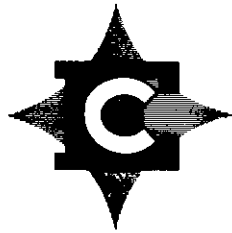


east  
central  
junior  
college



1973-1975 Catalog

**EAST CENTRAL JUNIOR COLLEGE**  
**P. O. BOX 529 — UNION, MISSOURI 63084**  
**TELEPHONE: 314-583-5193**

## THE CURRICULUM: COURSES OF INSTRUCTION

The first digit of a course number refers to academic level of the course; courses numbered 100 are designated primarily for freshmen; courses numbered 200 for sophomores.

The third digit of a course number refers to the number of semester hours credit given for that course. Thus, History 133 earns for the student three hours credit.

The College reserves the privilege of withdrawing any course for which there is not sufficient enrollment.

### COURSE DESCRIPTIONS

#### ART

- Art 102      CRAFTS      2 hours  
Course is designed to allow the student to explore a number of different craft areas such as: mosaics, basketry, printmaking, etc. Individual projects will be developed in those areas in which the student has special interests. The course is especially well suited to teachers, parents, and other non-art majors who are interested in developing creative hobbies.  
  
Prerequisite: none
- Art 103      COMPOSITION      3 hours  
Representational, abstract, non-objective drawings and paintings; space and volume relations; movement and direction of planes in development of visual units of design and their integration in the whole organization; introduction to perspective and light and shade.  
  
Prerequisite: none
- Art 113      ART APPRECIATION I      3 hours  
A general survey of the artistic activities of man from pre-historic to modern times. Slides and 16mm films are used in conjunction with the course.  
  
Prerequisite: none
- Art 123      ART APPRECIATION II      3 hours  
A survey of art history from 1900 to the present, with some studio applications. Selected art movements and techniques will be discussed.  
  
Prerequisite: none

Art 133 INTRODUCTION TO ART 3 hours  
An introduction to art through various media and techniques such as design, drawing, printmaking, color, shading, sculpture, space relationship. Media include ink, cray-pas, plaster, and watercolor. This is a survey course and not recommended for art majors.

Prerequisite: none

Art 143 SCULPTURE I 3 hours  
An introduction to sculpture through the use of various media: cardboard sculpture, plastic sculpture, and wood or stone sculpture. Some drawing and research of sculptors and sculpture techniques is required.

Prerequisite: none

Art 153 DRAWING I 3 hours  
An introduction to drawing as an approach to space and form through a variety of methods, both traditional and contemporary. Emphasis will be placed upon analytical seeing as well as familiarization with and control of drawing material. Introduction to perspective and light and dark shades, some texture and other methods will be used for creative drawings.

Prerequisite: Art 103 or consent of the instructor.

Art 163 DRAWING II 3 hours  
Drawing of the human figure in charcoal, crayon, ink, and other media. Representational, abstract, and non-objective drawings, space and volume relations; movement and direction of planes in space; development of visual units of design and their integration in the whole organization.

Prerequisite: Art 153 or consent of the instructor.

Art 173 PAINTING I 3 hours  
Introduction to the material and techniques of oil and acrylic painting. Intended to develop technical and expressive abilities. Forms, colors, line, texture, and organization of painting will be studied. Practical application of framing techniques.

Prerequisite: Art 153 or 163 or consent of the instructor.

Art 183 PAINTING II 3 hours  
Theory and practice of painting using oil and acrylics. Development of form through color and appropriate emphasis.

on texture Objective appearance conditioned to meet the requirements of a controlled composition and aesthetic concept. While working with a variety of media, the student will be encouraged to emphasize individual expression.

Prerequisite: Art 173

Art 193                    COMMERCIAL ART                    3 hours  
Exploration of the basic elements of design as related to commercial art. The application of elements is stimulated by a wide variety of projects. Projects will stress the development of ideas rather than execution of media.

Prerequisite: none

Art 213                    SCULPTURE II                    3 hours  
Examination and analysis of traditional and contemporary sculpture. Sculptural design is related to material and techniques such as clay, wood, stone, plaster, and metal.

Prerequisite: Art 143 or consent of the instructor.



Art 223                    DESIGN                    3 hours  
Exploration of space, line, color, shape, and texture as the basic elements in visual expression. The application of elements is stimulated by a wide variety of projects stressing creative ability.

Prerequisite: Art 103 or consent of the instructor

Art 233 WATERCOLOR 3 hours  
The study of watercolor painting with emphasis upon color and composition and pictorial expression; experimentation with varied methods of watercolor painting. Studies will include washes and brush control

Prerequisite: Art 103 or 133 or consent of the instructor.

Art 243 PRINTMAKING I 3 hours  
Lecture and laboratory exercises dealing with history and techniques of printmaking, including the making of prints from material such as wood blocks, cardboard, and linoleum by using surface printing techniques.

Prerequisite: Art 133 or consent of the instructor

Art 263 PRINTMAKING II 3 hours  
Laboratory exercises dealing with the techniques of lithography, silkscreen and dry point as a fine printing medium. Emphasis is on individual exploration with materials.

Prerequisite: Art 133, or Art 243, or consent of the instructor

Art 271 DIRECTED STUDIES (HONORS) IN ART 1 hour  
The opportunity provides two alternatives. An exceptional art student may pursue (1) studying or developing independently a specifically prearranged topic or project, within the field of art, (2) develop experience in procedures, processes, and actual presentations of gallery displays.

Prerequisite: Consent of the instructor

#### AUTO MECHANICS

Auto 103 ELECTRICAL SYSTEMS 3 hours  
An advanced study of the automobile electrical systems. Beginning with a comprehensive study of direct-current theory, the module directs itself to application of the theory to the understanding of the automobile starting, charging, and ignition systems. Lab and shop work in this module concentrates on trouble-shooting and repair of auto electrical systems and components

Prerequisite: none





work will include brake servicing and replacement procedures, disc and drum service to hydraulic master and wheel cylinder assemblies.

Prerequisite: none

Auto 191

**STANDARD TRANSMISSIONS**

1 hour

A study of three and four speed standard transmissions including clutches and clutch designs. Shop work will concentrate on clutch replacement, shift linkage design and adjustments, and transmissions disassembly and repair procedures. The theory of gear design and ratios will be studied in great detail.

Prerequisite: none

Auto 192

**AUTOMATIC TRANSMISSIONS**

2 hours

A detailed study of the theory, operation, and repair of automatic transmissions. This module will begin with a complete study of planetary gear trains and their operation, hydraulic theory as applied to fluid couplings, and clutch theory and operation. Subsequent shop work will concentrate on removal, disassembly, overhaul, and replacement of automatic transmission assemblies. Special emphasis will be placed on diagnosis of automatic transmission problems.

Prerequisite: none

**Auto 201**      **AUTO MECHANICS PLACEMENT**      1 hour  
A course designed to assist auto mechanics students in obtaining jobs suitable to their training and interests.

Prerequisite: none

**Auto 202**      **ENGINES**      2 hours  
A detailed study of the gasoline-powered internal-combustion engine. Emphasis will be placed on procedures for repair and replacement of engine parts and components, engine cooling systems, and valve train assemblies. Engine overhaul and machine procedures will be discussed in detail, and shop work will include the disassembly, measuring, and reassembly of engine components.

Prerequisite: Auto 103 and Auto 112

**Auto 211**      **AIR CONDITIONING**      1 hour  
Beginning with a study of refrigeration and cooling theory, this module will concentrate on the diagnosis and repair of common automotive air-conditioning problems. Shop work will include the checking and charging of air-conditioning systems, as well as leak-detection procedures and correction of common compressor problems.

Prerequisite: none

**Auto 221**      **DRIVE LINES AND DIFFERENTIAL**      1 hour  
A study of the transmission of power from the transmission to the wheels of the modern vehicle. Shop work will concentrate on drive shaft service, adjustment and replacement of differential bearings and parts (including limited slip differentials), and diagnosis of vibration and axle noise problems.

Prerequisite: none

### **BIOLOGICAL SCIENCE**

**Bio 102**      **PERSONAL AND COMMUNITY HYGIENE**      2 hours  
A general course designed to develop proper attitudes and practices which will contribute to the fine art of living. Health problems which require community action are given consideration

Prerequisite: none





Bio 235

**COMPARATIVE ANATOMY**

5 hours

The comparative anatomy of vertebrate animals, including both embryological development and adult structure. Dissection includes a representative from each major vertebrate class. Includes classification of vertebrates, embryology, skeleton, muscles, coelome, digestive and respiratory systems, circulatory system, uninogenital system, and nervous system. Two lectures and six hours of laboratory per week.

Prerequisite: Bio 145 or consent of the instructor.

Bio 271,  
281, 291

**DIRECTED STUDIES (HONORS)  
IN BIOLOGY**

1 hour

The biology internship provides two alternatives. A student may pursue: (1) investigation or studying independently a specific prearranged topic, within the field of biological science, (2) assisting primarily in the laboratory, or in lecture when peer groupings are being utilized.

Prerequisite: Consent of the instructor.

**BUILDING AND SITE MAINTENANCE**

B & SM 100

**BUILDING AND SITE MAINTENANCE** 1100 Contact Hours

The Building and Site Maintenance program at East Central Junior College is designed to train regular students and adults for positions with many agencies. The program is intended to develop the necessary skills to develop the site, maintain the building and its equipment, diagnose basic systems and equipment malfunctions, accomplish normal repairs and initiate routine alteration or modification of the building and its systems.



The student will spend nearly 1100 hours in the program over an eleven month period. The final month will be spent in actually performing maintenance duties in a designated training station. The student will spend five hours a day, five days per week in the training program. All classes are scheduled in the morning so the student may hold down an afternoon or evening job.

### **BUSINESS**

**Bus 103**      **INTRODUCTION TO BUSINESS**      **3 hours**  
A survey course designed to give the student a general knowledge of the modern business world, and a better basis for choosing concentrated business offerings.

Prerequisite: none

**Bus 213**      **ACCOUNTING I**      **3 hours**  
Basic principles and procedures of business accounting, including debits and credits, journals and ledgers, the balance sheet, and income statements.

Prerequisite: none

**Bus 223**      **ACCOUNTING II**      **3 hours**  
A continuation of the study of accounting principles, including cash and investments, receivables, inventory, fixed assets, liabilities, accounting principles, manufacturing operations, and the analysis of financial data.

Prerequisite: Business 213

**Bus 233**      **INTRODUCTION TO COMPUTERS**      **3 hours**  
An introduction to basic theory and methodology of electronic data processing.

Prerequisite: Sophomore standing

### **BUSINESS MID-MANAGEMENT**

**Bus M 103**      **APPLIED ACCOUNTING**      **3 hours**  
This course is designed to give the student extensive practice in working with basic accounts, records, and statements.

Prerequisite: none

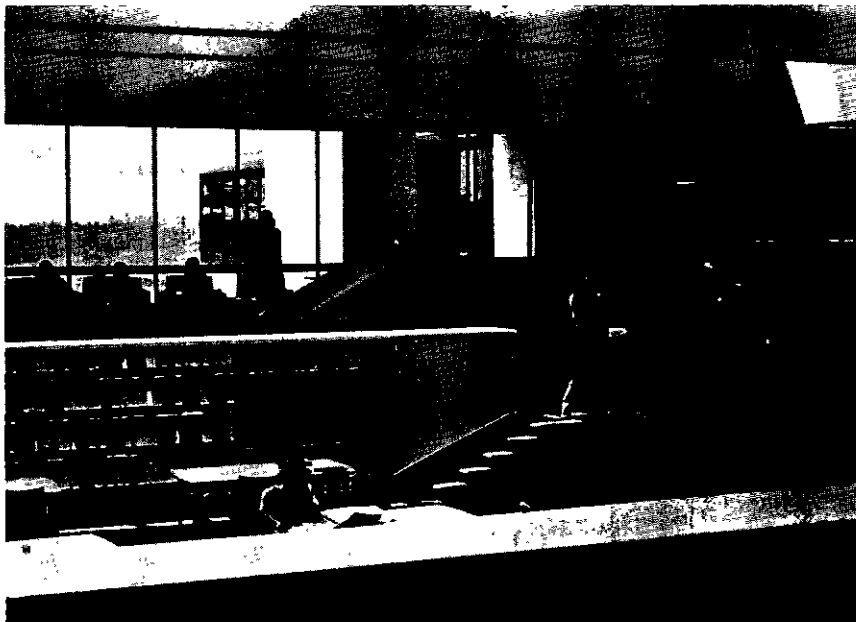
Bus M 201

**BUSINESS MANAGEMENT PLACEMENT**

1 hour

A course designed to assist business management students in obtaining jobs suitable to their training and interests.

Prerequisite: none



Bus M 213

**PRINCIPLES OF MARKETING**

3 hours

This course is designed to introduce the student to the managerial area of marketing. Although consumer and institutional behavior patterns and the overall role of marketing in the economy are covered, the major emphasis will be concerned with the types of problems confronting those involved in marketing management.

Prerequisite: none

Bus M 223

**SALESMANSHIP**

3 hours

A study of proper sales techniques for presenting and selling merchandise to the consumer. Methods of organization, training, and management of the sales force.

Prerequisite: none

- Bus M 233**                    **ADVERTISING AND DISPLAY**                    **3 hours**  
 Aspects of advertising with emphasis on the development of a proper marketing mix, the planning of advertising strategy, the management of personnel, the control of advertising operations, advertising research, and the development of display plans. Each student will be assigned an advertising project concerned with a marketing plan, advertising strategy, and an advertising budget.  
 Prerequisite: none
- Bus M 243**                    **PRINCIPLES OF FINANCE**                    **3 hours**  
 Basic financial management of the business firm involving procurement, allocation, and control of funds according to objectives of profitability and liquidity. Corporate financial behavior and practice are studied relative to initial organization and structure, financial instruments and market; measurement, analysis, and interpretation of investment and profit performance  
 Prerequisite: none
- Bus M 251**                    **DISPLAY PROJECT**                    **1 hour**  
 A study of the types and the role of visual merchandising in the retail store including creation, color and principles of design, incorporating actual experience in preparing retail displays.  
 Prerequisite: none
- Bus M 273**                    **PERSONNEL MANAGEMENT**                    **3 hours**  
 An evaluation and comparison of private and public personnel practices and techniques of recruiting, selecting, transferring, promoting, classifying, and training workers.  
 Prerequisite: none
- Bus M 283**                    **BUSINESS LAW**                    **3 hours**  
 A study of those areas of the law which affect most businesses; sales and credit, contracts, insurance, agency and employment, commercial paper, and personal property and bailments.  
 Prerequisite: none.
- Bus M 291, 292, 293**                    **INTERNSHIP**                    **1-3 hours**  
 This phase of the student's business management training will include actual work experience in a retail business with periodic discussions of the problems involved in applying classroom principles to the job  
 Prerequisite: Enrollment in Business Management Program and consent of the instructor

## CHEMISTRY

- Chem 105      INTRODUCTION TO CHEMISTRY      5 hours  
Introduction to the basic principles of chemistry, including inorganic, analytical, physical, and organic chemistry. Environmental and practical applications are emphasized with one lab session per week being used for small group discussions of current topics. Three hours of lecture and two two-hour laboratories per week.  
*This course is designed for the student with no background in chemistry.*  
Prerequisite: none
- Chem 115      GENERAL CHEMISTRY I      5 hours  
Topics of study include slide rule, atomic and molecular structure, bonding, chemical equations, gases, solutions, and an introduction to organic chemistry. Three one-hour lecture periods and two two-hour laboratory periods per week.  
  
Prerequisite: A satisfactory score on the MMPT and either Chem 105 or high school chemistry.
- Chem 125      GENERAL CHEMISTRY II      5 hours  
A continuation of Chem 115, including chemical equilibria, complexions, thermodynamics, oxidation-reduction reactions, and qualitative analysis. Three one-hour lecture and recitation periods and two two-hour laboratory periods per week.  
  
Prerequisite: Chem 115
- Chem 234, 235      QUANTITATIVE ANALYSIS      4-5 hours  
A study of the fundamental principles of quantitative analytical chemistry, including gravimetric volumetric and spectrophotometric determinations. Two hours lecture and two or three three-hour laboratory periods per week.  
  
Prerequisite: Chem 125
- Chem 245      INTRODUCTORY ORGANIC AND BIOLOGICAL CHEMISTRY      5 hours  
A survey of major topics of organic and biological chemistry, including aliphatic and aromatic hydrocarbons, carbohydrates, lipids, amino acids, the vitamins, and steroids. The course relates chemical applications to human metabolism, agriculture, home economics, and medical technology programs. Four hours lecture and three hours laboratory each week.  
  
Prerequisite: Chem 105 or Chem 115

**DIRECTED STUDIES IN  
CHEMISTRY (HONORS)**

1 hour

The student enrolled for directed studies has two alternatives:  
(1) investigate a specific topic within the field of chemistry. (2)  
Assist in the laboratory, stock room, or with individualized  
instruction under the supervision of an instructor.

Prerequisite: Consent of the Instructor.

**DRAFTING AND DESIGN TECHNOLOGY**

Draft 115

**ENGINEERING DRAWING AND  
DESCRIPTIVE GEOMETRY**

5 hours

This course is designed to give the student a working knowledge  
of fundamental drawing practices and the geometric  
relationships of points, lines and planes in space. Areas covered  
include the techniques of lettering, sketching, instrumental  
drawing of mechanical parts, sectional and auxiliary views and  
conventional drafting practices.

Prerequisite: none

Draft 133

**ARCHITECTURAL DRAWING**

3 hours

This course introduces the fundamental principles of residential  
design. It includes instruction on materials and methods of  
construction, design standards and room arrangement. Course  
emphasis will be given to the development of complete  
residential plans.

Prerequisite: Draft 115

Draft 143

**MACHINE DRAWING**

3 hours

The student will work in problem solving situations involving  
the development of drawings of castings, forgings, machinings  
and sheet metal layout. Also, the methods of making working  
and assembly drawings will be included, providing depth in the  
area of machine drawing. Dimensioning will be of primary  
importance.

Prerequisite: Draft 115

Draft 152

**MODERN DRAFTING TECHNIQUES**

2 hours

This is an exploratory course which has major emphasis on  
photography, film processing, model building and their in-  
dustrial applications. Students will participate in development  
of projects utilizing the latest available industrial techniques.

Prerequisite: Draft 115

**Draft 163**      **MATERIALS AND PROCESSES**      3 hours  
A survey of current engineering materials and the various processes used to shape them. Materials studied include a review of ferrous and nonferrous metals, plastics, rubbers, and ceramics. Emphasis is placed on the advantages and limitations of the various casting, forging, machining, grinding, forming, molding, welding, heat treating and powder metallurgy processes used to shape materials.

Prerequisite: none

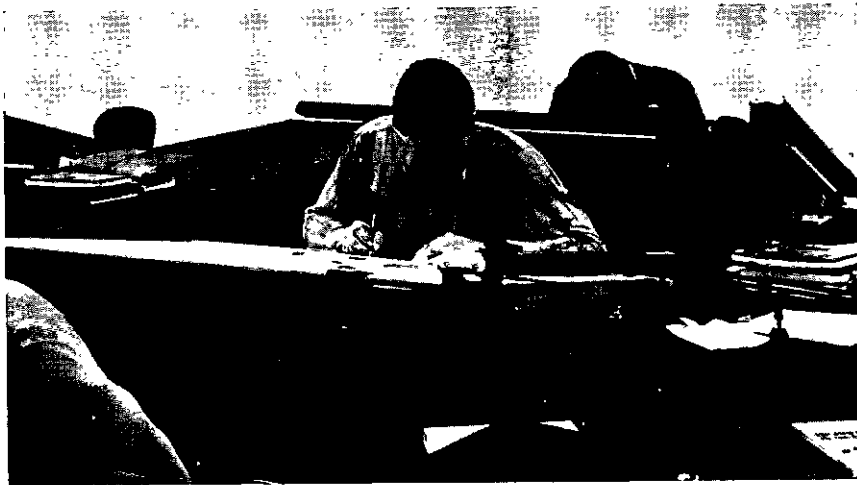
**Draft 173**      **PRINCIPLES OF POWER**      3 hours  
Principles of hydraulics and pneumatics fundamental to fluid power design are presented. Other topics include principles of mechanical and electrical powered systems and power system schematics

Prerequisite: Math 100 or consent of the instructor.

**Draft 201**      **DRAFTING PLACEMENT**      1 hour  
A course designed to assist drafting students in obtaining jobs suitable to their training and interests.

Prerequisite: none

**Draft 202**      **TECHNICAL ILLUSTRATION**      2 hours  
A course to develop the understanding and skills to produce technical illustrations in the many forms required by industry. Included will be an intensive study of the pictorial forms of







**Draft 271**      **DIRECTED STUDIES IN  
DRAFTING DESIGN**      **1 hour**  
Investigation in depth of a specific industrial problem or actual  
experience in related office practices.

Prerequisite: consent of the instructor.

**Draft 273**      **STRUCTURAL DRAWING**      **3 hours**  
The course concentrates on detailing and delineating the  
structural systems encountered in architectural and civil  
construction. Systems included will be those based on materials  
including wood, steel and concrete components. Shop drawings  
and erection drawings will be covered.

Prerequisite: Draft 115 and 253

### **ECONOMICS**

**Econ 213**      **PRINCIPLES OF  
MACRO-ECONOMICS**      **3 hours**  
The social control of the economic system by means of  
monetary, fiscal and regulatory policies of the government and  
by the market process.

Prerequisite: none

**Econ 223**      **PRINCIPLES OF  
MICRO-ECONOMICS**      **3 hours**  
An intensive study of the tools of economic analysis and their  
application to problems of business and public policy, with an  
emphasis on firms, households, and markets

Prerequisite: none

### **EDUCATION**

**Ed 101**      **CAREER DECISIONS**      **1 hour**  
A course designed to assist students in self inventory, to help the  
student see and understand his interests, aspirations, needs,  
personal assets and liabilities. Students will gain experience in  
exploring the world of work, finding information on jobs, and  
learning to use that information. Students will learn how to  
make decisions regarding themselves and their relationship to  
the world of work

Prerequisite: none

Ed 113                    **INTRODUCTION TO EDUCATION**                    3 hours  
An introduction to the many facets of American education designed to give the student accurate information about education and to provide him with opportunities to determine his interest and aptitude for pursuing an educational profession.

Prerequisite: none

Ed 223                    **EDUCATIONAL PSYCHOLOGY**                    3 hours  
A study of theories and facts concerning human behavior in such areas as motivation, learning, and social development, as applied to the educational process.

Prerequisite: Psychology 113 or consent of the instructor.

### **ENGINEERING**

Engr 113                    **ENGINEERING DRAWING AND  
DESCRIPTIVE GEOMETRY**                    3 hours  
A course in orthographic projections (multiview, sections, auxiliaries), isometric and oblique drawing and simple dimensioning. Emphasis is given to interpretation of drawings, technique of sketching, care and use of drafting instruments, and preparation and interpretation of graphs and charts.

Prerequisite: Satisfactory score on pre-test.

Engr 203                    **ENGINEERING MECHANICS—STATICS**                    3 hours  
Application of the principles of mechanics to engineering problems of equilibrium. Topics include resultants, equilibrium, friction, trusses, center of gravity, and moment of inertia.

Prerequisite: Phys 215  
Corequisite: Math 225

### **ENGLISH**

Eng 103                    **BASIC FUNDAMENTALS OF ENGLISH**                    3 hours  
A course dealing with the fundamentals of grammar and language usage. This course will partially fulfill the English requirement for the technical education student or may prepare a student to enter English 123, but does not carry credit applicable toward the Associate of Arts degree.

Prerequisite: none

Eng 123

ENGLISH COMPOSITION I

3 hours

A course dealing with the principles of composition including rhetoric, grammar, and usage. The course emphasizes the adequate development of ideas through the use of various rhetorical patterns. Research techniques are taught.

Prerequisite: Eng 103 or demonstrated proficiency on the MCET and on a writing sample.



Eng 123H

ENGLISH COMPOSITION (HONORS)

3-6 hours

An intensified composition course open to freshmen who qualify as evidenced by their high school ranks, placement test scores, and a writing sample. The student who receives a grade of A or B will not be required to take English 133. This student will receive six hours credit in composition but will be required to take a literature course to fulfill the English graduation requirement.

Prerequisite: Demonstrated high proficiency on the MCET and on a writing sample.

Eng 133

ENGLISH COMPOSITION II

3 hours

A continuation of the study of English composition which provides practice in writing longer units of exposition including argumentation and critical papers.

Prerequisite: Eng 123

Eng 143 TECHNICAL WRITING 3 hours  
Introduction to the practical aspects of preparing reports. The emphasis is on the techniques of collecting and presenting scientific data by means of formal and informal reports. Also included are other elements of communication concerning science and industry.

Prerequisite: One previous English course.

Eng 163 FICTION 3 hours  
A study of literature concentrating on the forms and themes of prose fiction. The course includes the study of novels as well as short stories.

Prerequisite: Eng 103 or Eng 123

Eng 173 POETRY AND DRAMA 3 hours  
A study of literature concentrating on the forms and themes of poetry and drama. The course emphasizes the study and analysis of poems and plays.

Prerequisite: Eng 103 or Eng 123

Corequisite: Eng 123

Eng 183 FILM 3 hours  
Film is a humanities course which will deal with the motion picture as a serious art form and social force in society. Selected films will be analyzed with respect to aesthetics, production methods and social significance.

Prerequisite: Eng 103 or Eng 123 or consent of the instructor.

Eng 193 CHILDREN'S LITERATURE 3 hours  
A study of children's literature from pre-school to sixth grade to acquaint the students with the best forms of literature for children and to develop standards of judgment in the selection of reading materials for children.

*Recommended for elementary education majors.*

Prerequisite: Eng 123

Eng 213 ENGLISH LIFE AND LITERATURE I 3 hours  
A survey of English literature from the Anglo-Saxon period through the Age of Reason.

Prerequisite: Eng 123 and sophomore standing, or consent of the instructor.

Eng 223            ENGLISH LIFE AND LITERATURE II            3 hours  
A survey of English literature from the Romantic Period to the  
Twentieth Century.

Prerequisite: Eng 123 and sophomore standing, or consent of the  
instructor.

Eng 233            AMERICAN LITERATURE I            3 hours  
A survey of American Literature from the colonial period up to  
the Civil War.

Prerequisite: Eng 123 and sophomore standing, or consent of the  
instructor.

Eng 243            AMERICAN LITERATURE II            3 hours  
A survey of American Literature from the Civil War to the  
present.

Prerequisite: Eng 123 and sophomore standing, or consent of the  
instructor.

Eng 271            DIRECTED STUDIES IN LITERATURE            1 hour  
Intensive study of various movements, themes, genres, or  
authors in American or English literature, the study to be  
determined by instructor and student. The study will include  
extensive reading, discussion, and an in-depth paper.

Prerequisite: Consent of the instructor and a grade point  
average of 3.0 or better in the department.

#### FRENCH

Fren 115            ELEMENTARY FRENCH            5 hours  
Elementary French is an introductory French course designed  
to give the student facility in understanding, speaking, reading,  
and writing the new language so that he may communicate in a  
variety of situations.

Prerequisite: none

Fren 125            INTERMEDIATE FRENCH            5 hours  
Intermediate French is a continuation of French 125. Emphasis  
is placed upon reading selections to give the students exposure  
to modern French prose on a variety of subjects.

Prerequisite: Fren 115

Fren 213

**FRENCH READINGS**

3 hours

Further grammar and vocabulary building.

Prerequisite: Fren 125

**GEOGRAPHY**

Geog 113

**GEOGRAPHY OF THE NEW WORLD**

3 hours

A regional study of North America, South America, and Australia, with emphasis on the natural resources, political conditions, economy, population, and cultural patterns of each area.

Prerequisite: none

Geog 123

**GEOGRAPHY OF THE OLD WORLD**

3 hours

A regional study of Europe, Africa, and Asia with emphasis on the natural resources, political conditions, economy, population, and cultural patterns of each area.

Prerequisite: none

**GEOLOGY**

Geol 115

**INTRODUCTION TO  
PHYSICAL GEOLOGY**

5 hours

An introductory course in physical geology in which materials of the earth's crust, structures, and geologic features of the surface are studied. Field trips and the laboratory study of common minerals and rocks will be included in the five-hour section. Three lecture and four hours laboratory per week.

Prerequisite: none

**GERMAN**

Germ 115

**ELEMENTARY GERMAN**

5 hours

Study of the fundamentals of the German language, including grammar, pronunciation, and idioms. Emphasis is placed upon reading simple German prose and development of sightreading skill.

Prerequisite: none.





students of history and others who desire an elective course in the humanities

Prerequisite: none

**Hist 233** FOUNDATIONS OF WORLD CIVILIZATION III (LATIN AMERICA) 3 hours  
An interdisciplinary topical study of the social, economic, political, cultural and intellectual conditions of modern Latin America from 1800 to the present. The course is designed for students of history and others who desire an elective course in the humanities.

Prerequisite: Sophomore standing or consent of the instructor

**Hist 243** FOUNDATIONS OF WORLD CIVILIZATION IV (AFRICA AND ASIA) 3 hours  
An interdisciplinary study of Africa and Asia from 1800, including studies of the politics, culture and people of both recent and contemporary Africa, China, Japan, India, and other selected nations of Asia. The course is designed for students of history and others who desire an elective course in the humanities.

Prerequisite: Sophomore standing or consent of the instructor

**Hist 271** DIRECTED STUDIES IN HISTORY (HONORS) 1 hour  
The student enrolled for directed studies has two alternatives: (1) investigate a specific topic within the field of history (2) assist with tutorial history instruction under the supervision of an instructor.

Prerequisite: consent of the instructor

#### JOURNALISM

**Jour 102** PUBLICATIONS PRACTICUM I-YEARBOOK 2 hours  
Students enrolled in this course produce the college yearbook. The course includes instruction and practical experience in copy writing, editing, layout and design, and photography.

Prerequisite: none

**Jour 112** PUBLICATIONS PRACTICUM II-NEWSPAPER 2 hours  
Practice in news reporting, newspaper layout and design, and

pasteup. The course is open to all students who want practical experience working on the college newspaper **Cornerstone**.

Prerequisite: none

## MATHEMATICS

### Math 100

#### BASIC MATHEMATICS

3 hours

A beginning course which will satisfy certain terminal program requirements but does not satisfy Associate of Arts degree requirements. Topics covered include the following: basic principles of arithmetic, positive and negative numbers, exponents, fractions, decimals, combining like terms, order of operations and symbols of grouping, working with formulas, linear equations, word problems, ratio and proportion, units of measure, area and volume formulas, multiplying polynomials, factoring polynomials, fractions containing variables, radicals, graphing and quadratic equations.

Prerequisite: none



**Math 103****BUSINESS MATHEMATICS****3 hours**

Commercial and financial applications of basic arithmetic and algebraic processes. This course is intended for students in office and business career A.A.S. degree programs.

Corequisite: All students who enroll in Math 103 will be tested to see if they have adequate skills in basic mathematics. Those students who do not possess such skills will be required to take additional laboratory instruction in their weak areas.

**Math 113****MODERN MATHEMATICS I****3 hours**

This course is designed for students who are potential elementary teachers or for general education students. Topics are presented in such a manner that they can be mastered by the student without previous training in set theory. Topics covered include the following: sets, logic, venn diagrams, systems of numeration, system of whole numbers, system of integers, system of rational numbers, field properties, algorithms for whole numbers, and terminology of modern math. As these topics are mastered, modern methods of teaching these topics will be investigated.

Prerequisite: Math 100 or satisfactory score on MMPT.

**Math 123****MODERN MATHEMATICS II****3 hours**

This course is designed to make the potential elementary teacher or general education student familiar with all topics which are taught in the math curriculum in grades K-10 and the modern approach of teaching these topics. Topics covered include the following: review of topics covered in Math 113, number theory, decimals and real numbers, nonmetric metric geometry, metric geometry, statistics and probability, and modern methods of teaching the above mentioned topics.

Prerequisite: Math 113 or consent of the instructor.

**Math 133****TECHNICAL MATHEMATICS I****3 hours**

Treatment of measured data, significant figures, applications in geometry, basic algebra, use of the slide rule, linear equations.

Prerequisite: Math 100 or satisfactory score on MMPT.

**Math 143****TECHNICAL MATHEMATICS II****3 hours**

Numerical trigonometry of the right angle, analytic trigonometry, oblique triangles, functions and graphs, logarithms, and application of numerical trigonometry and vectors.

Prerequisite: Math 133

- Math 153**      **INTERMEDIATE ALGEBRA**      3 hours  
 A preparatory course covering the fundamental principles of algebra designed to prepare the student to take college algebra and in the case of certain degrees to satisfy the mathematics requirement. This course is recommended for those students who have only one or two years of high school algebra. Topics covered include the following: sets, factoring, linear and quadratic equations, fractions and fractional equations, exponents and radicals, simple analytical geometry and systems of equations.  
 Prerequisite: Math 100 or satisfactory score on MMPT.
- Math 162**      **TRIGONOMETRY**      2 hours  
 This course designed to provide the student with a study of the trigonometric functions and their applications. Topics covered include the following: angles, length of arc, tables of trigonometric functions, interpolation, reference angles, graphic representation of trigonometric functions, law of cosines, law of sines, identities, trigonometric equations, inverse functions, complex numbers, logarithms, and polar coordinates.  
 Prerequisite or corequisite: Math 153 or 163.
- Math 163**      **COLLEGE ALGEBRA**      3 hours  
 This course is designed to meet the needs of the student in a transfer program. Topics covered include the following: sets, factoring, exponents, radicals, linear and quadratic equations, theory of equations, inequalities, logarithms, complex numbers, field properties, systems of equations, simple linear programming, and applications of these topics.  
 Prerequisite: Three years of high school mathematics and/or satisfactory score on the MMPT or Math 153.
- Math 165**      **ANALYTIC GEOMETRY AND CALCULUS I**      5 hours  
 A first course in a sequence of courses including analytic geometry, differential calculus, and integral calculus. This series is recommended for majors in engineering, the physical sciences, and mathematics. Topics include the following: properties of real numbers, introduction to analytic geometry, functions, limits, continuity, the derivative, differentiation of algebraic functions, applications of the derivative, antidifferentiation, and the definite integral.  
 Prerequisite: Math 163 and Math 162 or satisfactory score on the MMPT

**Math 175**      **ANALYTIC GEOMETRY AND CALCULUS II**      **5 hours**  
A continuation of Math 165 including the following topics: applications of the definite integral, logarithmic and exponential functions, trigonometric functions, techniques of integration, approximate integration, polar coordinates, conic sections, and vectors, and parametric equations.

Prerequisite: Math 165.

**Math 203**      **FINITE MATH**      **3 hours**  
An introduction to matrices and linear programming. Designed primarily for non-physical science majors.

Prerequisite: Math 163 or equivalent.

**Math 213**      **STATISTICS**      **3 hours**  
This is an introductory course in statistics with an emphasis upon the collection and presentation of the following data: averages, dispersion, introduction to statistical inference, index numbers, time series, correlation and linear regression.

Prerequisite: Math 153

**Math 225**      **ANALYTIC GEOMETRY AND CALCULUS III**      **5 hours**  
A continuation of Math 175 including the following topics: hyperbolic functions, indeterminate forms, improper integrals, vectors in three-dimensional space, solid analytic geometry, differential calculus of functions of several variables, multiple integration, infinite series.

Prerequisite: Math 175

**Math 233**      **DIFFERENTIAL EQUATIONS**      **3 hours**  
Topics include separable variables, homogenous equations, exact equations, integrating factors, linear differential equations. LaPlace transform, and applications.

Prerequisite: Math 225.

**Math 271**      **DIRECTED STUDIES**  
**IN MATHEMATICS (HONORS)**      **1 hour**  
The student enrolled for directed studies has two alternatives:  
(1) investigate a specific topic within the field of mathematics  
(2) assist with tutorial mathematics instruction under the supervision of an instructor.

Prerequisite: consent of the instructor

## MUSIC

- Mus 103**      **FUNDAMENTALS OF MUSIC**      3 hours  
A basic study of music, including notation, scales, intervals, chords, and rhythms; intended for the elementary education major and those not majoring in music. Summer offering intended as a pre-music theory survey.  
Prerequisite: none.
- Mus 111, 211**      **COLLEGE CHOIR**      1 hour  
Prerequisite: Open to all students with consent of instructor who have had previous chorus or choir experience. Credit will be given for participation each semester.
- Mus 111, 211**      **COLLEGE CONCERT BAND**      1 hour  
Prerequisite: Open to all students with consent of instructor who have had previous experience. Credit will be given for participation each semester.
- Mus 111, 211**      **STAGE BAND**      1 hour  
The stage band is a studio band and will prepare and present concerts, while dealing primarily with music of the jazz idiom. Credit will be given for participation each semester.  
Prerequisite: Open to all college students who are qualified instrumentalists by consent of the director.
- Mus 111, 211**      **ECJC SINGERS**      1 hour  
A select singing and dancing ensemble which performs popular music incorporating choreography the fall semester. The spring semester the ensemble will present music of the Medieval church-an early worship service by candlelight, known as Compline.  
Prerequisite: Consent of the instructor.
- Mus 112, 222**      **APPLIED MUSIC**      2 hours  
Applied music (private lessons) is offered in the following areas: piano, voice, brass, woodwind, and string instruments.  
Prerequisite: none.
- Mus 113**      **MUSIC APPRECIATION**      3 hours  
A historical survey of the development of music, intended to provide a background for the understanding and appreciation of music. Recommended for music majors and minors as well as non-music majors.  
Prerequisite: none.
- Mus 115**      **MUSIC THEORY I**      5 hours  
A beginning course in music theory, study of intervals, triads, four part diatonic harmony, connection of triads and their in-





Mus 271      **BEGINNING GUITAR**      1 hour  
A basic course in the elementary skills playing guitar, including chord and melody playing. No previous musical training required.

Prerequisite: none.

#### **PHYSICAL EDUCATION**

PE 101      **PHYSICAL EDUCATION  
FOR MEN AND WOMEN**      1 hour  
One hour credit granted per course. Four courses are generally required. (See degree requirements.)

PE 101      **CO-ED BOWLING**      1 hour  
Emphasis on better performance of skills and techniques. Understanding of form, timing, and coordination. Team competition in league play.

Prerequisite: none

PE 101      **CO-ED CANOEING**      1 hour  
Fundamental techniques, skills and courtesies of canoeing. Actual canoeing trips a part of class sessions.

Prerequisite: none



- PE 101 CO-ED GOLF 1 hour  
Fundamental techniques and skills, rules, terminology, playing courtesies, and etiquette.
- Prerequisite: none
- PE 101 CO-ED GYMNASTICS 1 hour  
Fundamentals of gymnastics, including an introduction to various apparatus such as the trampoline, side horse, uneven parallel bars, mats, and free exercise. An introduction to weight training may also be received.
- Prerequisite: none
- PE 101 CO-ED KARATE 1 hour  
Techniques of basic empty hand fighting in form, practice, and sparring.
- Prerequisite: none
- PE 101 CO-ED ROLLER SKATING 1 hour  
An introduction to the skills of roller dancing. Three skate dances are taught each semester to include skating to music, timing, and basic coordination.
- Prerequisite: none
- PE 101 CO-ED SKEET AND TRAP SHOOTING 1 hour  
Techniques, skills, and safety uses of shooting clay birds
- Prerequisite: none
- PE 101 CO-ED TENNIS 1 hour  
Fundamental skills, rules, strategy, and courtesies of tennis. Tournament play during class sessions.
- Prerequisite: none
- PE 101 PHYSICAL EDUCATION FOR MEN 1 hour  
An introduction to the fundamentals of flag football, including rules, playing skills, and coordination. An introduction to the fundamentals of volleyball, basketball and softball.
- Prerequisite: none
- PE 101 VARSITY SPORTS 1 hour  
One hour of credit is given for participation each semester in the

following varsity sports: cross-country, basketball, golf, and tennis

Prerequisite: none

**PE 101**      **PHYSICAL EDUCATION FOR WOMEN**      1 hour  
An introduction to the fundamentals and skills of volleyball, softball, soccer, badminton, table tennis, and shuffle board.

Prerequisite: none

**PE 102**      **PERSONAL AND COMMUNITY HYGIENE**      2 hours  
A general course designed to develop proper attitudes and practices which will contribute to the fine art of living. Health problems which will require community action are given consideration

**PE 112**      **INTRODUCTION TO PHYSICAL EDUCATION**      2 hours  
A consideration of the principles of the basic theories of physical education. Course is designed for physical education majors and minors.

Prerequisite: none.



PE 122

**COMMUNITY RECREATION**

2 hours

Study and practice of sports adaptable to junior and senior high school facilities and recreational centers. Course designed for physical education and recreation majors and minors.

Prerequisite: none.

PE 212

**FIRST AID AND ATHLETIC TRAINING**

2 hours

Treatment of wounds, shock, poisoning, fractures, unconsciousness, and stoppage of breathing, the care and prevention of athletic injuries. Red Cross certificate will be earned.

Prerequisite: none.

**PHILOSOPHY**

Phil 113

**INTRODUCTION TO LOGIC**

3 hours

Logic is the study of techniques for distinguishing between adequate and inadequate arguments. This course is designed to introduce several techniques that may be used to evaluate arguments. The primary emphasis will be becoming able to use the techniques of propositional and monadic predicate calculi in evaluating arguments. A second emphasis will be upon learning several criteria for distinguishing between adequate and inadequate arguments in science. The final emphasis of the course will be upon learning some elementary decision making procedures, e.g. two-person zero sum games and the use of decision tables

Prerequisite: none.

Phil 213

**CONTEMPORARY ETHICAL PROBLEMS**

3 hours

This course is a survey course in philosophy. It is designed to be problem oriented, using the writings of the philosophers as a resource in understanding the issues raised by the contemporary ethical problems.

Prerequisite: none

**PHYSICS**

Phy 105

**PHYSICAL SCIENCE**

5 hours

A demonstration, lecture, reading course in physical science designed for students who do not expect to take the traditional



Phy 271

**DIRECTED STUDIES  
IN PHYSICS (HONORS)** 1 hour  
The student enrolled for directed studies has two alternatives:  
(1) investigate a specific topic within the field of physics (2)  
assist in the laboratory, stockroom, or with individualized in-  
struction under the supervision of an instructor.

Prerequisite: consent of the instructor

### **POLITICAL SCIENCE**

Pol S 113 **AMERICAN NATIONAL GOVERNMENT** 3 hours  
An introduction to the basic principles and structures of  
American national government. Emphasis will be placed on  
constitutional development and interpretation, the place of  
government in the social process, the nature of political  
organization, the processes of the machinery of popular control  
in the exercise of authority and freedom, and the function of the  
executive, legislative, and judicial branches. Successful  
completion of Political Science 113 and 123 meets the State of  
Missouri requirements in American history and institutions and  
state and national constitutions.

Prerequisite: none.

Pol S 123 **AMERICAN STATE AND LOCAL GOVERNMENTS** 3 hours  
An introductory survey of state constitutions, legislative,  
executive and judicial organization, and powers and principal  
activities of the states. Emphasis will be upon state-local  
relations, county-municipal governments, and the growth and  
problems of metropolitan areas.

Prerequisite: Pol S113 or consent of the instructor

Pol S 213 **INTERNATIONAL RELATIONS** 3 hours  
A study of the major factors underlying international relations:  
climate and geography, national concepts and institutions, the  
development of foreign policy. Today's problems of developing  
nations, East vs. West, and nuclear potentials are considered.

Prerequisite: Pol S 113 or consent of the instructor.

Pol S 271 **DIRECTED STUDIES  
IN POLITICAL SCIENCE (HONORS)** 1 hour  
The student enrolled for directed studies has two alternatives:  
(1) investigate a specific topic with the field of political science  
(2) assist with tutorial political science instruction under the  
supervision of an instructor.

## PSYCHOLOGY

Psyc 113      GENERAL PSYCHOLOGY      3 hours  
A survey of theories and facts dealing with various aspects of human behavior, such as development, perception, motivation, and emotion, learning, and personal adjustment.

Prerequisite: none.

Psyc 213      PERSONAL AND SOCIAL ADJUSTMENT      3 hours  
A study of personality structure and successful and unsuccessful processes of adjustment and human effectiveness.

Prerequisite: Psyc 113 or consent of the instructor.

Psyc 223      EDUCATIONAL PSYCHOLOGY      3 hours  
A study of theories and facts concerning human behavior in such areas as motivation, learning, and social development, as applied to the educational process.

Prerequisite: Psychology 113 or consent of the instructor.

## SECRETARIAL SCIENCE

ScS 113      ELEMENTARY TYPEWRITING      3 hours  
The keyboard and techniques of touch typewriting, development of basic skills, and a study of the arrangement of typewritten material.

Prerequisite: none.

ScS 123      INTERMEDIATE TYPEWRITING      3 hours  
Further development of typewriting skills with special attention given to improving accuracy and increasing speed. Continued instruction in letter styles, tabulations, reports, and forms.

Prerequisite: ScS 113 or speed of at least 40 wpm for five minutes with a maximum of five errors.

ScS 133      ADVANCED TYPEWRITING      3 hours  
A continuation of ScS 123 with further development of accuracy and speed in typewritten work. Emphasis on handling office typing problems according to employment standards.

Prerequisite: ScS 123

ScS 143      ELEMENTARY SHORTHAND      3 hours  
A study of Gregg shorthand theory and shorthand dictation at

moderate rates.

Prerequisite or Corequisite: ScS 113

ScS 153      **INTERMEDIATE SHORTHAND**      3 hours  
Development of speed and accuracy in writing shorthand from dictation and development of ability to transcribe.

Prerequisite: ScS 113 and ScS 143

Corequisite: ScS 123

ScS 163      **ADVANCED SHORTHAND**      3 hours  
Emphasis on ability to take dictation and transcribe mailable copy in conformity with occupational standards.

Prerequisite: ScS 123 and ScS 153

ScS 172      **OFFICE MACHINES**      2 hours  
Basic training in the operation and use of adding machines and calculators. Acquaints students with machine terminology, office problems, and work standards.

Prerequisite: none







## SOCIOLOGY

Soc 113      GENERAL SOCIOLOGY      3 hours  
An introductory course in the field of sociology with special emphasis on the scientific study of social relations, social organizations, social institutions, and social dynamics as related to human behavior.

Prerequisite: none.

Soc 123      AMERICAN SOCIAL PROBLEMS      3 hours  
A study of select social problems, including consideration of proposed lines of action in dealing with them. Problem areas include population, the affluent society, poverty, urban renewal, delinquency and crime, automation, the aging, ethnic and racial relations, and the role of the United States in the relationship to the underdeveloped areas of the world

Prerequisite: Soc 113

Soc 213      HUMAN RELATIONS      3 hours  
This course is an introduction to the applied principles of sociology and psychology as they relate to human interaction in small groups. Major emphasis is placed on analysis of the interaction process with a view toward additional understanding of individual and group behavior and the problems attendant to leadership

Prerequisite: Psych 113

Soc 223      THE FAMILY      3 hours  
The study of the family as an agency of personality development, and cultural transmission, including a study of the family in relation to the structure and function of wider forms of social organization.

Prerequisite: Consent of the instructor.

## SOIL AND PLANT TECHNOLOGY

SPT 102      HORTICULTURE ORIENTATION      2 hours  
An overview of various aspects of the horticulture industry including general and specialized nursery operations, floriculture, arboriculture, landscape design, etc., as well as an introduction to basic horticulture practices, propagation, plant identification, soil management etc. Class includes numerous field trips.

Prerequisite: none

- SPT 113 SOILS 3 hours  
 A study of the soil from a plant's point of view. Physical structure, availability of nutrients, proper use of organic and chemical fertilizers are discussed and observed in the soils lab.  
 Prerequisite: Chemistry 105
- SPT 123 HORTICULTURE I 3 hours  
 An in-depth study of a variety of common ornamental plants, techniques for growing, maintenance, and proper application in design situations.  
 Prerequisite: Biology 155
- SPT 201 SOIL AND PLANT TECHNOLOGY PLACEMENT 1 hour  
 A course designed to assist soil and plant technology students in obtaining jobs suitable to their training and interests.  
 Prerequisite: none
- SPT 233 HORTICULTURE II 3 hours  
 An in-depth study of a variety of common ornamental plants, techniques for growing, maintenance, and proper application in design situations  
 Prerequisite: SPT 123
- SPT 243 PLANT PROPAGATION 3 hours  
 An introduction to the common methods of commercial plant reproduction including seeds, cuttings, layering, grafting, and division. This course will make use of the greenhouse propagation facilities.  
 Prerequisite: Biology 155
- SPT 253 LANDSCAPE DESIGN 3 hours  
 Theory of design of outdoor space for human use or enjoyment. The relation of site engineering to landscape planning and design of simple structures.  
 Prerequisite: none
- SPT 263 HORTICULTURE III 3 hours  
 Discussion, and when feasible, class use of special tools and machinery used in the horticulture trade, including the proper maintenance of the more common machines.  
 Prerequisite: SPT 233



critical understanding of ideas about rhetorical communication as well as the critical issues of our time, and subsequently to improve individual communications skills.

Prerequisites: none.

Spe 113 PUBLIC SPEAKING 3 hours  
An introduction to the basic elements of oral communication. Assignments include the presentation of speeches and the discussion of communication theories and techniques.

Prerequisite: Spe 103 or consent of the instructor.

Spe 123 ORAL INTERPRETATION 3 hours  
Study in the basic techniques of oral interpretation. The re-creation of literature is stressed through acquiring the skills and techniques necessary to convey the intellectual, emotional, and aesthetic values of literature to an audience. The course will include study in the oral interpretation of prose, drama, and poetry.

Prerequisite: none



Spe 133

**INTRODUCTION TO THE THEATRE** 3 hours  
An appreciation course designed to give a comprehensive introduction to theatre, including theatre history and contributions made by directors, actors, designers, technicians and playwrights to modern dramatic productions.

Prerequisite: none.

Spe 271

**DIRECTED STUDIES IN COMMUNICATION OR THEATRE ARTS** 1 hour  
Independent study in the many and varied aspects of the theatre for the advanced student. This could include study in acting, directing, costuming, makeup, scene design and construction, stage lighting, dramatic theory and history. Experimental research and studies of the theories of communication are also possible

Prerequisite: Consent of the instructor.

### TEACHER AIDE

TeacA 201

**TEACHER AIDE PLACEMENT** 1 hour  
A course designed to assist Teacher Aide students in obtaining jobs suitable to their training and interests.

Prerequisite: none

Teac A 213

**TEACHER AIDE SEMINAR** 3 hours  
A seminar providing the opportunity for Teacher Aide students to discuss the field of Teacher Aide Work, and to share the experiences and problems they have encountered in their role as Teacher Aide Interns. Moderated by a college staff member, the seminar serves as the vehicle to tie coursework and experience together in a relevant manner.

Prerequisite: Sophomore standing.

Teac A 291,  
292, 293

**TEACHER AIDE INTERNSHIP** 1-3 hours  
Supervised work experience in an actual educational setting, coordinated with the student's regular classwork, to provide a realistic view of the varied duties of a Teacher Aide.

Prerequisite: Consent of the instructor.