study particular aspects of psychology while majoring in other disciplines; (2) for students who plan to major in psychology, but do not plan for graduate study in the discipline and (3) for students who plan to major with the intention of going on to graduate study in psychology. Students planning graduate study should check with the department's office for recommended undergraduate course sequences in preparation for particular emphases in graduate study.

Major. The major consists of a minimum of 26 hours. Psych. 111 (111) is a prerequisite for all other psychology courses. All majors are required to take Psych. 111 (111), 112 (112), 311 (211) and 312 (212) plus a minimum of 12 hours of 500 and 600 level courses. Psych. 442 (342) and 443 (343) are strongly recommended for majors. Other courses should be selected in consultation with a departmental adviser. A minimum of five hours of mathematics is required of all psychology majors.

Minor. The minor consists of a minimum of 15 hours selected in consultation with the student's major adviser.

Lower Division Courses

111 (111). General Psychology. (3). An introduction to the general principles and areas of psychology. A 23 111 0 2001
112 (112). General Psychology Laboratory. (2). 4L. Introduction to scientific method in psychology. Prerequisite: Psych. 111 (111); concurrent enrollment preferred. A 23 112 1 2002

Upper Division Courses


When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example, 3R; 4L means three hours of lecture and four hours of lab.

442 (342). Psychological Statistics. (3). Emphasizes basic quantitative techniques in measurement and evaluation of behavior. Prerequisite: Psych. 112 (112) and a minimum of five hours of mathematics. A 23 442 0 2007

443 (343). Experimental Psychology. (3). Laboratory study of behavior stressing experimental design and research techniques. Prerequisites: Psych. 112 (112) and 442 (342). A 23 443 1 2002

501 (401). Introduction to Clinical Psychology. (3). Application of psychological principles to the field of problem behavior. Prerequisites: Psych. 375 (275), 544 (444) and 565 (465). A 23 501 0 2003


545 (345). Psycholinguistics. (3). Survey of psychological, linguistic and informational analyses of language. Prerequisite: Psych. 311 (211). A 23 545 0 2001

547 (346). Advanced Social Psychology. (3). An intensive review of a selected contemporary issue in social psychology. Prerequisites: Psych. 347 (246) and consent of instructor. A 23 547 0 2005


551 (351). Physiological Psychology Laboratory. (3). 6L. Instruction in laboratory methods. Each student must carry out his own research project. Prerequisite: Psych. 550 (350). A 23 551 1-2010

554 (454). Psychological Testing and Measurement. (3). A survey of the psychological foundation of tests and the interpretation and evaluation of test finding. Prerequisites: Psych. 112 (112), 312 (212) and 442 (342). A 23 554 0 2006

560 (360). Psychology Tutorial. (3). Selected topics in psychology. This course may be repeated for a maximum of six hours of credit. Prerequisites: An average of B in psychology courses, which must include Psych. 311 (211) and 312 (212), and consent of instructor. A 23-560 2 2001


570 (370). Comparative Psychology. (3). Behavioral research and principles at different phylogenetic levels. Prerequisites: Psych. 112 (112) and 311 (211). A 23 570 0 2001

573 (473). Motivation. (3). Current and classical problems concerning theory and research in motivation. Prerequisites: Psych. 311 (211) and 312 (212). A 23-573 0 2001

575 (475). Advanced Psychology of Personality. (3). More intensive treatment of the topics of Psychology of Personality. Prerequisites: Psych. 375 (275) and 442 (342). A 23 575 0 2001


610 (410). History of Psychology. (3). Psychological theory and experimentation from ancient to modern times. Prerequisite: ten hours of psychology. A 23 610 0 2001

* With sufficient reason a student may apply for consent of instructor to waive course prerequisite.
643 (443). Operant Conditioning Laboratory. (3). 6L. Experimental laboratory stressing analysis of behavior by operant techniques. Prerequisites: Psych. 112 (112) and 311 (211). A 23 643 1 2002

656 (456). Special Investigation. (2-3). Upon consultation with the instructor concerned, advanced students with adequate preparation may undertake original research in psychological problems. This course may be repeated for a maximum of six hours of credit. Prerequisites: ten hours of psychology and departmental consent. A 23 656 4 2001


668 (466). Human Factors. (3). Explores the impact of modern machines on man and the problems of performance, training, perception and error resulting from man-machine confrontations. The course also surveys current literature and experimentation with some attention to industrial design criteria. Prerequisites: Psych. 442 (342) and 443 (343). A 23 668 0 2001

669 (469). Human Factors Laboratory. (3). 6L. Applications of human factors principles and guidelines; experimentation, measurement, equipment design, field studies and analysis of complex machines and equipment. Prerequisite: Psych. 668 (468). A 23 669 1 2002

Graduate Courses

800 (500). Research Design in Psychology. (3). Scientific methods, techniques and designs of psychological research applicable to laboratory and clinical and field settings. Required of all graduate majors in psychology. Prerequisite: consent of instructor. A 23 800 9 2001


803 (503). Clinical Psychology Laboratory. (2). 4L. Practical experience in the applied aspects of clinical psychology. Course includes observation, recording and interpretation of a wide range of behavior and communication of findings. Prerequisites: Psych. 802 (502), or concurrent enrollment in 802 (502), and consent of instructor. A 23 803 2 2003

811 (511). Cognitive Assessment. (2). Rationale and methods of intellectual assessment, critical review of research. Prerequisites: Psych. 802 (502) and consent of instructor. A 23 811 9 2003

812 (512). Cognitive Assessment Laboratory. (2). 4L. Practical experience in administration and scoring of different tools and in the utilization of data in evaluating behavior. Prerequisites: Psych. 803 (503) and 811 (511), or concurrent enrollment in 811 (511). A 23 812 2-2003

815 (515). Clinical Research and Practice. (2). 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 four credit hours. Prerequisite: consent of instructor. A 23 815 2 2003

817 (517). 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 (502) and consent of instructor. A 23 817 9 2003

818 (518). Personality and Human Interaction Laboratory. (2). 4L. Research and practicum experience in the measurement and control of human interaction patterns. Prerequisites: Psych. 803 (503) and 817 (517), or concurrent enrollment in 817 (517), and consent of instructor. A 23 818 2 2003

820 (520). Graduate Research Seminar. (3). Advanced experimental procedures. This course is required of all graduate

* With sufficient reason a student may apply for consent of instructor to waive course prerequisite.
majors in psychology. Prerequisite: consent of instructor. A 23 820 9 2001


826 (526). Techniques of Behavior Modification. (2). A critical review of theory, research and practice in behavior modification. Prerequisites: Psych. 565 (465), or equivalent, 803 (503), and consent of instructor. A 23 826 9 2003

827 (527). Techniques of Behavior Modification Laboratory. (2). Practical experience with a variety of techniques. Prerequisites: Psych. 826 (526), or concurrent enrollment in 826 (526), and consent of instructor. A 23 827 2 2003

830 (530). 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: consent of instructor. A 23 830 9 2005

831 (531). Research in Community Psychology. (3). Special topics and group field research projects in community psychology. Prerequisite: consent of instructor. A 23 831 2 2005

832 (532). 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. This course may be repeated for a maximum of six credit hours. Prerequisites: Psych. 830 (530), 831 (531), and consent of instructor. A 23 832 2 2005


844 (544). Seminar in Personality and Psychosocial Disorders. (3). Relationship of normal behavior development and maladjustment and a critical review of theory and research. Prerequisites: Psych. 544 (444), or equivalent, and consent of instructor. A 23 844 9 2005

851 (551). Seminar in Physiological Psychology. (3). Intensive study of theory and research in physiological factors in behavior. Prerequisites: Psych. 550 (350), or equivalent, and consent of instructor. A 23 851 9 2010


870 (570). Seminar in Current Developments. (3). Intensive study of current issues, techniques, research and application. This course may be repeated for different topics for a maximum of six credit hours. Prerequisite: consent of instructor. A 23 870 9 2001

872 (572). Seminar in Comparative Behavior. (3). Intensive study of theories, methodology and research in laboratory and field investigations of behaviors of different species. Prerequisites: Psych. 570 (370), or equivalent, and consent of instructor. A 23 872 9 2001

873 (573). Seminar in Motivation and Emotion. (3). Intensive study of theory and research in motivational and emotional processes. Prerequisites: Psych. 573 (473), or equivalent, and consent of instructor. A 23 873 9 2001

875 (575)-876 (576). Thesis. (2-2). Prerequisite: enrollment in 875 (575) only with written consent of the Graduate Student Committee. A 23 875 4 2001; A 23 876 4 2001

885 (585). Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisites: Psych. 585 (485), or equivalent, and consent of instructor. A 23 885 9 2001

Fairmount College
Religion

The program of the Department of Religion is designed to acquaint undergraduate students with some of the major religious traditions, to enable them to acquire familiarity with both the different kinds of religious phenomena and the various methods for studying religion and to help students think critically and constructively about the nature and value of religion.

Major. A major in religion requires a minimum of 30 hours, with at least 15 at the 300-400 level. A maximum of six hours from cross-referenced courses are applicable to the major. At least three hours must be completed from each of the following groups.

1. Judeo-Christian Traditions—Rel. 310 (230), 315 (270), 320 (240) or 325 (260);
2. Non-Western Traditions—340 (337) or 330 (336);
3. Methodological and Comparative Studies—Rel. 410 (301), 460 (421) or 470 (425);
4. Constructive Studies—Rel. 330 (342), 420 (345), 430 (373) or 445 (383). (When applicable, Rel. 480 (480) or 490 (475) may be substituted for one or more of the required courses with departmental approval.)

Minor. A minor in religion requires a minimum of 15 hours, chosen in consultation with the department.

Lower Division Courses

130 (130). 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 15 130 0 1510.

140 (111). Religion in America. (3). A survey of the beliefs, practices and issues current in major American religious bodies, with some attention to minor religious denominations such as the Black Church, Christian Science and the Latter Day Saints. A 15 140 0 1510.


160 (305). New Testament Greek I. (3). The essentials of Greek grammar, elementary reading exercises and selected readings in Gospels and Epistles. The completion of two semesters is required for credit. A 15 160 0 1510.


210 (201). Current Religious Issues. (3). A critical study of contemporary issues in the West, with some attention to non-Western religions. The relationship of religion to such topics as race, war, secularism, population explosion and politics is considered. A 15 210 0 1510.

Upper Division Courses


315 (270). Judaism. (3). A historic-literary study of Jewish thought from the canonization of the Bible to the present time. Texts, historic settings, personalities and development of ideas and values are emphasized. A 15 315 0 1510.

325 (260). Western Religious Thought. (3). A study of some of the major theologians in the Western religious tradition, from pre-Augustinian times to the eighteenth century, including such thinkers as Augustine, Aquinas, Anselm, Luther and Calvin. A 15 325 0 1510

330 (342). Modern Religious Thought. (3). A critical study of Western religious thought in the nineteenth and twentieth centuries, including selections from such theologians as Schleiermacher, Kierkegaard, Barth, Buber, Rahner and Tillich. A 15 330 0 1510

340 (337). Islam. (3). The religion in its geographical, social, political and cultural context, both Arab and non-Arab. A 15 340 0 1510

346 (446). Philosophy of Religion. (3). Same as Phil. 346 (446). A 15 346 0 1510

350 (336). Eastern Religions. (3). An examination of the major religious traditions of the East by means of an analysis of their classical writings—e.g., the Upanishadic literature and the Bhagavad Gita (Hinduism), the Dhammapada (Buddhism), the Analects (Confucianism), the Tao Te Ching (Taoism) and others. A 15 350 0 1510

410 (301). 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 his history. A 15 410 0 1510

420 (345). Marx, Nietzsche and Christianity. (3). An examination and critical evaluation of two of the seminal critiques of Christianity that have been produced in the modern world. A 15 420 0 1510

421 (321). Sociology of Religion. (3). Same as Soc. 521 (321). A 15 421 0 1510

427 (327). Primitive Religion. (3). Same as Anthro. 527 (327). A 15 427 0 1510

430 (373). Religion and the Future. (3). An examination of the ways world religions are responding to current technological, cultural and social trends and an indication of future issues that will call for a response. The relationship between religion and future developments in automation, population explosion, biological engineering and arms control receive special attention. A 15 430 0 1510

440 (322). New Testament Backgrounds. (3). A study of selected material from the Dead Sea Scrolls, the Apocrypha and the Pseudepigrapha, as well as a consideration of Gnosticism and the mystery religions. A 15 440 0 1510

445 (383). Religion and Human Conflict. (3). A critical examination of the relationship between religion and human conflict as expressed in war, revolution, civil strife and interpersonal relationships. Special attention is given to the ways Western and Eastern religions have justified, tried to limit or ameliorate human conflict. A 15 445 0 1510

460 (421). A Study of Religious Experience. (3). An interdisciplinary study of forms of religious experience such as conversion, mysticism, prayer, worship and vision. Readings from such representative thinkers as James, Freud, Marx, Otto, Allport and Maslow are included. A 15-460 0 1510

470 (425). The Problem of Salvation. (3). A comparative analysis of the various answers mankind has given to the problem of the nature of the human condition and of man's salvation from it, utilizing selections from both East and West and from both within and outside the specifically religious traditions (e.g., Patanjali, Lao Tzu, Plato, Augustine, Spinoza, Camus and Tillich). A 15 470-0 1510

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

Fairmount College 319
476 (424). The Reformation. (3). Same as Hist. 576 (424). A 15 476 0 1510

480 (480). Special Studies. (3). A concentrated study of a theologian, a theorist of religion or a religious issue announced by the instructor when the course is scheduled. This course may be repeated for credit. Prerequisite: consent of the instructor. A 15 480 0 1510

490 (475). Independent Work. (2-3). Designed for the student who is capable of doing advanced independent work in a specialized area of the study of religion that is not formally offered by the department. This course may be repeated for credit. Prerequisite: departmental consent. A 15 490 3 1510

Romance Languages

FRENCH

Two major areas may be taken in French.

Major A. A major in French consists of 24 semester hours beyond Fr. 112 (112), or its equivalent, and must include Fr. 220 (220), 531 (333), 532 (334), 526 (336) and an additional upper division French literature course, exclusive of Fr. 515 (315), Major Topics. In addition, it is strongly recommended that French majors choose a minor in some other foreign language and elect, where possible, complementary courses in English, history, philosophy and art history.

Major B. The teaching major in French in either Fairmount College of Liberal Arts and Sciences or in the College of Education consists of at least 50 semester hours chosen from the following categories. A student must take at least 24 hours in French beyond the 111-112 (111-112) level, 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, history, linguistics, philosophy, political science (these must be chosen in consultation with the teacher education adviser); or
3. A totally separate second major as prescribed by the Catalog.

It is strongly recommended that majors planning to teach French should qualify to teach at least one other foreign language. They must have a 2.75 average in French and departmental approval in order to be admitted to the professional semester. It is further recommended that majors planning to teach take Fr. 505 (305) and 530 (330). Sec. Ed. 442 (442), section F, and 447 (447) are required of all majors and minors seeking a high school teaching certificate. Majors interested in teaching French in the elementary schools should consult the department’s professor in charge of teacher education.

Minor. The French minor consists of a minimum of 11 hours beyond the 111-112 (111-112) level and must include Fr. 220 (220), 223 (221), 225 (225) and one upper division French course, exclusive of Fr. 515 (315), Major Topics.
ITALIAN

There is no major in Italian.

Minor. A minor in Italian consists of 12 hours beyond the 112 (112) level and must include Ital. 531 (331).

LATIN AND GREEK

Major A. The major in Latin consists of a minimum of 24 hours beyond Latin 112 (112), or its equivalent, and must include at least nine hours of upper division courses. It is recommended that Latin majors take Hist. 562 (307), 563 (308), 566 (323) and 567 (324).

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 in the language beyond the Latin 111-112 (111-112) level 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, history, linguistics, philosophy or political science (these must be chosen in consultation with the teacher education adviser); or
   3. A totally separate second major as prescribed by the Catalog.

It is strongly recommended that majors planning to teach Latin qualify in at least one other foreign language. They must have a 2.75 grade point average in Latin and departmental approval in order to be admitted to the professional semester. Sec. Ed. 442 (442), section F, and 447 (447) are required of all majors and minors seeking a high school teaching certificate.

Minor. A minor in Latin consists of a minimum of 11 hours beyond the 112 (112) level and must include at least one 500 level course.

PORTUGUESE OR GREEK

No major or minor is offered in either Portuguese or Greek.

SPANISH

Major A. A major in Spanish consists of a minimum of 24 hours beyond Span. 112 (112), or its equivalent, and must include Span. 224 (224), 225 (226), 526 (326) or 623 (423) and at least nine hours of upper division Hispanic literatures, including two survey of literature courses. Courses in Spanish or Spanish-American history, economics or art are strongly recommended for all majors. All courses offered in the Spanish section, count toward a Spanish major. With departmental approval, a maximum of four hours in courses in related fields taken in the Wichita State University Summer Program in Mexico may count toward the Spanish major.
Native speakers of Spanish normally are not permitted to take courses at the 100-200 (100-200) level and must take a minimum of 12 hours of Hispanic literature in order to complete a major in Spanish. Students who have completed more than two units of high school Spanish and students who have spoken Spanish natively should consult with a counselor in the Spanish department before enrolling in Spanish courses.

Major B. The teaching major in Spanish 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 the Span. 111-112 (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, history, linguistics, philosophy, political science (these should be chosen in consultation with the teacher education adviser); or

3. A totally separate second major as prescribed by this 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 majors who are planning to teach take Span. 505 (335) or 626 (426). Sec. Ed. 442 (442), section F, and 447 (447) are required of all majors and minors seeking a high school teaching certificate. Majors interested in teaching Spanish in the elementary schools should consult the departmental professor in charge of teacher education.

Minor. A minor in Spanish consists of a minimum of 11 hours beyond the 112 (112) level and must include Span. 223 (223), 225 (226), 220 (230) and one upper division course exclusive of Span. 515 (315).

Native speakers normally are not permitted to take courses at the 100-200 (100-200) level and must take a minimum of six hours of Hispanic literature in order to complete a Spanish minor.

FRENCH

Lower Division Courses

060 (60). French for Graduate Reading Examination. (3). 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 MA or MS degrees. No previous knowledge of French is required. The course will not count toward a degree. A 26 060-0 1102

111 (111)-112 (112). Elementary French. (5-5). Covers speaking, reading and writing, including grammar essentials. Daily classroom and laboratory work is required. A 26 111 0 1102; A 26 112 0-1102

205 (205). Basic French Phonetics and Pronunciation. (2). An introductory, practical course to improve individual

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.
pronunciation. Intensive drills of vowels, consonants and speech patterns are used. Prerequisite: Fr. 112 (112) or equivalent. A 26 205 0 1102

210 (210). Intermediate French. (5). Writing, cultural readings and speaking, including a general review of French grammar using the oral method. Not open to students with previous credit in Fr. 200 (dropped), 220 (220) or 223 (221). Prerequisites: two units of high school French or Fr. 112 (112) with a minimum grade of C, or departmental consent. This course is designed primarily for students working to fulfill the liberal arts language requirement. A 26 210-0 1102

220 (220). Intermediate French Grammar and Composition. (3). Prerequisite: Fr. 112 (112) or departmental consent. A 26 220 0 1102

223 (221)-224 (222). Intermediate French Readings I and II. (3-3). Intensive reading of French literary works. Prerequisite: Fr. 112 (112), or equivalent for Fr. 223 (221), Fr. 223 (221), or equivalent for 224 (222). This course may be used to meet the foreign literature requirement. A 26 223 0 1102; A 26 224 0 1102

225 (225). Intermediate French Conversation. (2). A course involving oral assignments of some regular work in the language laboratory. Prerequisite: Fr. 112 (112) or equivalent. A 26 225 0-1102

Upper Division Courses

Upper division courses are given on a rotating basis. Fr. 224 (222) is the prerequisite for all upper division literature courses.

505 (305). Advanced Phonetics and Diction. (2). Scientific analysis of French sounds and intonation. Phonetic transcriptions and intensive drills of speech patterns are utilized. This course is not open to students with credit in Fr. 310 (dropped). Prerequisite: Fr. 205 (205). A 26 505 0 1102

515 (315). 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. The course may be repeated for credit. Prerequisite: departmental consent. A 26 515 0 1102

525 (325). Advanced Conversation. (3). A course designed to increase fluency in speaking French. Assignments include oral reports, dialogs and work in the language laboratory. Prerequisite: Fr. 225 (225) or departmental consent. A 26-525 0 1102

526 (336). Advanced Composition and Grammar. (3). Emphasis on theme writing, original compositions and detailed study of modern French grammar. Prerequisite: Fr. 220 (220). A 26 526 0-1102

530 (330). Explication de textes. (2). Scrutiny of poetry and prose passages, with a careful study of the content, style, author and background. Prerequisite: Fr. 224 (222). A 26 530 0-1102

531 (333)-532 (334). Survey of French Literature. (3-3). 531 (333): covers literature through the eighteenth century. 532 (334): includes nineteenth century through present-day writers. A 26 531-0 1102; A 26 532 0 1102

540 (340). Masterpieces of French Literature in English Translation I. (3). A study of French literature from the Middle Ages through the seventeenth century. Such selected readings as the Song of Roland, medieval romances and legends, the Farce of Maitre Pathelin, the poetry of François Villon, the poetry of the Pléiade, and the works of Rabelais, Montaigne, Racine, Corneille, Mollière, Descartes, Pascal and La Bruyère. French is not a prerequisite, and the course does not count toward a French major or minor. A 26 540 0 1102

541 (341). Masterpieces of French Literature in English Translation II. (3). A study of French literature of the eighteenth and nineteenth centuries. Selected readings are taken from such authors as Marivaux, Montesquieu, Voltaire, Prévost, Rousseau, Diderot, Beau-
marchais, Stendhal, Balzac, Hugo, Lamartine, Vigny, Musset, Baudelaire, Flaubert, Zola, Mallarmé, Verlaine, Maupassant and Rimbaud. French is not a prerequisite, and the course does not count toward a French major or minor. A 26 541 0 1102

542 (342). Masterpieces of French Literature in English Translation III. (3). A study of French literature of the twentieth century up to the present time. Selected readings are taken from such authors as Bergson, Cide, Proust, Valéry, Apollinaire, Giraudoux, Bernanos, Saint-Exupéry, Malraux, Sarthe, Anouilh, Camus, Prévert, de Chardin, Ionesco, Robbe-Grillet, Butor, Pagnol and Sarraute. French is not a prerequisite, and the course does not count toward a French major or minor. A 26 542 0 1102

623 (423). Seminar in French. (1-5). Special studies in (a) French language, (b) French literature, (c) French culture and civilization or (d) methods of teaching French in the elementary and secondary schools. The course may be repeated for credit. Prerequisite: departmental consent. A 26 623 9 1102

626 (232). French Civilization. (3). The background of history, art and institutions. Prerequisite: Fr. 223 (221) or departmental consent. A 26 626 0 1102

630 (430). Medieval and Renaissance French Literature. (3). A 26 630 0 1102

631 (431). Seventeenth Century French Literature. (3). A 26 631 0 1102

632 (432). Eighteenth Century French Literature. (3). A 26 632 0 1102

633 (433). Nineteenth Century French Literature. (3). A 26 633 0 1102

634 (434). Contemporary French Literature. (3). A 26 634 0 1102

635 (435). Introduction to Romance Language Linguistics. Same as Span. 635 (435). An introduction designed primarily to the historical phonology and morphology of the romance languages. Particular emphasis is given to French and Spanish. Prerequisite: F. 505 (305), Span. 505 (305) or departmental consent. A 26-635 0 1102

636 (436). Introduction to Literary Criticism. (3). An introductory course presenting the history and the methods of literary criticism in France. The analysis and discussion of important trends in French literary criticism are emphasized. Prerequisites: Fr. 530 (330), 531 (333), 532 (334) or departmental consent. A 26-636 0 1102

ITALIAN

Lower Division Courses

111 (111)-112 (112). Elementary Italian. (5-5). Fundamentals of pronunciation and practice in speaking, understanding, reading and writing. A 26 111 0 1104; A 26 112 0 1104

220 (230). Intermediate Italian Grammar and Composition. (3). Prerequisite: Ital. 112 (112) or equivalent. A 26 220-0 1104

223 (223)-224 (224). Selected Italian Readings. (3-3). Intensive reading of Italian literary works. Discussions in Italian, as well as oral and written summaries, are featured. Prerequisite: Ital. 112 (112) or two units of high school Italian for Ital. 223 (223); Ital. 223 (223) or three high school units for Ital. 224 (224). A 26 223 0 1104; A 26 224-0 1104

225 (225). Intermediate Conversation. (2). Prerequisite: Ital. 112 (112) or departmental consent. A 26 225 0 1104

531 (331). Introduction to Italian Literature. (3). Prerequisite: Ital. 224 (224) or departmental consent. A 26 531 0-1104

540 (340). Masterpieces of Italian Literature in Translation. (3). Representative selections in English translation from Italian medieval and Renaissance literature. The works of Dante and other writers in their medieval context, Boccaccio and the Waning of the Middle Ages; Petrarch and the formation of a new, humanistic civilization—reflections and divergences in the fourteenth, fifteenth
and sixteenth centuries are all included. A knowledge of Italian is not a prerequisite, and the course does not count toward an Italian minor. A 26 540 0 1104

LATIN

Lower Division Courses

111 (111)-112 (112). Elementary Latin. (5-5). Grammar, composition and translation. A 26 111 0 1109; A 26 112 0 1109
221 (221). Basic Latin Review. (3). Prerequisite: two units of high school Latin or equivalent. A 26 221 0 1109
223 (223). Intermediate Latin. (3). Cicero's orations, essays and letters. Prerequisite: Latin 111 (111)-112 (112) or two years of high school Latin or departmental consent. A 26 223 0 1109
224 (224). Intermediate Latin. (3). Sallust's Catiline and Livy's invasion of Hannibal. Prerequisite: Latin 223 (223) or departmental consent. A 26 224 0 1109

Upper Division Courses

Latin 224 (224) or departmental consent are prerequisites to all upper division Latin literature courses, unless otherwise specified.

531 (331). Advanced Latin. (3). Introduction to Latin verse. Prerequisite: Latin 223 (223)-224 (224) or departmental consent. A 26 531 0 1109
532 (332). Advanced Latin. (3). Vergil's Aeneid. Prerequisite: Latin 531 (331) or departmental consent. A 26 532 0 1109
533 (333). Roman Comedy. (3). A 26 533 0 1109
534 (334). Roman Elegy. (3). A 26 534 0 1109
535 (335). Roman Novel. (3). A 26 535-0 1109
536 (336). Selected Latin Readings. (3). (a) Golden Age (b) Silver Age. This course may be repeated for credit. A 26 536 0 1109

643 (443). Medieval Latin and St. Jerome. (3). Prerequisite: two 500-level courses or departmental consent. A 26-643 0 1109
644 (444). Latin Prose Composition. (3). A 26 644 0 1109
645 (445). Advanced Selected Latin Reading. (3). (a) Golden Age (b) Silver Age. This course may be repeated for credit. A 26 645 0 1109
646 (446). Seminar in Latin. (3). (a) Golden Age, (b) Silver Age. This course may be repeated for credit. A 26 646 0-1109

GREEK

Lower Division Courses

111 (111)-112 (112). Elementary Greek. (5-5). Grammar, composition and translation. A 26 111 0 1110; A 26 112 0-1110
223 (223). Intermediate Greek. (3). Plato and also Herodotus. Prerequisite: Greek 111 (111)-112 (112). A 26 223-0 1110
224 (224). Intermediate Greek. (3). Homer's Iliad. Prerequisite: Greek 223 (223). A 26 224 0 1110

Upper Division Courses

531 (331). Advanced Greek. (3). Sophocles and Euripides. Prerequisite: Greek 224 (224). A 26 531 0 1110
532 (332). Advanced Greek. (3). Thucydides. Prerequisite: Greek 531 (331). A 26 532 0 1110

PORTUGUESE

Lower Division Courses

060 (60). Reading Portuguese. (2). Open to Latin American studies majors and to upper division or graduate students who need to fulfill departmental requirements of a reading knowledge of a foreign language for the MA or MS degrees. No previous knowledge of Portuguese required. Will not count toward a degree. A 26 060 0 1120

Fairmount College 325
SPANISH

Lower Division Courses

111 (111)-112 (112). Elementary Spanish. (5-5). Emphasis on the four fundamental skills in language learning: understanding, speaking, reading and writing. A 26 111 0 1105; A 26 112 0 1105

210 (210). Intermediate Spanish. (5). Spanish review, with emphasis on conversation and cultural readings. Prerequisite: Span. 112 (112), or two units of high school Spanish, or departmental consent. Not open to students with previous credit in Span. 221 (dropped). This course is 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 (223), 225 (226) or 220 (230). A 26 210 0 1105

220 (230). Intermediate Spanish Grammar and Composition. (3). Prerequisite: Span. 112 (112) or two units of high school Spanish. A 26 220 0 1105

223 (223)-224 (224). Selected Spanish Readings. I-II. (3-3). Intensive reading of Latin American and Spanish literary works. Also includes outside readings and reports. Prerequisite: Span. 112 (112) or two high school units of Spanish for 223 (223); Span. 223 (223) or three high school units of Spanish for 224 (224). A 26 223 0 1105; A 26 224 0 1105

225 (226). Intermediate Conversation. (2). Prerequisite: Span. 112 (112) or two units of high school Spanish. Should be taken with Span. 220 (230). A 26-225 0 1105

Upper Division Courses

Span. 224 (224) is a prerequisite for all upper division literature and civilization courses unless otherwise specified.

505 (355). Spanish Phonetics. (2). Prerequisite: any 200-level course or departmental consent. A 26 505 0 1105

515 (315). Major Topics. (1-4). Special studies in (a) language, (b) literary reports, (c) commercial Spanish, (d) the language laboratory, (e) music, (f) composition and (g) problems in teaching Spanish. This course may be repeated for credit. Prerequisite: departmental consent. A 26 515 0 1105

525 (324). Advanced Conversation. (3). Prerequisite: Span. 225 (226) or departmental consent. A 26 525 0 1105

526 (326). Advanced Grammar and Composition. (3). Prerequisite: Span. 220 (230) or departmental consent. A 26-526 0 1105

531 (331). Survey of Spanish Literature. (3). Main currents of Spanish literature from 1700 to the present. A 26 531 0-1105

532 (332). Survey of Spanish Literature. (3). Spanish literature from the beginning to 1700. Prerequisite: Span. 531 (331) or departmental consent. A 26-532 0 1105

534 (334). Contemporary Spanish Theater. (3). A 26 534 0 1105

536 (336). Contemporary Spanish Novel. (3). A 26 536 0 1105

540 (340). Masterpieces of Spanish Literature Through the Golden Age in Translation. (3). A critical study of great literary works such as The Poem of the Cid, The Celestina, Don Quijote, Lazarillo and the theater of the Golden Age. Knowledge of Spanish is not a prerequisite. This course does not count toward a Spanish major or minor. A 26-540 0 1105

541 (341). Spanish Literature Since 1870 in Translation. (3). Reading in English of selected works of important Spanish novelists, poets and dramatists since 1870 and include Galdós, Unamuno, Benavente, Sender, Antonio Machado, Juan Ramón Jiménez and Lorca.
Spanish is not a prerequisite. This course does not count toward a Spanish major or minor. A 26 541 0 1105

542 (342). Contemporary Latin American Fiction in Translation. (3). Selected major novelists of Spanish America and Brazil, such as Rulfo, Fuentes, Asturias, García, Márquez, Carpentier, Malraux, Sábato, Cortázar and Amado. This course does not count toward a Spanish major or minor. A knowledge of Spanish is not a prerequisite. A 26 542 0 1105

543 (343). Contemporary Chicano Literature. (3). A study of modern and contemporary Chicano writers in the United States, including such writers as Allurista, Corky González and Octavio Romano. Extensive use of Chicano magazines and newspapers is made. This course does not count toward a Spanish major or minor. A 26 543 0 2213

620 (420). Great Themes of Spanish Literature. (2). Prerequisite: any 500-level Hispanic literature course. A 26 620 0 1105

621 (421). Main Currents of Spanish-American Literature. (3). Prerequisite: any 500-level Hispanic literature course. A 26 621 0 1105

623 (423). Seminar in Spanish. (1-4). Special studies in (a) Roman type language, (b) Spanish and Spanish-American literature, (c) Spanish and Spanish-American culture and civilization, and (d) methods of teaching Spanish in the elementary and secondary schools. This course may be repeated for credit. Prerequisite: departmental consent. A 26 623 9 1105

625 (425). Contemporary Spanish-American Novel. (3). Prerequisite: any 500-level Hispanic literature course. A 26 625 0 1105

626 (426). Spanish Civilization. (3). Intensive study of Spanish culture, including historical and geographical factors in its development, and its contributions to world civilization. Portuguese civilization is also considered. A 26 626-0 1105

627 (427). 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 0 1105

635 (435). Introduction to Romance Linguistics. (3). Same as Fr. 635 (435). An introduction primarily to the historical phonology and morphology of the Romance languages, with particular emphasis on French and Spanish. Prerequisite: French 505 (305) or Span. 505 355) or departmental consent. A 26-635 0 1105

Graduate Courses

800 (500). Introduction to Research. (1). A course designed to give graduate students basic tools for writing research papers. The preparation of bibliographies, footnoting and basic techniques of literary interpretation are included. A 26-800 0 1105


805 (505). Directed Readings. (1-4). Readings vary according to the student’s preparation. Preparation of reports, literary critiques and special projects in linguistics are included. A 26 805 3 1105

826 (526). Grammar and Stylistics. (3). Intensive study of advanced grammar and stylistic usage. A 26 826 0 1105

831 (531). Seminar in Spanish Literature. (3). (a) Middle Ages, (b) Renaissance, (c) Golden Age theater, (d) Cervantes, (e) modern novel, (f) Generation of '98, (g) Contempory Novel, (h) twentieth century theater, (i) Spanish romanticism and (j) twentieth century poetry. A 26 831 9 1105

832 (532). Seminar in Spanish-American Literature. (3). (a) Colonial period, (b) contemporary novel, (c) short story, (d) poetry, (e) modernism, (f) essay and (g) theater. A 26 832 9 1105

Fairmount College 327
Sociology

Major. A major consists of at least 30 hours, including Soc. 211 (211), 310 (310) and Soc. 645 (445) or 646 (446). Certain courses in related departments that meet the particular needs of the student and are approved by his adviser may be counted toward a sociology major. No more than six hours of such courses may be included. With the exception of Soc. (SW) 214 (214)-215 (215), social work courses do not count toward the major.

Minor. At least 15 hours of sociology, including Soc. 211 (211), and a minimum of six hours of upper division courses must be taken. No social work courses may be counted toward a minor.

SOCIOLOGY

Lower Division Courses

211 (211). Introduction to Sociology. (3). Introduction to basic concepts, propositions and theoretical approaches of sociology, including elementary methods of studying social phenomena. This course serves as the basic course for students who intend to take additional courses in sociology. A 25 211 0 2208

220 (220). Contemporary Social Problems. (3). An analysis of contemporary American social problems, with an emphasis on urban social problems. The course counts for major or minor credit. A 25 220 0 2208

226 (226). Race Relations. (3). The nature of race; ethnic groups confused with races; interrelations of ethnic groups in the United States and other countries; processes of change; and action programs. Prerequisite: Soc. 211 (211). A 25 226 0 2208

Upper Division Courses

310 (310). Sociological Statistics. (4). Statistical application to sociological problems, including parametric measures (including significance of differences and correlation), and nonparametric measures (such as binomial expansion and chi square). Prerequisites: Soc. 211 (211) and Math. 331 (121)-332 (122) or 112 (141). A 25 310 1 2208

514 (314). Comparative Family Systems. (3). Ethnographic and historical studies of family systems; range of variation; and vestiges of older systems in contemporary United States. Prerequisite: Soc. 211 (211). A 25 514 0 2208

515 (315). The American Family. (3). Analysis of American family behavior, including the selection of marriage partners, the husband-wife and parent-child relationships, and the relation of those patterns of behavior to other aspects of American society. Prerequisite: Soc. 211 (211). A 25 515 0 2208

520 (320). The Normative Order and Social Control. (3). Analysis of the development of the normative system, the concept of social control and the breakdown of social order in collective and deviant behavior. Prerequisite: Soc. 211 (211). A 25 520 0 2208


* Prerequisite may be waived by departmental consent.
belief and organization to other aspects of the social structure and to social change is discussed. Prerequisite: Soc. 211 (211). A 25 521 0 2208

522 (322). Deviant Behavior. (3). The structure, dynamics and etiology of those behavior systems that are integrated around systematic violations of the control norms. Competing theories are presented and evaluated within the context of the assumption that man is a social product. Prerequisite: Soc. 211 (211). A 25 522 0 2208

523 (323). Sociology of Law. (3). The study of law and legal institutions within their social context. Prerequisite: Soc. 211 (211). A 25 523 0 2208

525 (325). Formal Organizations. (3). Characteristics of complex organizations and factors related to their effectiveness, with emphasis on research methods and findings. Prerequisite: Soc. 211 (211). A 25 525 0 2208

526 (326). Political Sociology. (3). Social bases and consequences of political behavior; the study of power and authority; problems in the development and maintenance of viable democratic political structures; and bureaucratic organization and power. Prerequisite: Soc. 211 (211). A 25 526 0 2208

527 (327). Violence and Social Change. (3). The analysis of the causal processes and functions of extreme and violent political behavior, i.e., revolutionary, insurrectionary and protest movements. The course includes an analysis of consequences for social change. Prerequisite: Soc. 211 (211). A 25 527 0 2208

530 (330). Social Stratification. (3). An analysis of status, class and caste in various societies, especially American society. The relationship of stratification to the various social institutions is also included. Prerequisite: Soc. 211 (211). A 25 530 0 2208

531 (331). Population. (3). The size, composition, distribution and recent trends in the population of the world and the United States and the relation of population to world problems. Prerequisite: Soc. 211 (211). A 25 531-0 2208

534 (334). Urban Sociology. (3). Urban population, urban organization, urban institutions and programs of city planning. Prerequisite: Soc. 211 (211). A 25-534 0 2208

535 (335). Industrial Sociology. (3). The work group as a social group, social organization of the work plant and social factors affecting the worker. Prerequisite: Soc. 211 (211). A 25 535 0 2208

538 (338). Medical Sociology. (3). An analysis of social and cultural factors related to physical and mental illness; the dynamics of communication and role relationships among patients and medical personnel; and social research and theory relevant to the health professions. Prerequisite: Soc. 211 (211). A 25 538 0 2208

539 (339). Juvenile Delinquency. (3). The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: Soc. 211 (211).* A 25 539 0 2208

540 (340). Criminology. (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 211 (211).* A 25 540 0 2208

541 (341). Contemporary Corrections. (3). Historical and contemporary programs for the treatment of offenders, viewed as societal reactions to criminal behavior. Prerequisite: Soc. 539 (339) or 540 (340).* A 25 541 0 2208

600 (400). Selected Topics in Sociology. (3). Study in a specialized area of sociology, with emphasis on student research projects. Areas covered include deviant behavior, political sociology, the family and others. This course may be repeated for a maximum of six hours of credit. Prerequisites: Soc. 211 (211), consent of instructor and substantive area course. A 25 600 0 2208

* Prerequisite may be waived by departmental consent.
610 (410). Introduction to Scientific Method in Sociology. (3). The development of the problem, techniques of data collection, analysis and presentation. Laboratory work in the form of a completed project is required. Prerequisite: Soc. 310 (310). A 25 610 0 2208

628 (428). Social Interaction. (3). Group effects on the individual, symbolic interaction theory in sociology, with special emphasis on research and findings. Prerequisite: Soc. 211 (211). A 25 628-0 2208

645 (445). History of Sociological Theory. (3). Analysis of emergence of sociological theory. Prerequisite: eight hours of sociology. A 25 645 0 2208

646 (446). Principles and Concepts of Sociology. (3). Critical evaluation of major principles and concepts, their derivation and relationship to systematic theory. Prerequisite: eight hours of sociology. A 25 646 0 2208

651 (451). Directed Research. (3). Designed to give the student further research skills in an area of special interest. Each student is under the direction of a member of the graduate faculty who will guide him in development of research skills. Prerequisites: Soc. 610 (410) and consent of instructor. A 25 651 4 2208

670 (470). Independent Reading. (2-3). Designed for the advanced student capable of doing independent work in an area of special interest. Prerequisites: 15 hours of sociology and consent of instructor. A 25 670 3 2208

687 (477). Introduction to Urban Affairs. (3). Same as Pol. Sci. 687 (477) and Econ. 687 (477). An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 201 (221) and Soc. 211 (211), or a course in political science. A 25 687 0-2208

Graduate Courses

800 (500). 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. 610 (410) and departmental consent. A 25 800 9 2208

815 (515). Seminar on the Family. (3). Review of recent research on the family and the theoretical implication thereof. Prerequisites: Soc. 515 (315), 610 (410) and departmental consent. A 25 815 9-2208

820 (520). Seminar in Social Movements. (3). Analysis of the elements in social movements as factors in social and cultural change. Prerequisites: Soc. 610 (410), and 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 developed as part of the course. A 25 822 9 2208

825 (525). Seminar in Organizational Analysis. (3). Exploration of selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisites: Soc. 525 (325) and 610 (410), or departmental consent. A 25 825 9 2208

830 (530). Seminar in Stratification and Power Structure. (3). Analysis of the forms and dynamics of social inequality as a sociopolitical phenomenon. Class, status and power segments of contemporary urban society are examined, with reference to their spheres of influence and structural persistence and/or change. Prerequisites: Soc. 610 (410), 530 (330) and 526 (326). A 25 830 9 2208

834 (534). Seminar in Urban Sociology. (3). Independent research projects in urban sociology. Prerequisite: departmental consent. A 25 834 9 2208

* Prerequisite may be waived with departmental consent.
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 vis-à-vis the justice system, juvenile law 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. Prerequisites: Soc. 610 (410) and 539 (339). A 25-839 9 2208

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 research and outcome research. Prerequisites: Soc. 541 (341) and 610 (410). A 25-841 9 2208

Sociological Theory. (3). A course emphasizing continuities between European and American social theory. The perspective is both historical and analytical, spanning the eighteenth, nineteenth and twentieth centuries, and concluding with the works of representative contemporary theorists. Prerequisites: Soc. 610 (410) and 645 (445) or 646 (446). A 25-845 9 2208

Recent Developments in Sociology. (3). Major issues, new theories, new techniques of research, new areas of research and new applications. Prerequisites: 15 hours of sociology, including Soc. 610 (410) and departmental consent. This course may be repeated for credit but cannot exceed six hours. A 25-847 9 2208

Directed Research. (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. 610 (410), 800 (500) and consent of instructor. A 25-851 4 2208

Independent Reading. (2-3). Advanced systematic reading in a topical area under the tutorship of a member of the graduate faculty. This course may be repeated for credit not to exceed a total of six hours. Prerequisite: departmental consent. A 25-870 3 2208

Thesis. (3-3). A 25-875 4 2208; A 25-876 4 2208

Major. A student must take a minimum of 33 hours consisting of the following: Soc. (SW) 214 (214)-215 (215); 314 (314), 320 (320), 420 (420); 421 (421)-422 (422); Soc. 220 (220) and 515 (315); and Psych. 544 (444).

Minor. A student must take a minimum of 15 hours consisting of the following: Soc. (SW) 214 (214)-215 (215), 314 (314), 320 (320) and 420 (420).

Lower Division Courses

214 (214). The Social Welfare Institution. (3). Analysis of social welfare as a social institution, including the social, cultural, political and economic factors affecting policies and programs, with special emphasis on public income maintenance systems. Prerequisite: Soc. 211 (211). A 25-214 0 2208

215 (215). The Social Welfare Institution. (3). Functional approach to social welfare based on social welfare values and objectives, the helping process and relationship, with special emphasis on selected social problem areas along with community programs designed to resolve them. Prerequisite: Soc. (SW) 214 (214). A 25-215 0 2208
314 (314). The Social Work Profession. (3). The development of a theory of practice for social work by use of description and analysis of the objectives, values, roles, settings and knowledge base of the profession in the provision of services. Prerequisite: Soc. 220 (220), Psych. 111 (111) and Soc. (SW) 214 (214) - 215 (215).* Not open to students with credit in Soc. (SW) 311 (311) or Soc. (SW) 312 (312). A 25 314 0 2208

320 (320). Basic Practice Skills in Social Work. (3). An introduction to basic skills intrinsic to all social work practice, with concentration on provision of services at the level of interaction between social worker and client, emphasizing the interpersonal modes of influencing individuals and groups in their social situations. Prerequisites: Soc. (SW) 215 (215) and 314 (314). A 25 320 0 2208

420 (420). Methods of Social Work. (3). Exploration of the primary and secondary problem-solving methods in social work emphasizing casework, group work and community organization. Prerequisites: Soc. (SW) 314 (314) and 320 (320). A 25 420 0 2208

421 (421). Social Welfare Field Experience. (4). Placement in community social welfare agencies for supervised periods of observation and direct service assignments, with special emphasis on performance of basic practice skills and understanding of the social welfare agency and its role in the community service network. Prerequisite: Soc. (SW) 320 (320) or Soc. (SW) 320 (320) concurrent with Soc. (SW) 421 (421). A 25-421 2 2208

422 (422). Social Welfare Field Experience. (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 an in-depth development of techniques and skills common to practice in the social welfare field are included. Prerequisites: Soc. (SW) 320 (320), 420 (420), 421 (421) or 420 (420) concurrent with Soc. (SW) 422 (422). A 25-422 2-2208

Spanish (See Romance Languages)

Speech

Major. A minimum of 30 hours is needed, including Speech 221 (221), with a specialization in area 1, 2, 3 or 4 below.

Area 1. Public address—Speech 212 (212), 213 (213), 228 (228), 335 (335), 613 (413), 632 (432), 636 (436), 637 (437) and five to six hours to be elected with the consent of the area adviser from 612 (412), 615 (415), 661 (461), 670 (470).

Area 2. Theater—Speech 243 (243), 244 (244), 253 (253), 259 (259), 623 (423), 624 (424) plus at least nine hours of electives to be chosen with the consent of the area adviser from other theater courses. All theater majors are expected to participate in some area in the production of the University Theatre plays in consultation with the staff.

Area 3. Radio-Television—Speech 114 (114), 214 (214), 215 (215), 224 (224), 314 (314), 315 (315), 320 (320), 332 (232), 603 (403), 604 (404), 605 (405), 607 (407), 637 (437).

Area 4. General speech—Speech 212 (212), 213 (213), 143 (143) or 228 (228), 243 (243), 244 (244), 259 (259), 661 (461), 665 (465) and five hours to be elected with consent of the area adviser.

Students completing option 1 must participate in forensic activities for a minimum of two semesters prior to the senior year.
Students completing option 4, must complete three semesters of co-curricular activities with the approval of the area adviser.

Option 4 is structured primarily for those planning to teach at the secondary school level. However, a student planning to teach may also choose option 1 or 2. Students not planning to qualify for teaching may substitute courses within option 4 with departmental consent. Students planning to teach should also check the state certification requirements to make sure that they will fulfill the necessary requirements.

Broadcast-Journalism combined major. A student obtaining the combined major must take 36 hours, including: Speech 114 (114), 214 (214), 215 (215), 224 (224), 314 (314), 315 (315), 320 (320), 322 (322), 603 (403), 604 (404), 607 (407), 637 (437) and Journ. 115 (115), 226 (226), 330 (330), 360 (360).

Minor. A minimum of 15 hours selected with the approval of the speech department.

**Lower Division Courses**

111 (111). Basic Public Speaking. (3). A study of basic concepts of speech communication and listening as applied to public speaking. This course is designed for students wishing to enhance leadership potential by improvement in traditional public speaking situations. Course is not counted toward a speech major.

(The core curriculum requirement in oral communication may be fulfilled by completion of either Speech 111 (111) or Speech 112. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the speech 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 his establishment of more meaningful and satisfying interpersonal relationships through participation in group dynamics. The course is not counted toward a speech major.

(The core curriculum requirement in oral communication may be fulfilled by completion of either Speech 111 (111) or 112. For especially qualified students, an exemption or advanced standing examination is available. For further information, contact the speech department.) A 27 111 0 1506

114 (114). Broadcasting and the Citizen. (3). Organization, structure, history and social implications of the broadcasting industry. A 27 114 0 0603

143 (143). 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. This course is not counted toward a theater major. A 27 143 0 1007

201 (101, 102, 202). Debate. (1). Research for debates, participation in 30 or more full length debates per year (15 of which must be intercollegiate competition), and debate squad meetings. Pre-requisite: departmental consent. This course may be repeated for a maximum of four hours credit in Speech 201 (101, 102, 202) and/or 401 (301, 302, 402). The course is not counted toward a major. A 27 201 5 1506

When two course numbers are given at the beginning of a course description, the first number refers to the current course number, and the one in parentheses refers to the course's previous number. When only one course number appears, the course is a new course.

The following abbreviations are used in the course descriptions: R stands for lecture, and L stands for laboratory. For example: R; L arr. means lecture with laboratory arranged.

*Fairmount College* 333
212 (212). Persuasive Speaking. (2). Training in influencing human behavior in socially acceptable ways via the spoken word. A 27 212 0 1506

213 (213). Argumentation and Debate. (3). The principles of reasoned discourse and the practices of scholastic forensic for prospective secondary teachers. Prerequisite: departmental consent. A 27-213 0 1506


221 (221). Oral Interpretation. (3). The development of the mental, vocal and analytical techniques essential to the interpretation of literature. A 27 221-0 1007

223 (223). Phonetics. (2). The physical properties of speech. Also included are the formation of sounds, combination of sounds into word patterns, dialectical variety and transcribing of sounds of American English by use of the International Phonetic Alphabet. A 27 223-0 1505

224 (224). Radio and TV Production. (3). Production and direction of radio and TV programs, laboratory work at KMUW-FM. A 27 224 1 0603

226 (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 1506

228 (228). Principles of Group Discussion. (3). Development of reflective thinking, group leadership and effective group participation. A 27 228 0 1506

243 (243). 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 27-243 0 1007

244 (244). Stagecraft. (3). R; L arr. Theory and practice of making, painting and using scenery for the stage. Practical work on University Theatre productions. A 27 244 1 1007

253 (253). Costuming for the Stage. (3). R; L arr. Basic principles of costume design and construction; pattern making, material selection, wardrobe management and organization; practical experience with University Theatre and Experimental Theatre productions. A 27 253-1 1007

259 (259). Directing I. (3). R; L arr. Basic theories and principles of stage directing; problems of producing the play, with practical experience gained by use of the project methods. Prerequisite: Speech 243 (243) or departmental consent. A 27 259 1 1007

Upper Division Courses

314 (314) & 315 (315). Radio Workshop. (1 & 1). Relation of theory to application at KMUW-FM. A 27 314 5-0603 & A 27 315 5 0603

320 (320). Cinematography. (3). Theory and technique of motion picture making and use of motion picture camera, with emphasis on documentary film concepts. A 27 320 0 0603


325 (225). Business and Professional Speaking. (2). A 27 325 0 1506

332 (232). Radio-Television Writing. (3). Writing formats, commercials, continuity and drama for radio and television. A 27 332 0 0603

335 (335). Survey of Rhetorical Theory. (3). From the Greeks to the moderns. A 27 335 0 1506

343 (243). Acting II. (3). Emphasis on the internal techniques of acting, on characterization and on the actor's analysis of the play and the role. A 27-243 0 1007
matic literature. Prerequisite: departmental consent. This course may be repeated for credit to a maximum of four hours. A 27 375 2 1007

401 (301, 302, 402). Debate. (1). Research for debates, participation in 30 or more full-length debates per year (15 of which must be intercollegiate competition), and debate squad meetings. Prerequisite: departmental consent. This course may be repeated for credit to a maximum of four hours. A 27 401 5 1506

516 (316) & 517 (317). Playwriting I and II. (3 & 3). The writing of scripts for performance. Emphasis is on both verbal and visual aspects of playwriting. If possible, the scripts will be performed. Prerequisites: Eng. 324 (324) and Speech 243 (243) and 259 (259), or consent of instructor. A 27 516 0 1007 & A 27 517 0 1007

543 (343). Acting II. (3). Utilization in scenes of the method gained in Speech 243 (243), with emphasis on styles of acting and on comedy technique. Prerequisite: Speech 243 (243). A 27 543 0 1007

544 (344). Advanced Stagecraft. (3). R; L arr. Theory and practice of translating set designs and drawings to the physical stage and practical experience with University Theatre productions. Prerequisite: Speech 244 (244) with a grade of C or better. A 27 544 0 1007

559 (359). Directing II. (3). R; L arr. Staging and rehearsal techniques, with emphasis on the problems of the period and stylized play. Prerequisite: Speech 259 (259) or departmental consent. A 27-559 0 1007

603 (603) & 604 (404). Television Workshop. (2 & 2). R; L arr. The theories, tools and techniques of television production. Studio work as a member of a TV production crew is included. A 27-603 2 0603 & A 27 604 2 0603

605 (405). Radio and TV Station Management. (3). The organization and management of radio and television station, including administrative, programming, technical and sales problems and physical facilities. Prerequisite: departmental consent. A 27 605 0 0603

607 (407). 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

612 (412). Contemporary Theories of Oral Communication. (3). Conceptual models useful in the scientific study of speech and application from selected areas of psychology, sociology, anthropology and other related fields. A 27-612 0 1506

613 (413). Advanced Theories of Argumentation. (3). Intensive examination of the principles and problems of reasoned discourse. A 27 613 0 1506

615 (415). Language and Symbolic Processes. (3). Application of the theoretical framework of general semantics, linguistics and psycholinguistics to the analysis of oral language behavior. Analysis of language usage that leads to conflict, confusion and misdirection and development of methods of accuracy and precision in language usage. A 27 615-0 1506

621 (421). Advanced Oral Interpretation. (3). Intensive study and analysis of various forms of literature, the techniques of effective oral communication and the building of the individual or group concert recital. Prerequisite: Speech 221 (221). A 27 621 0 1007

623 (423). Development of the Theater I. (3). The history of theatrical activity as a social institution and an art form, from the beginning to the seventeenth century. Representative plays, methods of staging and theatrical architecture of various periods are included. A 27 623-0 1007

624 (424). Development of the Theater II. (3). From the seventeenth century to the present. A 27 624 0 1007

Fairmont College 335
625 (425). Dramatic Theory. (3). Critical examination of selected aesthetic theories of the theatrical arts and the relationship of the theories to major dramatic works and theatrical periods. Prerequisite: Speech 623 (423) or 624 (424), or departmental consent. A 27 625 0 1007

632 (432). American Public Address. (3). A detailed study of notable American speakers and their public utterances. Their impact on the political, economic and social history of this nation from colonial times to the present is assessed. A 27 632 0 1506

636 (436). Advanced Public Speaking. (3). Theory and practice in the various forms of platform speaking for the academically mature student. The course includes such special forms as the after-dinner speech, speeches of goodwill, tribute, keynote and courtesy. Prerequisite: Speech 212 (212) or departmental consent. A 27 636 0 1506

637 (437). Theory of Mass Persuasion. (2). An analysis of the techniques used in the mass media, with special emphasis on the use of spoken language. A 27 637 0 1506

644 (444). Scene Design. (3). R; L arr. Fundamentals of scene design. Practical work on University Theatre productions is included. Prerequisites: Speech 244 (244) with a grade of C or better and IE 250 (250), Topics in Graphic Engineering, or departmental consent. A 27 644 1 1007

645 (445). Stage Lighting. (3). R; L arr. Lighting equipment; light design and its relation to scenery design. Emphasis is upon the problems in high school, college, church, etc. Practical work on University Theatre productions is included. Prerequisite: Speech 244 (244) with a grade of C or better. A 27 645-1 1007

653 (453). History of Costume. (3). R; L arr. Historical survey and individual research of dress from ancient Egypt to present day. Theory and practice of adapting period styles to the stage. Practical experience on University and Experimental Theatre productions. Prerequisite: Speech 253 (253) or departmental consent. A 27 653 0 1007

661 (461). Directing the Forensics Program. (2). A study of the problems and techniques of administering secondary school and college forensics activities. A 27 661 0 1599

665 (465). Communication Disorders. (3). Same as Logo. 705 (421). Problems of the speech defective relative to emotional handicaps, pedagogical retardation, etc. Methods for classroom teacher. A 27 665 0 1220

670 (470). The Audience. (3). Analyses of speech audiences, including those of radio, television, public address and theater. Demographic and psychosocial dimensions and characteristics and quantitative and qualitative techniques of audience measurement and evaluations thereof are included. A 27 670 0 1599

672 (472). 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 670 (470) or departmental consent. A 27 672 2 1599

674. Concepts in Communication for Teaching. (3). Principles and techniques of effective communication in the classroom. Emphasis is placed upon basic themes of interpersonal communication. The course is designed to give students practical experience in utilizing these themes. A 27 674 0 1599

675 (475). Directed Study. (2-4). Individual study or projects. Prerequisite: departmental consent. This course may be repeated for credit with departmental consent. A 27 675 3 1599
Graduate Courses

750 (450). Workshops in Speech. (2-4). See Sec. Ed. 750 (450), in College of Education section. A 27 750 2 1599

800 (500). Introduction to Graduate Study in Speech. (3). Major emphasis is placed upon the principles of research, bibliographical data and historical, descriptive and experimental research methods useful in speech, broadcasting and drama. This course should be taken at the beginning of the graduate program. A 27 800 0 1599

803 (503). Educational and Instructional Broadcasting. (3). Investigation of the methods of producing and using educational and in-school instructional radio and television programs. A 27 803 0 0603

806 (506). Regulation and Responsibility in Broadcasting. (3). Government and broadcasting relations and review of basic radio and television law, with emphasis on responsibilities of broadcast licensee. A 27 806 0 0603

820 (520). Investigation and Conference. (2-3, 2-3). Directed research and experimentation for graduate students in some phase of (a) public address, (b) theater history and production, (c) radio-television or (d) the teaching of speech. This course may be repeated for credit up to a total of six hours. A 27 820 3 1599

823 (523). History of Dramatic Criticism. (3). A survey and analysis of major critical theories from Aristotle to the present. A 27 823 0 1007

824 (524). Development of Modern Theater Styles. (3). An examination of the major movements in the modern theater since 1850. Emphasis is on both literary and physical elements of styles. A 27-824 0 1007

830 (530). Theories of Rhetoric: Classical. (3). 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 27 830 0 1506

831 (531). Theories of Rhetoric: Medieval, Renaissance, and Modern. (3). 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, Steale, Rush, John Quincy Adams, Blair, Campbell and Whately. A 27 831 0 1506


860 (560). Seminars in Speech. (2-3). Special seminars designed to treat problems in: (a) public address, (b) drama, (c) radio-television or (d) speech education. This course may be repeated for credit. A 27 860 9 1599

867 (567). Trends in Speech Education. (3). To provide advanced speech students with a background for a philosophy of speech education. Readings and seminar discussions 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 a comparative study of speech curricula today and projectives to the future. A 27 867 0 1599
UNIVERSITY FACULTY 1972-1973

(Date or dates following title refer to time of initial and successive appointments to the faculty with rank of assistant instructor or higher.)

Ackerman, Paul D., Assistant Professor of Psychology (1968). BA, University of Kansas, 1964; MA, ibid., 1966; PhD, ibid., 1968.


Ahlberg, Clark D., President and University Professor (1968). BA, Wichita State University, 1939; MA, Syracuse University, 1942; PhD, ibid., 1951; LLD, ibid., 1969.

Alexander, David, Assistant Professor of Physics (1971). BS, Kansas State University, 1967; AM, Indiana University, 1968; PhD, ibid., 1971.


Alic, John A., Assistant Professor of Mechanical Engineering (1972). BME, Cornell University, 1964; MS, Stanford University, 1965; PhD, University of Maryland, 1972.

Allegrucci, Robert L., Assistant Professor of Sociology (1967). BS, Kansas State College of Pittsburg, 1959; MA, ibid., 1960; PhD, University of Missouri, 1969.

Allen, Anneke S., Associate Professor of Chemistry (1964). Candidate Ryksuniversiteit Groningen Netherlands, 1952; PhD, Tulane University, 1955.

Alley, Robert D., Associate Professor and Chairman of Department of Secondary Education (1967). BS, Iowa State University, 1957; ME, University of Montana, 1960; EdD, Arizona State University, 1967.

Anderson, Robert E., Professor of Educational Administration (1967). BA, University of Iowa, 1952; MA, ibid., 1953; EdD, University of Nebraska, 1963.

Arteaga, Lucio, Professor of Mathematics (1968). BA, University of Zaragoza, Spain, 1942; MS, Dalhousie University, 1959; PhD, University of Saskatchewan, 1964.


Bair, Sue F., Assistant Professor of Physical Education (1966). BA, Wichita State University, 1961; ME, ibid., 1967.

Bajaj, Prem N., Associate Professor of Mathematics (1968). BA, Punjab University, 1951; MA, ibid., 1954; MS, Case Western Reserve University, 1967; PhD, ibid., 1968.


Baker, Jess, Assistant Instructor in Sociology and Administrative Assistant to the Vice President for Student Affairs (1971). BA, Kansas State University, 1968.

Ballenger, Marcus T., Assistant Professor of Elementary Education and Director of Early Childhood Education Project (1970). BS in Ed, North Texas State University, 1960; MEd, Texas Tech University, 1963; EdD, ibid., 1970.
Bartel, Peter S., Assistant Professor of Physics (1965). AB, Bethel College, 1943; MA, University of Iowa, 1953. (Leave of absence, spring semester, 1972-1973.)

Bartkowski, (Gray), Lillian, Instructor in Composition (1972). BA, Marquette University, 1960; MA, University of Detroit, 1967.

Bartz, James R., Assistant Professor and Chairman of the Department of Art Education (1970). BS, Ohio State University, 1964; MA, ibid., 1970.

Bass, Ronald E., Assistant Professor of Industrial Education (1971). BS, Eastern New Mexico University, 1965; MEd, ibid., 1968; EdD, East Texas State University, 1971.

Bateman, Morita M., Associate Professor of Administration (1966). BSME, University of South Carolina, 1946; MS, University of North Carolina, 1950; PhD, Oklahoma State University, 1967.


Beason, George Marion, Instructor in Administration (1973). BBA, Wichita State University, 1971; MS, ibid., 1972.

Bender, D. Wayne, Associate Professor of Industrial Education (1962). BA, Wichita State University, 1958; MS, Kansas State College of Pittsburg, 1962; EdD, University of Illinois, 1969.

Bellet, John A., Assistant Professor of Administration (1971). BA, University of Southern California, 1966; PhD, Texas Tech University, 1971.


Benningfield, Lloyd M., Professor of Electrical Engineering and Acting Dean for Graduate Studies and Research (1967). BSEE, Oklahoma State University, 1951; MSEE, University of Missouri, 1957; PhD, Purdue University, 1965.

Berg, J. R., Professor of Geology (1946). BA, Augustana College, 1938; MS, University of Iowa, 1940; PhD, ibid., 1942.

Berman, Steven M., Instructor in Studio Arts (1972). BFA, Kansas City Art Institute, 1969; MFA, School of the Art Institute of Chicago, 1972.

Bernard, David E., Professor of Printmaking and Chairman of Department of Studio Arts (1949). BFA, University of Illinois, 1939; MFA, University of Iowa, 1949.

Bernhart, Walter D., Professor of Aeronautical Engineering (1954, 1964). BSCE, Kansas State University, 1950; MS, Wichita State University, 1959; PhD, Oklahoma State University, 1964.

Besser, Milton, Associate Professor of Journalism (1971). BA, University of Colorado, 1933.


Billings, Dorothy, Assistant Professor of Anthropology (1968). BA, University of Wisconsin, 1955; PhD, University of Sydney, 1972.

Bish, John T., Assistant Professor of Biology (1963). BS, Wichita State University, 1962; MS, ibid., 1965.
Blake, Leslie M., Professor and Chairman of Department of Speech (1940). BS, Kansas State University, 1937; MS, ibid., 1939.

Blake, Rufus W., Jr., Assistant Instructor in Sociology, Administrative Assistant to the Vice President for Student Affairs, and Director, Project TOGETHER (1968). BA, Wichita State University, 1966.

Blythe, Jack G., Professor of Geology (1949). BA, Wichita State University, 1947; MS, Northwestern University, 1950; PhD, University of Oklahoma, 1957.


Bontrager, Ralph L., Professor of Educational Administration (1966). BS, University of Kansas, 1951; MEd, ibid., 1952; EdD, ibid., 1965.

Born, John D., Jr., Associate Professor of History and Assistant Dean of the Graduate School (1965). BA, University of Texas, 1952; MA, University of Houston, 1958; PhD, University of New Mexico, 1963.

Borresen, C. Robert, Assistant Professor of Psychology (1965). BS, Northwestern University, 1954; AM, University of Missouri, 1959; PhD, ibid., 1968.


Boyd, John David, Assistant Professor of Studio Arts (1972). BA, California State College at Long Beach, 1968; MFA, Cranbrook Academy of Art, 1971.


Bradley, Phillip L., Assistant Professor of Health Education and Supervising Dentist of the School of Dental Hygiene (1972). BA, Southwestern College, 1957; DDS, University of Missouri at Kansas City, 1960.


Brady, Stephen W., Assistant Professor of Mathematics (1967). AB, Indiana University, 1963; AM, ibid., 1965; PhD, ibid., 1968.

Brandhorst, Armin L., Assistant Professor of Engineering and Director of Physical Plant (1964). BSME, Kansas State University, 1959, MSME, Oklahoma State University, 1964.

Breazale, John B., Professor of Physics, Vice President for Academic Affairs and Dean of Faculties (1959). BS, Millsaps College, 1947; MS, University of Alabama, 1951; PhD, University of Virginia, 1955.

Bredhoff, Theodore C., Associate Professor of Physical Education and Director of Athletics (1972). BS, Cornell College, 1954; MS, University of Washington, 1959.

Brewer, Donald D., Assistant Professor of Administration (1966, 1970). BS in CE, Kansas State University, 1964; MS, Wichita State University, 1966.

Brewer, Jeneva J., Associate Professor of Mathematics (1949). BA, Wichita State University, 1946; MA, ibid., 1949.

Brinkman, Sidney E., Assistant Professor of Accounting (1958, 1965). BA, Wichita State University, 1956; MS, ibid., 1966; CPA Certificate, Kansas.

Britton, Clark V., Jr., Associate Professor of Printmaking and Chairman of Department of Graphic Design (1957). BAA, Auburn University, 1952; MAA, ibid., 1955.


Bubieniec, Ernest Julian, Professor of Biology (1961). AB, Harvard University, 1949; MS, University of Wisconsin, 1952; PhD, ibid., 1957.

Buess, Charles M., Professor of Chemistry (1961). BA, Ohio State University, 1942; MS, Case Western Reserve University, 1946; PhD, University of Southern California, 1949.


Burk, Kenneth W., Professor of Logopedics (1971). BA, University of Iowa, 1953; MA, University of Kentucky, 1955; PhD, Purdue University, 1962.

Burnett, Darrell Jack, Instructor in Administration and Assistant Director of Planning (1967). BSBA, Wichita State University, 1957; MS, ibid., 1967.


Camin, Kathleen Q., Associate Professor of Economics (1965). AB, Smith College, 1957; PhD, University of Missouri, 1969.

Campbell, James H., Associate Professor of Administration (1964). BA, Miami University, 1956; PhD, Michigan State University, 1967.

Campbell, Betty J., Instructor in Health Education, Assistant Project Director of South Central Health Education Center and Director of Program Evaluation (1973). BA, Wichita State University, 1968; MS, ibid., 1972.


Carraway, Edward E., Assistant Professor, Library and Head of Circulation Department (1967). AB, East Carolina University, 1961; MLS, University of Oklahoma, 1967.

Carson, Doris M., Assistant Professor and Head of Cataloging Department (1957). BA, Kansas Wesleyan University, 1933; MA, University of Kansas, 1941; MS, University of Illinois, 1954.


Carter Virgil L., Assistant Professor of Industrial Education (1972). BSE, Northeastern State College, 1952; MT, ibid., 1957; EdD, University of Arkansas, 1972.

Cates Mary E., Assistant Professor of Nursing (1972). BSN, University of Colorado, 1962; MN, Emory University, 1966.

Cathers, Robert E., Assistant Professor of Chemistry (1965). BS, Wichita State University, 1961; MS, ibid., 1963; PhD, Texas Tech University, 1966.

Cavarozzi, Joyce Pennington, Assistant Professor of Speech and Drama (1965). BS in Ed, Ohio University, 1953; MA, Ohio State University, 1963.

Cesar, James J., Professor of Violin (1949). BM, Cleveland Institute of Music, 1940; BS, Case Western Reserve University, 1947; MA, ibid., 1949.

Chaffee, Leonard M., Professor of Education and Dean of the College of Education (1967). BA, Hiram College, 1951; MEd, Kent State University, 1952; PhD, Ohio State University, 1961.


Chard, Frederick H., Clinical Associate in the College of Health Related Professions (1973). BA, University of Wisconsin, 1937; MD, ibid., 1939.

Chesnut, Terry, Assistant Instructor and Director of the University Preschool Program (1972). AB, Washburn University, 1956.


Cho, Dong Woo, Assistant Professor of Economics (1972). BA, Seoul National University, Seoul, Korea, 1965; MA, Wayne State University, 1969.

Chopra, Dharam Vir, Associate Professor of Mathematics (1967). BA, Punjab University, India, 1950; MA, ibid., 1953; MS, University of Michigan, 1961; AM, ibid., 1963; PhD, University of Nebraska, 1968.


Christenson, Donald D., Professor of Administration and Associate Dean of the College of Business Administration (1958). BS, Wichita State University, 1955; MS, University of Illinois, 1958; PhD, ibid., 1962.
Christian, Robert V., Jr., Professor of Chemistry (1946). BS, Wichita State University, 1940; PhD, Iowa State University, 1946.

Chung, Kae H., Professor of Administration (1970). BA, Seoul National University, Seoul, Korea, 1959; MBA, Louisiana State University, 1965; PhD, ibid., 1968.

Ciboski, Kenneth N., Assistant Professor of Political Science (1968). BA, University of Kansas, 1961; MA, ibid., 1965; PhD, University of Washington, 1971.


Cochran, Alma Laura, Assistant Professor of Health Education and Project Director of the Nurse Clinician Program (1973). RN, Wesley School of Nursing, 1956; BA, Southwestern College, 1968; MEd, Wichita State University, 1972.

Cochran, Corydon E., Assistant Professor of Educational Psychology (1969). BA, University of Oklahoma, 1954; MEd, ibid., 1959; EdD, Oklahoma State University, 1969.

Cole, Thomas, Clinical Associate in Dental Hygiene (1972). DDS, Saint Louis University, 1945.

Collins, George W., Associate Professor of History (1968). BS, Northwestern University, 1948; MA, ibid., 1950; PhD, University of Colorado, 1965.

Collins, Janet R., Assistant Professor of Educational Psychology (1969). AB, University of Cincinnati, 1941; MA, Washington University, 1962.

Collins, Marilyn P., Assistant Professor of Nursing (1970). BSN, University of Kansas, 1966; MN, Emory University, 1969.

Collison, Brooke B., Assistant Professor of Student Personnel and Guidance (1969). BS, University of Kansas, 1956; MEd, ibid., 1962; PhD, University of Missouri, 1969.


Comstock, George A., Professor of Education and Director of Counseling Services (1953). BA, University of Colorado, 1935; MA, ibid., 1940; EdD, ibid., 1948.

Cook, Everett L., Associate Professor of Aeronautical Engineering (1953, 1969). BSAE, Wichita State University, 1954; MSAE, ibid., 1958; PhD, Oklahoma State University, 1967.

Cook, Sandra L., Instructor in Administration (1968). BBA, Wichita State University, 1966; MS, ibid., 1968. (Leave of absence, fall semester, 1972-1973.)

Corbett, Don, Assistant Professor of Music Education (1971). BME, Wichita State University, 1953; MME, ibid., 1959.

Corbin, Harry F., University Professor (1946). AB, Wichita State University, 1940; BD, University of Chicago, 1943; LLB, University of Kansas, 1949; PhD, University of Chicago, 1972. (Leave of absence, fall semester 1972-1973.)

Cowles, Josephine M., Associate Professor, Library (1947). ScB, Ottawa University, 1928; BS in LS, University of Illinois, 1936; MS, ibid., 1949.


Craig, Bruce W., Assistant Professor of Biology (1972). BS, Northern Arizona University, 1967; MS, ibid., 1969; PhD, Iowa State University, 1972.


Cress, Allan M., Professor and Chairman of Department of German (1953). AB, University of Illinois, 1942; MA, ibid., 1948; PhD, ibid., 1952.

Crockett, Helen M., Assistant Professor and Director of Continuing Education (1961). AB, Wichita State University, 1951; MA, ibid., 1955.

Crooks, C. Gary, Assistant Instructor in Minority Studies and Administrative Assistant to the Chairman of the Department of Minority Studies (1972). BS, Southwestern College, 1965; ME, Wichita State University, 1971.

Crowns, Gary D., Associate Professor of Mathematics (1962, 1968). BA, Wichita State University, 1960; MS, ibid., 1962; PhD, University of New Mexico, 1968.

Crooks, Arthur J., Jr., Professor and Chairman of Department of Administration of Justice (1971). BS, Wisconsin State University at Stevens Point, 1947; JD, University of Wisconsin, 1950; MSSW, ibid., 1958; PhD, Florida State University, 1965.

Curtin, Mary Jo, Instructor in Dental Hygiene (1973). RDH, University of Missouri at Kansas City, 1968.


Cutler, R. Bruce, Professor of English (1960). BA, University of Iowa, 1951; MS, Kansas State University, 1957.

Daniels, Virginia M., Instructor and Counselor and Assistant to the Dean of University College (1971). BA, Northwestern University, 1947; MEd, Wichita State University, 1967.

Darling, John R., Professor of Administration (1971). BS, University of Alabama, 1959; MS, ibid., 1960; PhD, University of Illinois, 1967.


Davison, Ronald G., Assistant Professor of Educational Administration and Director of Title IV Grant (1969). BA, State University of New York at Buffalo, 1959; EdM, ibid., 1964; EdD, ibid., 1969.
Decker, Jay C., Associate Professor of Music and Director of Orchestras (1971). BMEd, Wichita State University, 1956; MS in MusEd, University of Illinois, 1962; DMA, University of Missouri at Kansas City, 1971.


DeFatta, Joseph A., Assistant Professor of Accounting (1970). BS, Centenary College, 1966; MS, Louisiana State University, 1967; PhD, ibid., 1970.


Denton, Densil Ray, Jr., Assistant Instructor in Psychology and Administrative Assistant to the Director of Research and Sponsored Programs (1968). BA, Wichita State University, 1963.

DeVun, Esmond E., Jr., Associate Professor of Mathematics (1969). BS, Louisiana State University at New Orleans, 1963; MS, Louisiana State University at Baton Rouge, 1966; PhD, University of Massachusetts, 1969.

Dey, Glen R., Professor of Student Personnel and Guidance (1967). BS in Ed, University of Nebraska, 1954; MEd, ibid., 1959; EdD, ibid., 1961.


Dille, Burch M., Assistant Professor of Elementary Education (1970). BA, Howard Payne College, 1940; ME, University of Texas at El Paso, 1959; EdD, New Mexico State University, 1971.

Distler, Donald A., Associate Professor of Biology (1963). BA, University of Louisville, 1952; MS, ibid., 1958; PhD, University of Kansas, 1966.


Doig, J. Robert, Jr., Assistant Professor of Aeronautical Engineering (1963). BS, Physics, Union College, 1938; MS, Pennsylvania State University, 1940.


Douglas, Donald M., Assistant Professor of History (1965). BA, Kansas State University, 1961; MA, ibid., 1963; PhD, University of Kansas, 1968.

Douglas, J. Rex, Associate Professor of Educational Administration and Supervision and Director of Project '76 (1969). BBA, University of Texas, 1947; MA, Western State College, 1961; EdD, Texas Tech University, 1967.


Dralle, Lewis A., Professor of History (1963). AB, University of Chicago, 1939; MA, University of California at Los Angeles, 1948; PhD, ibid., 1952.

Dreifort, John E., Assistant Professor of History (1970). BS, Bowling Green State University, 1965; MA, ibid., 1966; PhD, Kent State University, 1970.

Drum, Dale S., Assistant Professor of Economics (1969). BS, Bradley University, 1964; MA, University of Nebraska, 1966; PhD, ibid., 1972.
Duell, Dennis C., Associate Professor of Economics (1967). BS, Kansas State University, 1961; MS, ibid., 1963; PhD, University of Illinois, 1969.

Duell, Orpha K., Associate Professor of Educational Psychology (1967). BS, Kansas State University, 1963; MS, University of Illinois, 1965; PhD, ibid., 1967.


Dunn, Colon H., Professor of Electrical Engineering (1959). BS, John Brown University, 1942; MEE, Rensselaer Polytechnic Institute, 1953.

Dunnine, Wayne W., Assistant Professor of Chemistry and Assistant Professor of Administration of Justice (1961). BS, Iowa State University, 1952; MS, ibid., 1959; PhD, ibid., 1964.

Duram, James C., Associate Professor of History (1968). BA, Western Michigan University, 1961; MA, ibid., 1963; PhD, Wayne State University, 1968.

Dybdahl, Russell E., Assistant Professor, Library (1956). BA, Union College, 1937; MA, University of South Dakota, 1947.


Eichler, Victor B., Assistant Professor of Biology (1971). BS, University of Illinois, 1963; MS, ibid., 1964; PhD, University of Iowa, 1969.

Elcrat, Alan R., Associate Professor of Mathematics (1967). BS, University of New Mexico, 1963; MA, Indiana University, 1965; PhD, ibid., 1967.


Ellis, Howard E., Professor of Music Education and Assistant Dean of the College of Fine Arts (1955). AB, Albion College, 1942; MM, University of Michigan, 1947; PhD, ibid., 1957.


Erickson, James, Associate Professor of English (1964). BA, University of Minnesota, 1955; MA, ibid., 1957; PhD, ibid., 1961.


Eversman, Walter, Associate Professor of Aeronautical Engineering (1964). BSAE, Purdue University, 1959; MS, Engineering Mechanics, Stanford University, 1961; PhD, ibid., 1964. (Leave of absence, fall semester, 1972-1973.)


Faires, Wesley L., Assistant Professor of Logopedics (1965). BA, Wichita State University, 1958; MA, ibid., 1962; PhD, ibid., 1965.

Farnsworth, David N., Professor of Political Science (1956). BA, Wichita State University, 1953; AM, University of Illinois, 1955; PhD, ibid., 1959.


Fife, Natasha Matson, Assistant Professor of Physical Education (1959). BS, Texas Woman's University, 1958; ME, Wichita State University, 1967.


Finn, Jane A., Assistant Professor and Counselor in Student Services (1972). BA, Barat College, 1964; MA, University of Kansas, 1967; PhD, ibid., 1971.


Fisher, Glenn W., Regents' Professor of Urban Affairs (1970). BA, University of Iowa, 1948; MA, University of North Carolina, 1950; PhD, University of Wisconsin, 1954.


Fleischhauer, Catherine A., Assistant Professor of Nursing (1972). BSNE, St. John's University, Jamaica, New York, 1950; MS, ibid., 1954.


Foster, Donald L., Assistant Professor of Physics (1966). BA, Reed College, 1957; PhD, University of Kansas, 1968.

Foster, Mary Sue, Assistant Professor of Art Education (1966). BSE, University of Kansas, 1961; MSE, ibid., 1963; MFA, ibid., 1971.

Founds, Jean, Assistant Instructor in Journalism and Supervising Auditor for the Publications Board (1970).

Fremont, Theodore S., Assistant Professor of Educational Psychology (1970). BA, Nebraska Wesleyan University, 1965; MS, Fort Hays Kansas State College, 1966; EdD, Oklahoma State University, 1970.

French, Thomas C., Assistant Professor of Mathematics (1965). BS, Wichita State University, 1962; MS, Colorado State University, 1964.

Friesen, Walter S., Associate Professor of Student Personnel and Guidance and Dean of University College (1969). AB, Tabor College, 1953; MS, Kansas State Teachers College, 1957; EdD, University of Northern Colorado, 1963.

Frisbie, David A., Assistant Professor of Educational Psychology (1971). BS, Wisconsin State University, 1966; MA, Michigan State University, 1969; PhD, ibid., 1971.

Froning, Dorothy Gardner, Professor of Spanish (1947). AB, Park College, 1936; MA, University of Alabama, 1947; PhD, University of California at Los Angeles, 1961. (Leave of absence, fall semester, 1972-1973.)

Fugate, Josephine B., Professor of Mathematics (1955). AB, University of Kansas, 1924; MA, ibid., 1929.


Gane, Elizabeth Mae, Assistant Professor, Director, The International Program, and Fulbright Adviser (1960). AB, Randolph-Macon Woman's College, 1937; MA, Syracuse University, 1959.


Gemma, James L., Assistant Professor of Mathematics (1971). BS, University of Detroit, 1962; MS, Ohio State University, 1965; PhD, ibid., 1970.

Gerhard, Armin, Instructor in German (1968). BA, University of Texas, 1966; MA, ibid., 1968.

Gerlach, E. Hugh, Jr., Adjunct Assistant Professor of Biology (1969). BS, University of Kentucky, 1953; PhD, ibid., 1967.

Gerling, Amy C., Professor of Sociology (1947). BA, University of Wisconsin, 1931; MA, ibid., 1933; PhD, Cornell University, 1939.

Gibson, George H., Assistant Professor of Opera Theater and Voice (1967). BM, University of Miami, 1956; MM, University of Texas, 1959; DMA, University of Southern California, 1971.

Givner, David, Assistant Professor of Health Education in the Physician's Assistant Program (1973). The Johns Hopkins University, 1925; MD, University of Maryland School of Medicine, 1929.

Gleason, Kenneth C., Professor and Chairman of Department of Educational Administration (1965). AB, Wichita State University, 1950; MA, Columbia University, 1952; EdD, ibid., 1964.

Goering, Robert C., Clinical Associate in Medical Technology (1972). AB, Bethel College, 1948; MD, Escuela Nacional de Medicina, Universidad Nacional Autonome Mexico Ciudad Universitario Mexico, 1951.

Gohn, Lyle, Assistant Professor and Associate Dean of Students (1967). BS, Purdue University, 1962; MS, ibid., 1964; PhD, ibid., 1967.

Goodpasture, Carter, Adjunct Associate Professor of Health Education (1970). BS, Princeton University, 1932; MD, University of Chicago, 1936.

Cosman, Albert L., Professor of Mechanical Engineering and Associate Dean of the College of Engineering (1967). BSME, University of Michigan, 1950; MSME, University of Colorado, 1955; PhD, University of Iowa, 1963.

Gotterbarn, Donald W., Assistant Professor of Philosophy (1971). BA, Hofstra University, 1964; BD, Colgate-Rochester Divinity School, 1967; MA, University of Rochester, 1970; PhD, ibid., 1971.

Goudie, Andrea, Assistant Professor of English (1968). BA, University of Minnesota, 1962; MA, Indiana University, 1963; PhD, ibid., 1969.

Could, Loyal N., Professor and Chairman of Department of Journalism (1970). BA, Florida State University, 1951; MA, University of North Carolina, 1954; PhD, ibid., 1955.

Graham, Archie Richard, Associate Professor of Mechanical Engineering (1965). BSME, Kansas State University, 1957; MS, ibid., 1960; PhD, University of Iowa, 1966.

Graham, Gerald H., Professor and Chairman of Department of Administration (1967). BS, Northwestern State College, 1959; MSBA, ibid., 1960; PhD, Louisiana State University, 1968.

Graham, J. Keith, Professor and Chairman of Department of Logopedics (1966). BS, Wayne State University, 1948; MA, ibid., 1951, PhD, Northwestern University, 1964.


Gray, H. Tom, Adjunct Clinical Associate in the College of Health Related Professions (1973). MD, University of Arkansas, 1944.

Gray, James, Associate Professor of History (1963). AB, University of California at Los Angeles, 1954; PhD, ibid., 1966. (Leave of absence, fall semester, 1972-1973.)


Green, Jess D., Clinical Associate in Medical Technology (1972). AB, University of Missouri at Kansas City, 1944; MD, George Washington University, 1950.

Green, Mary, Assistant Professor of Physical Education (1971). BA, West Texas State University, 1957; MEd, ibid., 1959; EdD, University of Northern Colorado, 1972.

Greenberg, Gary, Assistant Professor of Psychology (1966, 1970). BS, Brooklyn College, 1962; MA, Wichita State University, 1964; PhD, Kansas State University, 1970.

Gregg, Alvin, Assistant Professor of English (1968). BA, Texas Tech University, 1956; MA, ibid., 1957; PhD, University of Texas, 1969.

Grewal, Mahesh S., Associate Professor of Mechanical Engineering (1969). BSc, University of Allahabad, India, 1953; BS, University of California, 1957; MS, ibid., 1959; PhD, ibid., 1962.

Gries, John C., Assistant Professor of Geology (1971). BS, University of Wyoming, 1962; MS, ibid., 1965; PhD, University of Texas, 1970.

Griffith, Kathryn, Professor of Political Science (1957). AB, Wichita State University, 1947; MPA, Syracuse University, 1954; PhD, University of Chicago, 1967.

Grow, Lynn Merle, Assistant Professor of English (1972). BA, University of Southern California, 1967; MA, ibid., 1968; PhD, ibid., 1971; MA (Phil.), 1972.

Gundersen, James N., Professor and Chairman of Department of Geology (1970). BS, University of Wisconsin, 1949; MA, University of California at Los Angeles, 1955; PhD, University of Minnesota, 1958.


Gythiel, Anthony P., Assistant Professor of English (1971). Diplôme d'Humanités, St. Stanislas, Poperinge, Belgium, 1950; BPh, Maison de Philosophie, Brussels, Belgium, 1953; MA in Theology, Theologicum Université de Louvain, 1956; MA, University of Detroit, 1966; PhD, ibid., 1971.


Halstead, Helen L., Assistant Professor of Nursing (1970). BSN, University of Kansas, 1955; MEd, University of Minnesota, 1959.

Hammond, Geraldine, Professor of English (1932). AB, Wichita State University, 1931; MA, University of Kansas, 1932; PhD, University of Colorado, 1944.

Hannon, Floyd B., Adjunct Professor of Administration of Justice (1972).

Hansan, John, Associate Professor of Physical Education (1964). BS, University of Kansas, 1962; MS, ibid., 1963; EdD, University of Oregon, 1969.


Harder, Marvin A., Professor of Political Science (1947). AB, Wichita State University, 1947; AM, Columbia University, 1949; PhD, ibid., 1959.

Hardy, James Lynn, Professor and Chairman of Department of Music Education (1965). BS in Ed, Southwest Missouri State College, 1948; MME, University of Kansas, 1956; EdD, ibid., 1969.

Harnsberger, John L., Professor and Chairman of Department of History (1962). BA, Hamline University, 1948; MA, University of Minnesota, 1950; PhD, ibid., 1956.


Hart, Charles William Merton, Visiting Professor of Anthropology (1971). BA, University of Sydney, Australia, 1927; MA ibid., 1929.

Hart, Dillis L., Adjunct Professor and Chairman of Department of Inhalation Therapy (1972). BS, Central State University, 1961; MD, University of Oklahoma, 1964.

Hartman, John J., Professor and Chairman of Department of Sociology (1968). BS, Southwest Missouri State College, 1961; MS, University of Missouri, 1963; PhD, ibid., 1966.
Hay, Bryan S., Assistant Professor of English (1965). BS, University of Rochester, 1958; PhD, ibid., 1969.

Haydon, Randall B., Distinguished Professor of Money and Banking in Department of Economics (1970). BBA, University of Massachusetts, 1954; MBA, ibid., 1958; PhD, University of Illinois, 1962.


Hecht, Sabrina M., Assistant Professor of Mathematics (1950). AB, Kansas State College of Pittsburg, 1939; MS, University of Michigan, 1945.


Heilmann, Charles, Assistant Professor of Sociology and Assistant Professor of Administration of Justice (1965). BA, Washburn University, 1936; JD, ibid., 1939; MA, Wichita State University, 1964.


Henningsen, Rodney J., Associate Professor of Administration of Justice (1971). BA, Augustana College, 1962; MA, University of Nebraska, 1966; PhD, ibid., 1971.

Herman, David T., Professor and Chairman of Department of Psychology (1949). AB, Indiana University, 1940; MA, ibid., 1942; PhD, ibid., 1947.


Hinshaw, Alfred H., Associate Professor of Health Education and Medical Director of the Physician's Assistant Program (1972). BS, University of Kansas, 1931; MD, ibid., 1933.

Ho, James C., Associate Professor of Physics (1971). BS, National Taiwan University, 1959; MS, University of California, Berkeley, 1963; PhD, ibid., 1966.

Hoag, Gerald B., Associate Professor of English (1967). AB, Loyola University (New Orleans), 1951; MA, Tulane University, 1955; PhD, ibid., 1963.


Hogan, Linda, Clinical Associate in Medical Technology (1972). BA, Kansas State Teachers College, 1965; MT (ASCP), 1965.

Holman, Carol Schowalter, Assistant Professor of Education and Associate Director of Audiovisual Services (1942). BME, Wichita State University, 1935; MME, ibid., 1950.

Holmer, Robert M., Professor and Chairman of Department of Physical Education, Health and Recreation (1955). BS, University of Kansas, 1941; MS, ibid., 1948; PhD, University of Iowa, 1954.

Holmes, Lowell D., Professor of Anthropology (1959). BS, Northwestern University, 1950; PhD, ibid., 1957.

Homburger, Richard H., Professor of Accounting (1956). JD, University of Zurich, 1937; MS, Columbia University, 1946; CPA Certificate, West Virginia.

Houston, Martha P., Instructor, Library (1968). BS, Kansas State University, 1945; ML, Kansas State Teachers College, 1968.
Hoyer, Elmer A., Associate Professor of Electrical Engineering (1966). BSEE, Wichita State University, 1962; MSEE, University of Missouri, 1964; PhD, ibid., 1967.

Hudson, Randall O., Associate Professor of History (1964). BS, University of Georgia, 1957; MA, University of North Carolina, 1962; PhD, ibid., 1965.


Humphrey, Bobbye J., Assistant Professor of Social Work and Assistant Dean of Faculties for Personnel (1968). AB, Friends University, 1948; MSW, University of Kansas, 1964

Hunter, Ann, Clinical Associate in Health Professions (1972). BS, Iowa State University, 1954; MS, ibid., 1955.

Hutcherson, Bernice, Assistant Professor of Social Work (1973). BA, Langston University, 1950; MSW, University of Kansas, 1969.


Ireland, Rosa Lee, Assistant Professor and Chairman of Department of Medical Technology (1972). BA, Wichita State University, 1964; MS, ibid., 1967; BSMT, ibid., 1972; MT (ASCP), 1972.

Jabara, F. D., WSU Endowment Association Professor in Business Administration (1949). BS, Oklahoma State University, 1948; MBA, Northwestern University, 1949; CPA Certificate, Kansas.

Jackson, Bill N. Assistant Professor of Graphic Design and Publications Designer in Office of Information and Public Events (1970). Kansas City Art Institute, 1938.


Jakowitz, Charles V., Professor of Electrical Engineering and Dean of the College of Engineering (1965). BSEE, Kansas State University, 1944; MSEE, ibid., 1947; PhD, University of Illinois, 1953.

Jamison, Ines, Assistant Professor of Voice (1970). BM, University of Kansas, 1926.

Jantze, Margaret L., Associate Professor and Chairman of Department of Business Education (1965). BS, Union College, 1947; MEd, University of Nebraska, 1959; EdD, ibid., 1965.

Johansen, Juanita, Clinical Associate in Medical Technology (1972).

Johns, Buddy Ava, Jr., Associate Professor of Mathematics (1964). BA, Friends University, 1957; MA, University of Kansas, 1960; PhD, ibid., 1964.

Johnson, Charles E., Assistant Professor of Mathematics (1971). BS, University of Utah, 1961; MS, University of Wisconsin, 1962; PhD, Ohio State University, 1970.

Johnson, Everett L., Assistant Professor of Electrical Engineering (1971). BSEE, University of Kansas, 1962; MSEE, University of New Mexico, 1964; PhD, University of Kansas, 1969.

Johnson, John W., Jr., Associate Professor of Chemistry (1955). BA, Wichita State University, 1952; MS, ibid., 1953; PhD, University of Illinois, 1956.

Johnston, Clara Frances R., Assistant Professor, Library (1954). BA, Wichita State University, 1950; AMLS, University of Michigan, 1953.

Faculty 353

Jones, W. James, Assistant Professor of Clarinet (1969). BM and BSE, Ohio State University, 1960; MA, ibid., 1962; PhD, University of Iowa, 1970.

Jong, Mark M. T., Associate Professor of Electrical Engineering (1967). BSEE National Taiwan University, 1960; MSEE, South Dakota School of Mines and Technology, 1965; PhD, University of Missouri, 1967.

Jordan, Donald E., Assistant Professor, Counselor and Director of Career Planning and Placement (1965). BA, Wichita State University, 1959; MEd, ibid., 1962.

Jovanovic, Milan K., Professor of Mechanical Engineering (1968). Diploma, Ing. (ME), University of Belgrade, 1938; Diploma, Physics, ibid., 1945; MS, Northwestern University, 1954; PhD, ibid., 1957.

Joyner, H. Sajon, Assistant Professor of Mechanical Engineering (1969). BS in Physics, University of Texas, 1962; MA in Physics, ibid., 1964; MS, University of Missouri at Rolla, 1967; PhD, ibid., 1970.


Kahn, Melvin A., Professor and Chairman of Department of Political Science (1970). BA, University of Florida, 1952; MA, University of Chicago, 1958; PhD, Indiana University, 1964.

Kasten, Roger N., Associate Professor of Logopedics (1971). BS in Ed, Bowling Green State University, 1955; MA, ibid., 1956; PhD, Northwestern University, 1964.


Kelly, Francis L., Assistant Professor of Speech (1965). BA, DePaul University, 1954; MT, University of Illinois, 1959; PhD, Ohio State University, 1972.


Kenyon, G. Y., Professor of Psychology (1955). BS, Wichita State University, 1949; MA, ibid., 1951; PhD, University of Rochester, 1957.


Killian, Donald G., Assistant Professor of Mathematics (1958). BS, Southeast Missouri State College, 1952; ME, University of Missouri, 1956; AM, ibid., 1958.

Kilroy, Dian D., Instructor in Health Education and Director, Center for Educational Development for the Health Related Professions (1971). BA, University of Kansas, 1970; MS, ibid., 1971.

Kinnison, Lloyd R., Jr., Assistant Professor of Educational Psychology (1972). BA, University of Northern Colorado, 1965; MA, ibid., 1966; EdD, University of Kansas, 1972.

Kiskadden, Robert M., Professor of Studio Arts and Assistant Dean of the College of Fine Arts (1949). BFA, University of Kansas, 1947; MA, Ohio Wesleyan University, 1949.

Klavins, Andrew, Visiting Assistant Professor of Aeronautical Engineering (1971). BS, University of Illinois, 1963; MS, ibid., 1968; PhD, ibid., 1970.

Klingsporn, M. J., Assistant Professor of Psychology (1965). AB, University of Nebraska, 1957; MA, ibid., 1962; PhD, ibid., 1965.

Klyman, Fred L., Assistant Professor of Administration of Justice (1971). BS, Memphis State University, 1967; MEd, ibid., 1970.

Knapp, Robert K., Associate Professor of Psychology (1961). BA, Kent State University, 1954; MA, ibid., 1956; PhD, Michigan State University, 1960.

Kneil, Thomas R., Assistant Professor of Logopedics (1967). AB, Bowdoin College, 1955; MS, Syracuse University, 1960; PhD, University of Iowa, 1972.

Knight, Dorothy M., Assistant Professor, Library (1966). BEd, Illinois State University, 1936; MS, Kansas State Teachers College, 1961.

Knight, Kenneth C., Assistant Professor, Library (1971). BS, Knox College, 1930; BS in LS, University of Illinois, 1946; MS (LS), ibid., 1947.


Konek, Carol W., Instructor in English (1969). BS, University of Kansas, 1961; MA, Wichita State University, 1968.

Koppenhaver, John, Assistant Professor of Spanish (1966, 1972). BA, Wichita State University, 1964; MA, University of Iowa, 1966.

Koski, Onnie, Clinical Associate in Dental Hygiene (1971). BA, University of Mississippi, 1953; DDS, University of Tennessee, 1956.


Kreps, Donald R., Assistant Professor of Sociology (1970). BA, Western Illinois University, 1960; MA, University of Iowa, 1969.

Kukral, Dean K., Assistant Professor of Mathematics (1968). AB, Wabash College, 1964; AM, Indiana University, 1966; PhD, ibid., 1972.


Lautz, Robert P., Assistant Professor and Director of Testing (1968). BA, Southern Illinois University, 1966; MS, ibid., 1968.

Lazar, Harry, Adjunct Associate Professor of Health Education (1972). BS, Lewis Institute, 1931; MD, University of Illinois, 1935.


LeBlanc, Steven A., Assistant Professor of Anthropology (1972). BA, Pomona College, 1965; MA, University of California at Santa Barbara, 1967; PhD, Washington University, 1971.
Lee, Douglas A., Associate Professor of Music Literature and Piano and Chairman of Musicology-Composition Department (1964). BMus, DePauw University, 1954; MMus, University of Michigan, 1958; PhD, ibid., 1968.

Leslie, John H., Jr., Associate Professor and Chairman of Department of Industrial Engineering (1962). BSIE, Wichita State University, 1961; MSIE, ibid., 1964; PhD, Oklahoma State University, 1972.

Lewis, George A., Jr., Assistant Professor of Psychology (1965). BA, Wichita State University, 1962; MA, Texas Christian University, 1965; PhD, ibid., 1968.


Lindquist, Emory, University Professor (1953). AB, Bethany College, 1930; BA, Oxford University, 1933; MA, ibid., 1937; PhD, University of Colorado, 1941; LLD, Augustana College, 1952; LHD, Bethany College, 1963.

Lindsley, Sara Rodewald, Instructor in German (1968). BS, Kansas State University, 1963; MA, University of Kansas, 1968.

Lindsted, Robert D., Instructor in Mechanical Engineering (1971). BS in ME, Wichita State University, 1969; MS, University of Vermont, 1971.

Linscheid, Harold W., Associate Professor of Mathematics (1958). BA, Bethel College, 1929; MEd, Phillips University, 1937; MA, University of Oklahoma, 1941; PhD, ibid., 1955.

Long, Patricía Ann, Assistant Instructor and Administrative Assistant to the Director of the Career Planning and Placement Center (1972). BS, University of Kansas, 1968; MEd, Wichita State University, 1972.

Loper, Gerald D., Jr., Associate Professor and Chairman of Department of Physics (1964). BA, Wichita State University, 1959; MS, Oklahoma State University, 1962; PhD, ibid., 1964.

Lowe, Larry S., Assistant Professor of Administration (1972). BS, Portland State University, 1967; MBA, ibid., 1969.

Lowe, Roger D., Assistant Professor of Accounting, Assistant to President for Finance, and Business Manager (1964). BSBA, Kansas State College of Pittsburg, 1960; CPA Certificate, Kansas.

Lucas, Walter A., Associate Professor of Elementary Education (1951). BE, State University College at Fredonia, 1941; MS, State University of New York at Albany, 1947; EdD, University of Colorado, 1949.


McCarten, John B., Assistant Professor of Chemistry (1964). BS, Creighton University, 1958; MS, ibid., 1960; PhD, University of Iowa, 1964.


McCroskey, Robert Lee, Professor of Logopedics (1967). BS in Ed, Ohio State University, 1948; MA, ibid., 1952; PhD, ibid., 1956.

McFarland, David E., Associate Professor of Aeronautical Engineering, Counselor and Assistant Dean of University College (1967). BS, Wichita State University, 1961; MS, ibid., 1964; PhD, University of Kansas, 1967.
McGaffey, Thomas N., Assistant Professor of Administration (1972). BA, Personnel University of Houston, 1966; MA, Southern Methodist University, 1967; PhD, ibid., 1972.

McIntyre, Donald W., Associate Professor of Psychology (1968). AB, University BA, California at Santa Barbara, 1955; MA, University of Connecticut, 1959; PhD, ibid., 1965.


McKenney, James W., Assistant Professor of Political Science (1966). BA, Williamette University, 1958; MA, University of Oregon, 1964; PhD, ibid., 1969. (Leave of absence, fall semester, 1972-1973.)

McKibbin, Lawrence E., Professor of Administration and Dean of the College of Business Administration (1972). BBA, University of Toledo, 1959; MBA, Stanford University, 1962; PhD, ibid., 1967.

McLuen, Peggy F., Assistant Professor of Physical Education (1966). BA, Wichita State University, 1947; ME, ibid., 1960.


Magelli, Paul J., University Professor and Dean of Fairmount College of Liberal Arts and Sciences (1969). AB, University of Illinois, 1959; MS, ibid., 1960; PhD, ibid., 1965.

Majors, T. E., Associate Professor of Philosophy (1964). BA, University of Arkansas, 1958; MA, ibid., 1959; PhD, Northwestern University, 1967.

Mallory, J. William, Assistant Professor of Philosophy (1965). BA, Northwestern University, 1957; MA, ibid., 1962; PhD, ibid., 1970.

Malone, Henry H., Assistant Professor of English and Associate Dean of Fairmount College of Liberal Arts and Sciences (1948). BA, Wichita State University, 1932; MA, ibid., 1950.


Marks, Bernard J., Professor of Economics (1969). BSC, Drake University, 1941; MS, Iowa State University, 1949; PhD, University of Minnesota, 1960.


Marymont, Jesse H., Jr., Clinical Associate in Medical Technology and Cytotechnology (1972), BA, Syracuse University, 1949; MD, ibid., 1954.


Mathis, William E., Associate Professor of Music Education, Coordinator of Graduate Music Studies and Chairman of Performance Department (1969). AB, Brigham Young, University, 1957; MS, ibid., 1961; PhD, University of Michigan, 1969.


Matson, Ronald R., Assistant Professor of Sociology and Assistant Professor of Administration of Justice (1970). AB, University of South Dakota, 1965; MA, University of Colorado, 1967; PhD, ibid., 1973.


Merriman, James D., Professor of English (1966). BA, Texas Tech University, 1947; AM, Columbia University, 1950; PhD, ibid., 1962.

Merriman, Mira P., Associate Professor and Chairman of Department of Art History (1966). BS, Columbia University, 1960; AM, ibid., 1963; PhD, ibid., 1968. (Leave of absence, spring semester, 1972-1973.)


Mickel, Howard A., Assistant Professor of Religion (1965). BA, Nebraska University, 1949; MA, Northwestern University, 1951; MTh, Lutheran Theological Seminary, Gettysburg, 1953; PhD, Claremont Graduate School, 1969.

Miller, Glendon R., Assistant Professor of Biology (1968). BA, Southern Illinois University, 1960; MA, ibid., 1962; PhD, University of Missouri, 1966.

Miller, Glenn W., Professor and Acting Chairman (fall semester) of Department of Economics (1969). BEd, Southern Illinois University, 1934; AM, University of Illinois, 1935; PhD, ibid., 1939.


Miller, Thomas A., Assistant Professor of Vocal Music (1971). BS, Anderson College, 1963; MMEd, Wichita State University, 1965; DMA, University of Missouri at Kansas City, 1971.

Miller, William E., Associate Professor of Logopedics (1949). BS, Wichita State University, 1940; MA, ibid., 1947; PhD, Northwestern University, 1950.

Millett, John H., Professor of Political Science (1957). AB, Beloit College, 1940; MA, University of Cincinnati, 1942; PhD, University of Illinois, 1950.

Millett, Nancy C., Associate Professor of Secondary Education (1968). BA, University of Rochester, 1949; MA, ibid., 1951; EdD, University of Colorado, 1972.

Mills, Everald E., Assistant Professor of Mathematics (1971). BS, University of Nebraska, 1962; MS, Washington State University, 1968; PhD, ibid., 1972.


Mills, Tonk, Adjunct Associate Professor of Dental Hygiene (1968). DDS, University of Missouri at Kansas City, 1955.
Miner, H. Craig, Associate Professor of History (1969). BA, Wichita State University; Personnel 1966; MA, ibid., 1967; PhD, University of Colorado, 1970.

Mittelstaedt, James S., Assistant Professor of Biology (1970). BS, University of Arkansas, 1965; MS, ibid., 1968; PhD, Purdue University, 1970.

Moellenberndt, Richard A., Assistant Professor of Accounting (1971). BA, Northwestern University; Missouri State College, 1964; MA, University of Nebraska, 1968.

Mohr, Phillip J., Associate Professor of Speech (1946, 1950, 1968). BA, Wichita State University; 1946; MA, ibid., 1947; PhD, Ohio State University, 1960.

Moini, Mostafa J., Assistant Professor of Administration (1969). BA, University of Oklahoma, 1964; MA, ibid., 1966; PhD, ibid., 1970.

Moler, Penna R., Assistant Professor of French (1967). BA, University of Kansas, 1964; MA, ibid., 1966. (Leave of absence, fall semester, 1972-1973.)

Moore, James C., Assistant Professor of Art History (1970). BFA, University of New Mexico, 1966; AM, Indiana University, 1968.

Moorhouse, Melvin Paul, Associate Professor of Speech (1957). AB, Westminster College (Pennsylvania), 1935; MA, Ohio State University, 1956.

Mullikin, Margaret D., Assistant Professor of Sociology (1967). BA in Ed, Wichita State University, 1954; MA, ibid., 1958.

Murphey, Dwight D., Assistant Professor of Administration (1967). BSL, University of Denver, 1957; JD, ibid., 1959.

Murphy, James M., Distinguished Professor of Bank Management in Department of Administration (1968). BS, Indiana University, 1943; MBA, ibid., 1948; DBA, ibid., 1959.

Myers, James E., Assistant Professor of Geology (1968). BS, Iowa State University, 1942; MS, Wichita State University, 1956; MS, ibid., 1968.

Myers, Marilyn S., Instructor, Library (1968). BA, Kansas State University, 1966; MS, University of Illinois, 1968.


Nance, Donald W., Assistant Professor and Counseling Psychologist (1968). BA, University of Redlands, 1964; MA, University of Iowa, 1967; PhD, ibid., 1968.

Nasise, Arline I., Adjunct Associate Professor, Nursing Services (1971). BS, University of Minnesota, 1939; MS in Nursing, Boston University, 1959.

Needles, Audrey, Assistant Professor of Speech and Drama (1965). AB, University of Denver, 1947; MA, ibid., 1948.


Nelson, F. William, Professor of English (1947). AB, University of Texas, 1943; AM, Columbia University, 1949; PhD, University of Oklahoma, 1957.


Newman, Arthur N., Associate Professor of Voice (1959). St. Louis Opera Company; International Opera Company; NBC Opera Television and New York City Center Opera. (Leave of absence, 1972-1973.)
Newton, Lyle D., Assistant Professor of Administration of Justice (1969). BA, Wichita State University, 1961; MA, ibid., 1965.

Nickel, James W., Assistant Professor of Philosophy (1968). AB, Tabor College, 1964; MA, University of Kansas, 1966; PhD, ibid., 1968.


Nickel, Kenneth N., Professor of Secondary Education and Associate Dean of the College of Education (1956). BA, Wichita State University, 1936; MA, University of Kansas, 1947; EdD, University of Colorado, 1958.

Nielsen, Carl C., Associate Professor of Administration (1968). BS, Dana College, 1956; MA, University of Nebraska, 1963; PhD, ibid., 1968.

Nickel, James W., Assistant Professor of Philosophy (1968). AB, Tabor College, 1964; MA, University of Kansas, 1966; PhD, ibid., 1968.

Nickel, Kenneth N., Professor of Secondary Education and Associate Dean of the College of Education (1956). BA, Wichita State University, 1936; MA, University of Kansas, 1947; EdD, University of Colorado, 1958.

Nielsen, Carl C., Associate Professor of Administration (1968). BS, Dana College, 1956; MA, University of Nebraska, 1963; PhD, ibid., 1968.


Noel, O. Carroll, Professor of Elementary Education (1950). BS, Kansas State Teachers College, 1927; MA, Wichita State University, 1948.

Norris, Roy H., Assistant Professor of Electrical Engineering (1961). BSEE, Wichita State University, 1959; MS, ibid., 1962; PhD, Oklahoma State University, 1972.

O'Loughlin, John B., Assistant Professor of Electrical Engineering and Director of the Computer Center (1967). BSEE, Massachusetts Institute of Technology, 1954; MSEE, ibid., 1956.


Owen, Pere, Clinical Associate in Inhalation Therapy (1972). BS, University of Kansas, 1959; MD, ibid., 1963.

Park, F. Wesley, Adjunct Professor of Dental Hygiene (1968). BA, Wichita State University, 1934; DDS, University of Missouri at Kansas City, 1937.

Parker, Albert R., Professor of History (1952). BS, Central State College, 1935; EdM, University of Oklahoma, 1942; PhD, ibid., 1950.

Parris, Wayne L., Associate Professor of Anthropology (1968). AB, McPherson College, 1944; BD, Bethany Theological Seminary, 1947; MA, Wichita State University, 1953; MA, University of Colorado, 1966; PhD, ibid., 1971.


Paske, Gerald H., Associate Professor and Chairman of Department of Philosophy (1967). BS, University of Wisconsin, 1958; MS, ibid., 1962; PhD, ibid., 1964.
Pate, Robert T., Professor and Chairman of Department of Elementary Education (1967). BA, Central State College, 1958; MEd, University of Oklahoma, 1962; EdD, ibid., 1964. (Deceased January 1973.)

Paulson, Merle J., Assistant Professor, Library and Head of Acquisitions Department (1962). BA, Kansas State Teachers College, 1953; BS, ibid., 1954; MA, University of Denver, 1962.

Payne, Joe Dean, Associate Professor of Elementary Education (1967). BA, Texas Tech University, 1950; MEd, ibid., 1953; EdD, ibid., 1963.


Pennington, Katherine, Adjunct Clinical Associate in the College of Health Related Professions (1973). AB, Friends University, 1937; MD, University of Kansas, 1943.

Perel, William M., Professor and Chairman of Department of Mathematics (1966). AB, Indiana University, 1949; AM, ibid., 1950; PhD, ibid., 1955.

Perline, Martin M., Professor of Economics and Associate Dean of the College of Business Administration (1965). BA, Arizona State University, 1960; MA, Ohio State University, 1962; PhD, ibid., 1965.


Pfannestiel, Maurice, Associate Professor of Economics (1966). BA, Fort Hays Kansas State College, 1960; MS, Oklahoma State University, 1966; PhD, ibid., 1967.


Platt, George M., Associate Professor of Political Science and Director of the Office of Planning (1969). BA, South Dakota State University, 1953; MA, Syracuse University, 1955; PhD, ibid., 1962.

Pluckhan, Margaret L., Associate Professor of Nursing (1970). BS in Nursing, University of Wisconsin, 1950; MPS, University of Colorado, 1956; PhD, University of Denver, 1970.


Poland, Leo A., Associate Professor of Accounting (1958). BS, University of Kansas, 1947; MBA, Harvard University, 1948; DBA, Indiana University, 1962.


Powell, Jackson O., Professor of Psychology (1950). BS, Southeastern State College, Oklahoma, 1941; MS, Syracuse University, 1947; PhD, ibid., 1950.
Powers, Walter L., Adjunct Associate Professor and Coordinator of Reading Services (1973). BA, St. John's University, New York, 1953; MS, Hofstra University, 1957; EdS, Butler University, 1967.

Pratt, Steve H., Professor of Psychology (1970). BA, University of California at Los Angeles, 1940; MS, Purdue University, 1950; PhD, ibid., 1952.

Pronko, N. H., Professor of Psychology (1947). AB, George Washington University, 1941; AM, Indiana University, 1941; PhD, ibid., 1944.

Prowse, Charles L., Adjunct Professor of Administration of Justice (1973).


Randolph, Brenda S., Associate Professor of Music Education (1972). BM, Oberlin College, 1961; MA, Case Western Reserve University, 1965; EdD, University of Illinois, 1969.

Rappaport, Allen, Associate Professor of Administration (1966). BS, University of South Carolina, 1961; MBA, ibid., 1962; PhD, University of Texas, 1968.


Reals, William J., Clinical Associate in Medical Technology (1972). BS, Creighton University, 1944; MD, ibid., 1945; MS (Med), ibid., 1949.

Rector, Larry, Assistant Professor and Associate Director of Financial Aids (1967). BA, Southwestern College, 1962; MEd, Wichita State University, 1967.

Reed, D. Cramer, Professor of Health Education, Dean of the WSU Branch of University of Kansas School of Medicine (1970). BA, Wichita State University, 1937; MD, Washington University, 1941.


Reed, Paul E., Associate Professor of Piano (1966). BM, Drake University, 1956; MM, ibid., 1957.

Regehr, Jerry, Clinical Associate in Inhalation Therapy (1972); ARIT, 1966.

Reif, Martin A., Professor of History and Associate Dean of Fairmount College of Liberal Arts and Sciences (1959). AB, University of California at Los Angeles, 1954; PhD, ibid., 1960.

Rensner, Delmar A., Adjunct Associate Professor of Dental Hygiene (1968). BS, University of Illinois, 1945; DDS, ibid., 1947.

Rhatigan, James J., Associate Professor of Education, Vice President for Student Affairs and Dean of Students (1965). BA, Coe College, 1957; MA, Syracuse University, 1959; PhD, University of Iowa, 1965.


Richardson, William H., Associate Professor of Mathematics (1962). AB, Chico State College, 1959; MS, Iowa State University, 1961.


Ritchie, Gisela F., Associate Professor of German (1965). MA, Free University of Berlin, 1952; PhD, University of Michigan, 1965.

Robertson, James P., Distinguished Professor of Orchestra and Conducting (1949). AB, Drury College, 1932; BM, ibid., 1936; MA, Teachers College, Columbia University, 1943.

Robinson, Fred W., Clinical Associate in the College of Health Related Professions (1973). AB, University of Michigan, 1943; MD, ibid., 1943.

Robinson, R. H., Adjunct Professor of Inhalation Therapy (1971). BS, Southwestern College, 1947; MD, University of Kansas, 1953.


Rogers, Ben F., Assistant Professor of Philosophy and Director of the Honors Program (1966). BA, University of Tennessee, 1958; MAT, Vanderbilt University, 1961; MA, Indiana University, 1966; PhD, ibid., 1970.

Rogers, Ethel Elizabeth, Assistant Professor of Mathematics (1958). BS, Kansas State University, 1946; MA, Northwestern University, 1950.

Rogers, George, Associate Professor and Chairman of Department of Minority Studies (1971). BS in Ed, Langston University, 1961; MEd, Central State College, 1969; EdD, University of Kansas, 1971.


Rohn, Arthur H., Associate Professor and Chairman of Department of Anthropology (1970). AB, Harvard University, 1951; PhD, ibid., 1966.

Rohr, Sister Charlotte, Associate Professor of Health Education and Coordinator of Health Administration (1972). BS, Marquette University, 1956; MBA, Xavier University, 1966.

Ross, Joe N., Assistant Professor of Health Education and Director of Department of Inhalation Therapy (1973). BS, Texas A and M University, 1970; MS, ibid., 1973. CITT, 1972; ARIT, 1972.


Rounds, Harry D., Professor of Biology (1963). BA, University of Virginia, 1952; MS, University of Pittsburgh, 1960; PhD, ibid., 1962.

Rugh, Archie C., Assistant Professor, Humanities Librarian (1972). BA, Pennsylvania State University, 1956; MA, University of California, 1968; MLS, University of California at Los Angeles, 1972.


Saalmann, Dieter, Assistant Professor of German (1971). BA, Northwestern State University of Louisiana, 1963; MA, The Johns Hopkins University, 1965; PhD, Washington University, 1970.
St. John, Richard W., Assistant Professor of Ceramics (1969). BFA, Kansas City Art Institute, 1967; MFA, Alfred University, 1969.

Sanchez, Saul, Acting Assistant Professor of Minority Studies (1972). BA, Southwest Texas State University, 1967; MA, University of Oklahoma, 1970; PhD, ibid., 1973.

Sanderson, Robert W., Colonel, U.S. Air Force, Professor of Aerospace Studies (1970). BS, Arizona State University, 1953; MS, University of Michigan, 1959; Academic Instructor and Allied Officer School Air University, 1970.

Sarachek, Alvin, Distinguished Professor of Natural Sciences and Chairman of Department of Biology (1958). BA, University of Missouri at Kansas City, 1948; MA, ibid., 1950; PhD, Kansas State University, 1958.

Savaiano, Eugene, Professor of Spanish and Chairman of Department of Romance Languages (1946). BS, Kansas State Teachers College, 1936; MS, ibid., 1937; PhD, University of Chicago, 1948.


Schlesier, Karl, Professor of Anthropology (1962). PhD, University of Bonn, 1956.

Schlicher, John E., Adjunct Clinical Associate in the College of Health Related Professions (1973). BA, University of Northern Iowa, 1962; MD, University of Iowa, 1966.

Schneider, Philip H., Instructor in English (1967). BA, State University of New York, College at Oneonta, 1965; MFA, University of Iowa, 1967.

Schrag, Robert L., Professor of Electrical Engineering (1957). BS in EE, Kansas State University, 1945; MS, California Institute of Technology, 1946; PhD, Pennsylvania State University, 1954.

Schrag, Sam, Assistant Professor, Library (1966). BA, Bethel College, 1961; MS, Kansas State Teachers College, 1966.

Schuermann, Allen C., Jr., Assistant Professor of Industrial Engineering (1971). BA, University of Kansas, 1965; MS, Wichita State University, 1968; PhD, University of Arkansas, 1971.


Schule, Donald K., Assistant Professor of Studio Arts (1967). BA, University of Minnesota, 1964; MFA, ibid., 1967.


Scriven, Nancy L., Assistant Professor of Music Education (1967). BME, Wichita State University, 1952; MME, ibid., 1966.

Seng, Jerry T., Assistant Professor of Biology (1970). BS, Purdue University, 1957; MA, Indiana University, 1966; PhD, ibid., 1970.

Sevart, John B., Assistant Professor of Mechanical Engineering (1960). BSME, Wichita State University, 1960; MS, ibid., 1962.

Sharp, Douglas, Associate Professor and Chairman of Department of Accounting (1969). BBA, University of Oklahoma, 1961; MBA, ibid., 1963; PhD, University of Missouri, 1969; CPA Certificate, Oklahoma.

Sherman, Dorothy M., Professor and Chairman of Department of Student Personnel and Guidance (1964). BA, University of Oregon, 1932; MA, ibid., 1934; PhD, Ohio State University, 1945.


Shih, Philip C., Instructor, Library (1969). BA, Tunghai University, Taiwan, China, 1965; MS, Florida State University, 1968.

Shreve, Marilyn K., Assistant Professor of Health Education and Director of Department of Dental Hygiene (1972). BS, University of Missouri at Kansas City, 1969; MS, ibid., 1972; RDH, ibid., 1968.

Shumard, Jack L., Assistant Instructor in Engineering and Assistant Director of Physical Plant (1969). BA, Wichita State University, 1951; BS in ME, ibid., 1958.

Shute, Charles, Research Associate and Staff Director of the Cerebral Palsy Project (1972). BA, Catholic University of America, 1966; MA, Wichita State University, 1970.


Siegel, Lewis, Adjunct Assistant Professor of Health Education (1972). BS, University of Michigan, 1950; PhD, Albert Einstein College of Medicine, Yeshiva University, 1962.

Siegelman, Harvey Bruce, Assistant Professor of Economics (1972). BS in BA, Ohio State University, 1965; MA, Wichita State University, 1966.


Slingerland, F. Yvonne, Assistant Professor of Physical Education (1967). BS, Fort Hays Kansas State College, 1954; MS, ibid., 1964.

Small, Blanche L., Assistant Professor, Library (1966). AB, Fort Hays Kansas State College, 1939; MS, Kansas State Teachers College, 1964.


Smith, Bert L., Associate Professor of Aeronautical Engineering (1966). BS, University of Missouri at Rolla, 1953; MS, ibid., 1960; PhD, Kansas State University, 1966.

Smith, Clifford J., Instructor in English (1967). BA, Wichita State University, 1960; MA, ibid., 1966; MT (ASCP), 1962; M (ASCP), 1967.


Smith, R. V., Professor and Chairman of Department of Mechanical Engineering (1971). BSME, University of Colorado, 1948; MS, ibid., 1951; MS, University of Utah, 1957; PhD, University of Oxford, 1968.

Smith, Wilbur L., Assistant Dean of Health Services/Educational Activities and Assistant Professor of Health Education (1972). BS, University of Oklahoma, 1963; MS, ibid., 1966; DrPH, University of Texas, 1969.


Snyder, Melvin H., Jr., Professor of Aeronautical Engineering (1947). BSME, Carnegie-Mellon University, 1947; MSAE, Wichita State University, 1950; PhD, Oklahoma State University, 1967.

Sobieski, Rodney J., Assistant Professor of Biology (1972). BS, Wayne State University, 1964; MS, ibid., 1966; PhD, University of Michigan, 1972.


Solomon, Herman, Adjunct Clinical Associate in the College of Health Related Professions (1973). MD, University of Mississippi, 1962.

Soper, Fred J., Associate Professor of Accounting and Director of Center for Management Development (1960, 1963). BS, University of Kansas, 1955; MBA, Wichita State University, 1962; CPA Certificate, Kansas.

Sowards, J. Kelley, Professor of History (1956). BA, Wichita State University, 1947; MA, University of Michigan, 1948; PhD, ibid., 1952.

Spangler, Eugene C., Associate Professor of Speech and Drama and Director of Theater Services (1939). BM, Wichita State University, 1939; MFA, University of Iowa, 1950.

Sparkes, Alan T., Assistant Professor of Sociology (1971). BA, Memorial University of Newfoundland, 1967; MA, University of Missouri, 1969.


Spohn, Charles L., Professor of Music and Dean of the College of Fine Arts (1970). BM, Butler University, 1950; MA, Ohio State University, 1953; PhD, ibid., 1959.


Stanga, John E., Assistant Professor of Political Science (1968). BA, Southeastern Louisiana University, 1961; MA, Louisiana State University, 1963; PhD, University of Wisconsin, 1971.

Stephens, Frances A., Assistant Professor of English (1970). BA, Texas A&I University, 1956; MA, University of Texas, 1967; PhD, ibid., 1970.

Stephens, G. Gayle, Adjunct Professor of Health Education (1972). BS in Med, University of Missouri, 1950; MD, Northwestern University, 1952.

Stevens, Mary Martha, Instructor in Dental Hygiene (1972). BS, University of Missouri at Kansas City, 1967.

Stone, Arthur J., Assistant Instructor in Administration of Justice and Director of Traffic and Security (1972).

Stover, Cheryl L., Instructor in Nursing (1972). BSN, Case Western Reserve University, 1969; MS, University of Colorado, 1972.


Stumpfhauser, Laszlo, Associate Professor of Health Education and Assistant Dean of the College of Health Related Professions (1972). BS, Montana State University, 1959; BS, University of Kansas, 1961; MS, Kansas State Teachers College, 1964; PhD, University of Toledo, 1969.

Sudermann, Frederick, Assistant Professor of Political Science and Director of Research and Sponsored Programs (1964). BA, Wichita State University, 1958; MA, ibid., 1960.


Swanson, Janis, Clinical Associate in Medical Technology (1972). BA, Wichita State University, 1958.

Swanson, Robert, Assistant Instructor in Art History (1973). BA, University of Texas, 1968.

Sweet, George H., Professor of Biology (1966). BS, Wichita State University, 1960; MA, University of Kansas, 1962; PhD, ibid., 1965.

Swenev, Arthur B., Professor of Administration (1968). BS, University of Illinois, 1947; MSW, ibid., 1949; PhD, University of Houston, 1958.

Taggart, Thoburn, Jr., Assistant Professor, Library (1962). BA, University of the South, 1953; MA, George Peabody College for Teachers, 1958.

Talaty, Erach R., Professor of Chemistry (1969). BSC, (Honours) Nagpur University, Nagpur, India, 1948; PhD, ibid., 1954; PhD, Ohio State University, 1957.

Tallarico, P. Thomas, Assistant Professor of Music Education (1971). BSE, Indiana University of Pennsylvania, 1958; MMEd, Duquesne University, 1963; PhD, West Virginia University, 1972.

Tasch, Paul, Professor of Geology (1955). BS, City University of New York, 1948; MS, Pennsylvania State University, 1950; PhD, University of Iowa, 1952.

Taylor, Richard J., Clinical Associate in Medical Technology (1972). BA, University of California, 1944; MD, Creighton University, 1949.

Taylor, Ross McLaury, Professor and Chairman of Department of American Studies (1939). AB, University of Oklahoma, 1930; MA, ibid., 1933; PhD, University of Iowa, 1938.


Teall, Mary Jane Woodard, Assistant Professor of Speech and Drama (1946). BS, Northwestern University, 1965.


TenElshof, Annette R., Assistant Professor of Student Personnel and Guidance and Associate Dean of Students (1970). BS, University of Michigan, 1961; MA, Wheaton College, 1963; EdS, Michigan State University, 1966; PhD, ibid., 1970.

Terflinger, Curtis D., Professor of Administration (1957). BA, University of Kansas, 1953; Juris Doctorate, ibid., 1955.

Terrell, William T., Associate Professor of Economics (1967). BS, Oklahoma State University, 1958; MS, ibid., 1961; PhD, Vanderbilt University, 1970.

Terwilliger, Gordon B., Professor of Music, Associate Dean of the Graduate School, and Director of the Summer Session (1946). BME, Northwestern University, 1942; MA, Columbia University, 1946; EdD, ibid., 1952.


Thomas, Phillip D., Professor of History (1965). BA, Baylor University, 1960; MA, University of New Mexico, 1964; PhD, ibid., 1965.


Thompson, Norman D., Assistant Instructor and Director of Operations, Digital Computing Center (1967).

Throckmorton, Helen J., Associate Professor of English (1954). AB, Friends University, 1945; MEd, University of Colorado, 1956; EdD, ibid., 1972.


Tilford, Michael, Assistant Professor of Secondary Education (1967). BS, Langston University, 1957; MA, The Johns Hopkins University, 1958; EdD, Oklahoma State University, 1970.

Tinterow, M. M., Clinical Associate in Inhalation Therapy (1972). BA, Rice University, 1937; MD, University of Texas, 1941.

Town, Robert L., Assistant Professor of Organ (1965). BM, Eastman School of Music, 1960; MM, Syracuse University, 1962.

Traugh, Cecelia, Assistant Professor of Secondary Education (1972). BA, University of California at Riverside, 1965; MA, ibid., 1966; PhD, University of California at Berkeley, 1972.

Traylor, Elwood B., Professor and Chairman of Department of Educational Psychology (1967). AB, Greenville College, 1948; MA, Washington University, 1951; EdD, ibid., 1966.


Tuttle, Edward H., Associate Professor of Social Work (1967). BA, Wichita State University, 1934; AM, University of Chicago, 1949.


Unruh, Henry, Jr., Professor of Physics (1961). BA, Wichita State University, 1950; MS, Kansas State University, 1952; PhD, Case Western Reserve University, 1960.

Vahdat, Pari, Associate Professor of Psychology (1967). AB, Indiana University, 1953; AM, ibid., 1957; PhD, ibid., 1964.


Vedder, Charles B., Assistant Professor of Sociology (1970). BA, Lawrence University, 1965; MA, University of Iowa, 1969; PhD, ibid., 1972.


Vickery, W. Dean, Assistant Professor of Administration (1971). BA, Wichita State University, 1954; MS, ibid., 1968.


Waddell, Mina Jean, Assistant Professor, Library and Head of Reference Department (1965). BA, Wichita State University, 1938; MS, Kansas State Teachers College, 1965.

Wahlbeck, Phillip G., Professor and Chairman of Department of Chemistry (1972). BS, University of Illinois, 1954; PhD, ibid., 1958.
Wall, Lillian, Associate Professor of Spanish (1963). BA, Kansas Wesleyan University, 1932; MS, Kansas State Teachers College, 1953; PhD, University of Wisconsin, 1969. (Leave of absence, spring semester, 1972-1973.)

Wallingford, Frances A., Associate Professor of Piano (1956). BM, Southwestern College, 1931; AB, ibid., 1933; MM, Wichita State University, 1956; Certificates, American Conservatory in Fontainebleau, France, 1928 and 1963.

Walters, Dorothy J., Associate Professor of English (1967). BA, University of Oklahoma, 1948; BA in LS, ibid., 1951; PhD, ibid., 1960. (Leave of absence, 1972-1973.)

Wang, C. David, Assistant Professor of Electrical Engineering (1972). BSEE, Cheng Kung University, 1966; MSEE, University of Missouri at Rolla, 1970; PhD, ibid., 1972.


Watertor, Jean L., Assistant Professor of Biology (1968). BA, University of Iowa, 1944; MS, University of Wisconsin, 1948; PhD, Iowa State University, 1965.


Watson, Richard L., Associate Professor of Elementary Education and Director of Reading Center (1971). AB, Wabash College, 1955; MSED, Indiana University, 1959; EdD, ibid., 1964.

Weaver, Carol I., Assistant Professor of Health Education and Director of the Department of Physical Therapy (1972). BS, University of Kansas, 1960; MS, University of Missouri at Kansas City, 1969; RPT, 1960.

Weaver, Michael, Clinical Associate in Inhalation Therapy (1972). Certificate of Inhalation Therapy, Wichita State University, 1971; ARIT, 1972.

Webb, Edgar L., Assistant Professor and Chairman of Department of Industrial Education (1959). BA, Wichita State University, 1959; MS, Kansas State College of Pittsburg, 1961.

Webb, Samuel C., Associate Professor of Economics (1966). BS, University of Missouri, 1957; MS, ibid., 1959; PhD, University of Kansas, 1968.

Weed, Norman L., Associate Professor of Economics (1971). BS, University of Nebraska, 1959; PhD, Tulane University, 1968.


Welsbacher, Richard C., Professor of Speech and Drama and Director of Theater (1958). AB, Denison University, 1948; MA, University of Denver, 1950; PhD, Ohio State University, 1965.

Wentworth, C. Russell, Associate Professor of Educational Administration and Dean of Admissions and Records (1971). BA, Michigan State University, 1949; MA, ibid., 1952; PhD, ibid., 1970.

Wentz, William H., Jr., Associate Professor of Aeronautical Engineering (1957, 1963). BSME, Wichita State University, 1953; MSAE, ibid., 1961; PhD, University of Kansas, 1969.
West, Elles C., Associate Professor of Physical Education (1965). Physical Therapy, Karolinska University, Stockholm, Sweden, 1950; MA, Stanford University, 1956; PhD, University of Oregon, 1965.

Wherritt, Robert C., Associate Professor of Mathematics (1962). BS, Tulane University, 1955; MS, ibid., 1961; PhD, New Mexico State University, 1971.

Whitehead, Glenn R., Assistant Professor of Studio Arts (1972). BFA, University of Texas, 1970; MFA, Stanford University, 1972.


Wiebe, Raymond F., Assistant Professor, Assistant to the Dean and Counselor in University College (1965). AB, Tabor College, 1953; MS, Kansas State University, 1965.


Wilkes, Mary Nell, Assistant Professor of Business Education (1956). BS, Texas Woman’s University, 1939; MBE, University of Colorado, 1961.


Williams, Richard K., Assistant Professor of Spanish (1971). AB, Grinnell College, 1956; MA, Syracuse University, 1962.

Wilson, Herman, Assistant Professor of Physical Education and Track Coach (1967). BS, Kansas State University, 1952; MS, ibid., 1963.

Wilson, John H., Associate Professor of Elementary Education (1968). BA, Wichita State University, 1958; EdM, ibid., 1964; EdD, University of Oklahoma, 1967.

Wilson, Judith Ann, Assistant Instructor and Project Coordinator in the Nurse Clinician Program (1973); RN, Wesley School of Nursing, 1971.

Wineke, Donald R., Assistant Professor of English (1971). BA, University of Washington, 1960; MA, Pennsylvania State University, 1962; PhD, Indiana University, 1971.

Winget, Lynn W., Professor of Spanish (1961). BA, Wichita State University, 1948; MA, University of Wisconsin, 1949; PhD, ibid., 1960.


Wong, John C., Associate Professor of Health Education and Associate Dean of the College of Health Related Professions (1970). AB, Phillips University, 1958; MS, University of Oklahoma, 1967; EdD, University of Missouri, 1971.

Wood, L. Curtise, Professor of Administration (1956). BA, Coe College, 1938; MA, University of Iowa, 1956; PhD, ibid., 1956.

Woodard, Francis O., Professor and Chairman of Department of Economics and Director of Center for Business and Economic Research (1965). BS, University of Nebraska, 1941; MA, ibid., 1958; PhD, ibid., 1962. (Deceased May 1973.)


Wyatt, P. J., Assistant Professor of English (1964, 1966). AB, University of Arizona, 1951; MA, Indiana University, 1957.


Yeargan, Richard G., Assistant Professor and Director of the Reading Improvement Laboratory (1970). AB, Fort Hays Kansas State College, 1959; MA, University of Northern Colorado, 1963.


Yoon, I. N., Associate Professor of Economics (1968). BA, Lynchburg College, 1955; MA, University of Minnesota, 1958; PhD, ibid., 1967.

Youngman, Arthur L., Assistant Professor of Biology (1965). BA, Montana State University, 1959; MS, Case Western Reserve University, 1961; PhD, University of Texas, 1965.

Yu, Yi-Yuan, Distinguished Professor of Aeronautical Engineering (1972). BS, Tientsin University, 1944; MS, Northwestern University, 1950; PhD, ibid., 1951.

Zandler, Melvin E., Assistant Professor of Chemistry (1966). BA, Friends University, 1960; MS, Wichita State University, 1963; PhD, Arizona State University, 1965.


Zody, Richard E., Associate Professor of Political Science and Director, Center for Urban Studies (1968). AB, Indiana State University, 1963; MA, ibid., 1965; PhD, Southern Illinois University, 1968.


Zumwalt, Glen W., Distinguished Professor of Aeronautical Engineering (1968). BS, University of Texas, 1948; BSME, ibid., 1949; MSME, ibid., 1953; PhD, University of Illinois, 1959.

Retired Faculty

Albright, Penrose S., Professor Emeritus of Physics (1943). BS, Renssalaer Polytechnic Institute, 1922; MS, University of Wisconsin, 1929; PhD, ibid., 1936.

Aldrich, Benjamin M., Professor Emeritus of Mechanical Engineering (1956). BSME, University of Nebraska, 1927; MS, South Dakota College, 1934; Registered Professional Engineer.

Angulo, J. E., Retired Assistant Professor of Spanish (1961). BS, Instituto Santiago de Cuba, 1921; AB, Friends University, 1925; MA, University of Kansas, 1931.

Beebe, Viola McKinney, Assistant Professor Emeritus of Classical Languages (1929). BA, Wichita State University, 1909; AM, ibid., 1932.

Branch, Hazel Elisabeth, Professor Emeritus of Zoology (1922). BA, University of Kansas, 1908; AM, ibid., 1912; PhD, Cornell University, 1921.
Downing, Jacquetta, Professor Emeritus of French (1917). BA, Wichita State University, 1921; AM, University of Kansas, 1922; L'Institut de Phonétique (Sorbonne), 1929.

Duerksen, George N., Assistant Professor Emeritus of Industrial Education (1967). BS, Kansas State College of Pittsburg, 1929; MS, ibid., 1938.

Duerksen, Walter, Professor and Dean Emeritus, College of Fine Arts (1932). BPM, Wichita State University, 1931; MM, Northwestern University, 1938.

Fletcher, Worth A., Professor Emeritus of Chemistry (1927). AB, Indiana University, 1925; MA, ibid., 1926; PhD, ibid., 1927.

Gossett, Lucille, Assistant Professor Emeritus of English (1937). BA, Baker University, 1922; MA, Wichita State University, 1940.

Graham, Marie, Associate Professor Emeritus of History (1917). BA, Wichita State University, 1915; MA, University of Chicago, 1916.

Hanson, Gordon C., Professor Emeritus of Educational Psychology (1938). BA, Augsburg College, 1928; PhD, University of North Dakota, 1937.

Hanson, Loring O., Professor Emeritus of Aeronautical Engineering (1955). BSCE, University of Kansas, 1928; MSCE, University of Wisconsin, 1932.

Haymaker, Mary, Associate Professor Emeritus of English (1925). BA, Wichita State University, 1925; MA, University of Colorado, 1927.

Hekhuis, Lambertus, Dean Emeritus of College of Liberal Arts and Sciences (1926). AB, Hope College, 1913; MA, ibid., 1916; BD, University of Chicago, 1925; PhD, ibid., 1925.

Hinton, Evelyn A., Associate Professor Emeritus of Educational Psychology (1929). Graduate, Columbia Normal School of Physical Education at Chicago, 1924; BA, Wichita State University, 1929; MS, University of Washington, 1938.


Marsh, T. Reese, Professor Emeritus of English (1943). BA, The Johns Hopkins University, 1924; PhD, University of Iowa, 1933.

Mood, Robert Gibbs, Professor Emeritus of English (1936). AB, Southwestern University, 1920; AM, Columbia University, 1925; PhD, University of Illinois, 1939.


Paddock, Beatrice, Assistant Professor Emeritus, Library (1962). AB, Friends University, 1926; ABLIS, University of Michigan, 1930.

Ricketts, Faye Margaret, Associate Professor Emeritus of Business Education (1931). AB, Business Administration, Wichita State University, 1927; MBA, University of Texas, 1932.


Ryan, Robert, Associate Professor Emeritus of Economics (1946). BS, Michigan State Normal College, 1934; BSC, Detroit Business University, 1936; MA, Wayne University, 1946.

Rydjord, John, Dean Emeritus of Graduate School (1926). AB, University of Wisconsin, 1922; MA, Northwestern University, 1923; PhD, University of California, Berkeley, 1925.

Schoener, Wilhelmina, Assistant Professor Emeritus of German (1963). AB, Friends University, 1926; MA, University of Kansas, 1962.

Strange, John M., Associate Professor Emeritus of Art (1944). BFA, University of Oklahoma, 1931; MS, Fort Hays Kansas State College, 1938.

Taggart, Gladys Martha, Professor Emeritus of Physical Education (1928). BS, University of Iowa, 1923; MA, Teachers College, Columbia University, 1930; PhD, New York University, 1959.

Van Keuren, Katharine, Associate Professor Emeritus, Library (1945). AB, Wichita State University, 1922; MA, Columbia University, 1938.

Wall, Hugo, Professor Emeritus of Political Science (1929). AB, Stanford University, 1926; PhD, ibid., 1929.

Walker, Margaret L., Assistant Professor Emeritus of English (1947). AB, University of Kansas, 1919; MA, Radcliffe College, 1930.

Watson, Tully F., Professor Emeritus of Physics (1947). BA, University of Oklahoma, 1928; MS, ibid., 1930; PhD, University of Illinois, 1935.

Wilner, George D., Professor Emeritus of Speech and Dramatic Art (1923). AB, University of Michigan, 1917; AM, ibid., 1919.

Wrestler, Fema E., Associate Professor Emeritus of Mathematics (1947). BS, Kansas State College of Pittsburg, 1924; AB, University of Kansas, 1925; MA, ibid., 1926.


**APPLIED MUSIC INSTRUCTORS—1972-1973**

| Bickford, Mary | Fear, Judy | Pease, Beatrice |
| Caywood, Kathryn | Hahn, Jerry | Reed, Sharon |
| Dicker, Judy | Jones, Cay | Rickmeier, Allan |
| Dusek, Dennis | Parks, Jean | Yenne, Janet |

**Lecturers—1972-1973**

Addison, Larry L.—Mathematics
Armstrong Max L.—Administration of Justice
Asch, Morton J.—Psychology
Baird, John M.—Mechanical Engineering
Bauman, Alice—Physical Education
Benedict, Esther E.—Mathematics
Bevis, Clyde E.—Administration of Justice
Blackwood, Wallace B.—Mathematics
Blakemore, Glen—Speech
Borthwick, Don R.—Accounting
Bowen, Virginia P.—Social Work
Britton, Regina J.—Graphic Design
Buckley, John J.—Speech
Cardenas, Michael P.—Mathematics
Carrier, Cecil C.—Geology
Chacko, Charivukalayil G.—Political Science
Coakley, Marie Lakme—Secondary Education
Collins, Theodore R.—Sociology
Cook, Patricia A.—Business Education
Criss, Carthur P.—Secondary Education
DeLozier, Andy P.—Administration of Justice
Detrich, Alan L.—Studio Arts
Dowler, Charles R.—Industrial Engineering
DuVall, Connie—Speech
Eckert, William G.—Administration of Justice
Emery, LaMont C.—Mathematics
Farmer, Louise—Mathematics
Faws, Robert E.—Humanities
Feeney, Richard T.—Mathematics
Foster, Vicki L.—Art Education
Gire, Terry H.—Political Science
Gosnell, Imogene—History
Granger, Carey D.—Secondary Education
Gries, Ruth R.—Geology
Grimaldi, Denise—French
Gurley, L. Lorenne—Educational Psychology
Hamilton, Beryl A.—Political Science
Hamilton, Stella M.—Mathematics
Hayes, Lance—Speech
Hernandez, James Z.—Administration of Justice
Herstein, Samuel—Industrial Engineering
Holmes, Jeanette R.—Secondary Education
Holmes, Michael R.—Anthropology
Howell, James—Elementary Education
Hunter, Ann—Nutrition
Hurley, Timothy J.—Journalism
Jackson, Frances—Musicology—Composition
Jones, Jordan D.—Administration of Justice
Koontz, Mary Jane—Elementary Education
Kruckenberg, Joanna M.—Administration of Justice
LaFever, Janice—English
LaMunyon, Richard E.—Administration of Justice

Faculty 375
Liebschutz, Thomas P.—Religion
Linsner, James D.—Mathematics
Love, George—Administration of Justice
McConachie, Bettie—Physical Education
McCrea, Judith B.—Studio Arts
McNally, Crystal—Library Science
McQueen, Jimmie C.—Mathematics
Martin, Thomas W.—Mathematics
Matthews, C. James—Sociology
Morgan, Betty L.—Reading Laboratory
Nathan, C. Henry—Speech
Nathan, Ruth K.—Elementary Education
Nelson, Larry R.—Accounting
Norby, Lorraine B.—Elementary Education
Oswald, Charles R.—Administration of Justice
Paris, Barry J.—German
Payne, Lewis—Inhalation Therapy
Pearson, Charles—Journalism
Pearson, Richard—Inhalation Therapy
Pease, Beatrice S.—Performance
Pinkerton, James L.—Administration
Reece, Willard T.—Religion
Riffel, Frederick A., Jr.—Biology
Ruth, Lonnie R.—Mathematics
Sanborn, Keith—Administration of Justice
Simpson, Roy M.—Industrial Education
Smith, Elizabeth Ruth—Biology
Sparks, Nancy—Secondary Education
Storm, David N.—Sociology
Tarrant, Bill—Journalism
Thomas, James H.—American Studies
Thomas, Judith—Economics
Troutman, Loretta J.—Mathematics
Vanlandingham, Bruce L.—Studio Arts
Villalpando, Innes J.—Spanish
Weaver, Mike—Inhalation Therapy
Webb, Larry L.—Studio Arts
Wilson, Marene—Musicology—Composition
Witrogen, Mel—Journalism
Yates, Kenneth—Psychology
INDEX

A

A/Pass/Fail Option
Abbreviations, Departmental
Ablah Library. See also Library and Audiovisual Services
Academic Achievement, Exemptions for Superior
Academic Calendar, 1973-1974
Academic Appeals, Court of Student
Academic Fees, General
Academic Information
a/pass/fail option
change of grades
classification of students
court of student appeals, the
credit/no credit courses
exemptions for superior achievement
grading system
graduate credit for seniors
graduation requirements (core curriculum)
honors program, University
independent study
interim grading practices
meaning of course numbers
probation and dismissal
progress reports
recognition
registration
second bachelor's degree
transfer of credits
transition period
withdrawal
Academic Recognition
Accounting
Accreditation and Associations, University
Achievement, Superior, Exemptions for
Activities and Organizations, Student. See also Organizations and Student Activities
Add Fee, Drop and
Address, Reporting Change of
Administration
Administration and Supervision, Educational
Administration, College of Business. See Business Administration
Administration of Justice
Administrative Officers
Admission Information
continuing education students
freshman students
graduate students
international students
requirements for each college.
See individual college residence defined
students from other universities
summer session
transfer students
Advanced Placement Credit
Advance Registration
Aeronautical Engineering
Aerospace Studies (Air Force ROTC)
Air Force ROTC. See Aerospace Studies
American Studies
Anthropology
Appeals, Court of Student Academic
Applied Music. See also Fine Arts, College of
Applied Music Instructors
Army ROTC. See also Military Science
Art, Division of
Art Collections
Art, Commercial. See also Graphic Design
Art Education. See also Fine Arts, College of
Art History
Arts, Studio. See also Fine Arts, College of
Assessment and Collection of Fees
Associate Deans, Student Services
Attendance, Class. See also Student Responsibility
Audiology. See also Logopedics
Audit Courses, Fees
Awards, Financial

Index 377
Bachelor's Degrees. See Degrees Bachelor's Degree, A Second 30
Beech Wind Tunnel, Walter H. 45
Biology 261-265
Board of Regents, Kansas 7
Bureau of Educational Placement 37
Business Administration, College of 63
accounting 67, 69-72
administration 68, 73-79
business education 68, 79-81
certificates and degrees in 66
bachelor of business administration 66-69
business teacher education degree 69
certificate of applied science, secretarial training 69
certificate of certified public accountant 70
certificate in management accounting 70
economics. See also Fairmount College 68, 81-86
probation 65
requirements, restrictions 65
programs in 63, 64
accreditation 64
graduate 63-64
undergraduate 63
research and continuing professional development 64
regulations 64
admission 64-65
Business Education 68, 79-81
Business and Economic Research, Center for 41

C
Calendar, Academic, 1973-1974 6
Campus Activities Center 44
Campus Activities Center Operations Fee 30-31
Campus Privilege Fee 30
Career Planning and Placement Center 36
Center for Business and Economic Research 41
Center for Educational Development 42
Center for Human Appraisal and Communication Research 42
Center for Management Development 42
Center for Urban Studies 42
Ceramics. See Studio Arts

Certificates
administration of justice 58-59, 249
certified public accountant 70
cytotechnology 229
dental hygiene 231
inhalation therapy 234-235
management accounting 70
secretarial training 69
teacher education 91
Chapel, Harvey D. Grace Memorial 45
Chemistry 265-269
Civil Rights. See also Human Relations 9
Change of Grades 20
Change of Address, Reporting 14
Collection and Assessment of Fees 33
Colleges of the University. See individual listings
Commercial Art and Graphic Design. See also Fine Arts, College of 175-177, 185-187
Communication Sciences (Logopedics) 117, 118, 120
Computer Science 243-244, 299-300
Computing Center, Digital 44
Continuing Education, Division of 13, 38-40, 59
admission to 13, 39-40
bulletin 40
academic probation and dismissal 39
transition semester 39
transferring credit from residence and extension credit 40
Contracts and Compensatory Charges 31
Core Curriculum 28-29
University College 54
Counseling 36
Courses, Audit, Fees 31
Course Description, Key to 48
Course Numbers, Meaning of 15
Courses Required for Graduation (Core Curriculum) 28-29
Course Symbols, Key to 48-49
Court of Student Academic Appeals 27
Credit, Advanced Placement 21
Credit by Examination 21-23, 32
Credit, Graduate, for Seniors 23
Credit/No Credit Courses 15-16, 18
Credit Points and Grade Point Average 19-20
Cum Laude 25
Cytotechnology. See also Health Related Professions, College of 229-230

378
Military Science (U.S. Army ROTC) ........................................ 122-124
Minority Programs. See Project TOGETHER

Minority Studies .................................................. 301-302
Miscellaneous Fees ............................................. 32
Music, Division of. See also Fine Arts, College of 191-209, 245
Music Education. See also Fine Arts, College of 124, 203-207
Music Fees ......................................................... 31-32
Music Performance ............................................... 207-209
Musicology-Composition ........................................ 199-203

Nursing ................................................................. 57-58, 221-225
Nurse Clinician ....................................................... 235-236

O
Officers, Administrative .............................................. 7
Organizations, Student ........................................... 46-48
departmental ..................................................... 47
governing .......................................................... 48
honorary and professional .................................. 47
living groups ......................................................... 48
special interests .................................................. 48
Orientation ......................................................... 35-36

Painting, Drawing and. See Studio Arts
Pathology, Speech. See also Logopedics ......................... 119, 120
Payment of Fees .................................................... 33
Pass/Fail Option ...................................................... 16, 20
Performance, Music .............................................. 207-209
Personnel and Guidance, Student (Education) ............... 134-135
Philosophy ............................................................. 303-305
Physical Education, Health and Recreation .................... 124-129
requirements ....................................................... 125-126
service program .................................................. 124
Physics ................................................................ 306-309
Physical Therapy ................................................. 225-228
Physician's Assistant ............................................. 236
Placement bureau of educational placement center .......... 36-37
Political Science ..................................................... 309-314
Portuguese (see Romance Languages) ......................... 246
Prelaw ................................................................. 245
Premedical ............................................................ 246
Preoptometry .......................................................... 246
Prepharmacy .......................................................... 246
Preprofessional Programs. See also individual listings.
liberal arts and sciences ................................... 245-248
university college .................................................. 57-59
Prescribed Fields of Study (Core Curriculum) ............ 28-29
Pretheological ......................................................... 247
Preveterinary .......................................................... 246
Printmaking. See Studio Arts
Probation and Dismissal Standards, Academic ............... 26-27
Progress Reports, Academic ...................................... 26
Project TOGETHER .................................................. 41
Psychology ............................................................ 314-317
Psychology, Educational ........................................... 104-107
Public Service Careers .......................................... 247
Puebla, Mexico Summer Program in .............................. 41
Radio, KMUW-FM ..................................................... 46
Reading and Writing Improvement Labs ....................... 45
Recognition, Academic ............................................. 24-25
Recreation ............................................................. 46
Refund Policy .......................................................... 33-34
Regents, Kansas Board of ........................................... 7
Registration academic ............................................. 14-15
advance ............................................................. 35
late fee ............................................................... 32
Religion ................................................................. 318-320
Religious Activities .................................................. 47
Retired Faculty ......................................................... 372-374
Research and Sponsored Programs ............................... 41
Requirements for Graduation ................................... 27-30
Required Courses for Graduation ................................. 28-29
Residence Defined .................................................. 14
Responsibility, Student ............................................. 9-10
Romance Languages ................................................. 320-327
French ................................................................. 320, 322-324
Greek ................................................................. 321, 325
Italian ................................................................. 321, 324-325
Latin ................................................................. 321, 325
Portuguese ............................................................ 321, 325
Spanish ................................................................. 321-322, 326-327
ROTC Air Force. See Aerospace Studies ......................... 99-101
Army. See Military Science 122-124
Russian ................................................................. 285

Scholarships ............................................................ 34
Sculpture. See Studio Arts
Second Bachelor's Degree ......................................... 30
Secondary Education 93-98, 130-134
Social Work 133-134
Secretarial Training 69
Selective Service 37
Senior Classification 15
Seniors, Graduate Credit for 23
Shocker Week 35-36
Social Work 247, 331-332
Sociology 328-332, 331-332
Sophomore Classification 51
Sororities 47
Spanish. See Romance Languages
Special Facilities. See Facilities
Special Programs 41-43
   Center for Business and
      Economic Research 41
   Center for Educational
      Development 42
   Center for Human Appraisal and
      Communication Research 42
   Center for Management
      Development 42
   Center for Urban Studies 42
   Division of Continuing Education.
      See also Continuing Educa-
      tion 38-40
   Project TOGETHER 41
   Research and Sponsored Programs 41
   Summer Session 40-41
Speech 332-337
Speech Disorders. See also Logopa-
   pedics 118
Speech Pathology. See also Logopa-
   pedics 119, 120
Sports Facilities 46
Statistics 295, 300
Student Activities, Organizations 46-48
   fraternities and sororities 47
   organizations 47-48
   religious activities 47
   student government 46
   Student Affairs, Vice President for 35
   Student Appeals, The Court of 27
   Students, Classification of 15
   Students from Other Universities,
      Admission 12
   Student Government 46
   Student Health and Hospitalization 38
   Student Personnel and
      Guidance 134-135
   Student Responsibility 9-10
   Student Services 35-38
      associate deans 35
      bureau of educational placement 37
      career planning and placement 36
   housing 37-38
   international program 36
   orientation 35-36
      advance registration 35
      counseling 36
      shocker week 35
   student health and hospitalization 38
      testing center 36
   veterans affairs and selective
      service 37
   vice president for student affairs 35
   Students, Associate Deans of 35
   Studio Arts, Department of. See also
      Division of Art 177-182, 187-191
   Summa Cum Laude 25
   Summer Program in Mexico 41
   Summer Session 40
      admission requirements 40
      bulletin 40
      enrollment 40
      fees 41
      summer program in Puebla,
      Mexico 41
   Superior Achievement, Exemptions
      for 23
   Symbols, Course, Key to 48-49
T
   Teacher Placement Fee 32
   Teaching, Liberal Arts Program 248
   TOGETHER, Project 41
   Testing Center 36
   Transcript, Charges for 32
   Transfer Students, Admission 11
   Transfer of Credits within the
      University 16
   Transition Period, Academic 21
U
   University
      accreditation and associations 9
      facilities 43-46
      faculty 339-372
      history 9
      human relations 9
      profile (description) 8
      special programs 41-43
      student responsibility 9-10
   University College 51-61
      academic opportunities 53-55
      advanced credit 54
      general education (core
      curriculum) 54
      personal development 54
      special programs 54
      transition period 53

Index 383
academic progress, probation and dismissal .......... 56 - 57
emergencies .......... 56
exceptions .......... 56
readmission after dismissal .......... 57
admission to .......... 52
continuing education .......... 59
course listing for .......... 59
humanities .......... 59
noncredit courses .......... 59 - 60
personal development .......... 59
preprofessional programs .......... 57 - 59
administration of justice .......... 58 - 59
diploma nursing .......... 57
academic advising .......... 53
orientation .......... 53
student responsibility .......... 52
transferring to a degree-granting college .......... 55
University Faculty .......... 339-372
University Honors Program .......... 23
Unpaid Fees .......... 33
Urban Studies, Center for .......... 42
Veterans Affairs .......... 37
Vice President for Student Affairs .......... 35
Wind Tunnels .......... 45
Withdrawal .......... 25 - 26
administrative .......... 25
voluntary .......... 25 - 26
Writing Improvement Lab, Reading and .......... 45
Workshop Fees .......... 31
Work-Study Program .......... 34