

**EAST  
CENTRAL**

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**JUNIOR  
COLLEGE**

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# 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 Art Appreciation I .....2 hours  
A general survey of the artistic activities of man from pre-historical to modern times. Slides and 16mm films are used in conjunction with the course  
Prerequisite: none
- Art 112 Art Appreciation II .....2 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 122 Crafts .....2 hours  
A practical application of crafts through the use of sculpture, using a three-step sequence: cardboard sculpture, plaster sculpture, and wood or stone sculpture.  
Prerequisite: none
- Art 103 Advertising Design .....3 hours  
An introduction to art as related to the field of advertising, dealing with the use of layout, lettering, and imagery for persuasive communication  
Prerequisite: none
- Art 113 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

Prerequisite: none

**Art 123 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.

Prerequisite: none

**Art 133 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; introduction to perspective and light and shade.

Prerequisite: Art 123 or consent of the instructor.

**Art 143 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 123 or consent of the instructor

**Art 153 Painting II** .....3 hours  
Theory and practice of making paintings using oil and acrylic. Development of form through color and appropriate emphasis 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 143

**Art 213 Sculpture** .....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 113 and 122 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 inventive organization.

Prerequisite: Art 113 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 113 or consent of the instructor.

Art 243 Printmaking .....3 hours  
A development of the interests and skills of drawing and painting into the making of prints from materials such as wood blocks, cardboard, and linoleum by using surface printing techniques

Prerequisite. Art 113 or consent of the instructor.

### 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. The course aims to give an appreciation of the benefits derived from physical fitness and good personal appearance.

Prerequisite: none

115 General Biology .....5 hours  
An introductory course involving fundamental biological principles of both plant and animal life. It is designed to be used as a general education requirement. Not open to students with credit in botany or zoology or students expecting to major in the biological sciences. Three hours of lecture and two two-hour laboratory periods per week

Prerequisite: none

Bio 145 General Botany ..... 5 hours  
An introduction to the plant kingdom, structure, physiology, life histories, economic importances, and the evolution of plants Laboratory will include dissection and observation to verify and enhance classroom lecture and recitation Three one-hour lecture recitation periods and two two-hour laboratory periods per week

Prerequisite. none

- Bio 155 General Zoology ..... 5 hours  
 A survey of the animal kingdom, animal structure, life process development, ecology, and the evolution of animals. Laboratory will include structure and taxonomic relationships as shown by dissection of representatives of the various animal groups. Three one-hour lecture recitation periods and two two-hour laboratory periods per week.  
 Prerequisite: none
- Bio 224 Field Biology ..... 4 hours  
 An introduction to ecology and other field courses in biology. Provides a background in field techniques, field and laboratory identification of plants and animals. Three one-hour lecture recitation periods and two two-hour laboratory periods per week.  
 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, urinogenital system, and nervous system. Two lectures and six hours of laboratory per week.  
 Prerequisite: Biology 155 or consent of the instructor

## BUSINESS

*(Also see Mid-Management and Secretarial Technology)*

- 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

### CHEMISTRY

**Chem 105** Introductory Chemistry .....5 hours  
An introduction to the basic principles of chemistry, including inorganic, analytical, physical, and organic chemistry. Three hours of lecture and two two-hour laboratories per week.

Prerequisite: none

**Chem 115** General Chemistry I .....5 hours  
Topics of study include atomic structure, bonding, equations, gases and solutions. Three one-hour lecture periods and two two-hour laboratory periods per week.

Prerequisite. A satisfactory score on the Missouri Math Placement Test and either Chem 105 or high school chemistry

**Chem 125** General Chemistry II ..... 5 hours  
A continuation of Chem 115, including equilibrium, thermodynamics, and a survey of qualitative methods of analysis. Three one-hour lecture and recitation periods and two two-hour laboratory periods per week

Prerequisite: Chem 115

**Chem 234-5** Quantitative Analysis ..... 4-5 hours  
A study of the fundamental principles of quantitative analytical chemistry, including gravimetric and volumetric determinations  
Two hour lecture and two or three three-hour laboratory periods per week

Prerequisite: Chem 125

## DRAFTING AND DESIGN TECHNOLOGY

- Draft 113** Engineering Drawing .....3 hours  
Instruction in this course is designed as the foundation for all engineering and technical design courses. Topics covered include equipment and supplies, applied geometry, lettering, multi-view drawing and sketching, auxiliary views, sections and conventional practices, dimensioning and notations, and screw threads and fasteners.  
Prerequisite: none
- Draft 123** Descriptive Geometry .....3 hours  
A study of the graphic analysis and solution of typical three dimensional space problems through the application of the principles of multi-view projections. Fundamental problems are related to points, lines, planes, intersections and developments of plane and curved surfaces, revolutions, and vector geometry.  
Prerequisite or corequisite. Drafting 113
- Draft 133** Technical Drawing .....3 hours  
This course provides an introduction to specialized areas of drafting. Topics covered include architectural drawing, structural drawing, electrical drawing, pipe drawing, and welding drawing  
Prerequisite. Drafting 113
- Draft 143** Machine Drawing .....3 hours  
Problems involved in making drawings for casting, forging, machining, and forming processes will be studied. Also, the method of making working and assembly drawings will be included, providing depth in the area of machine drawing.  
Prerequisite: Drafting 113
- Draft 153** Basic Electricity and Electronics ..... 3 hours  
Fundamentals of AC and DC circuits and their application to power transmission and control is presented. Emphasis is placed on the selection and application of power transmission components and control systems.  
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 iso-

metric, dimetric, trimetric, oblique and perspective drawing, and the methods and media used in creating illustrations.

Prerequisite: Drafting 113 and 133 or 113 and 143

**Draft 213 Principles of Metallurgy** ..... 3 hours  
Physical aspects of both ferrous and nonferrous metals are studied in this course. Basic metallurgy as it applies to the atomic and crystalline structure, constitution diagrams, physical properties, heat treatment, and corrosion is covered. Laboratory work includes the microscopic study of metallic specimens for identification and analyzation.

Prerequisite: Physical Science 115 or Physics 114

**Draft 223 Graphic Kinematics** ..... 3 hours  
A graphic study of motion without regard to forces causing that motion. Covered are displacement, velocity, and acceleration of linkages and cams. These mechanisms are treated in the strictest geometric form, therefore, making graphic solutions fast and practical. Mathematical solutions are kept to a minimum, but are used when graphics become too involved or confusing.

Prerequisite: Drafting 123

**Draft 243 Machine Design** ..... 3 hours  
This course is designed to bring together in practical applications the skill and knowledge developed in courses covering mechanics and drafting. Instruction provided will permit logical organization of facts for economical solution of machine design problems. Emphasis is placed on standardization, use of stock parts, and using manufacturers' catalogs.

Prerequisite: sophomore standing

**Draft 253 Statics and Strength of Materials** ..... 3 hours  
A study of stress and strain experienced by machine parts and structural members in service. Includes statics and vector analysis as applied to structures, properties of materials review, beam theory, beam design, theory of columns, and formulae. Emphasis is placed on application of theory and problem solving.

Prerequisites: Mathematics 152 or consent of the instructor

**Draft 263 Tool and Die Design** ..... 3 hours  
Lectures, classroom discussions and actual drawing board work are combined to give the student knowledge necessary to design the less complicated tools used in modern manufacturing. The work consists of laying out simple jigs, fixtures, cutting tools,



gages, and dies. Mass production methods are discussed so that this knowledge may be applied in the practical work of tool signing.

Prerequisite: Drafting 213

Draft 273 Principles of Fluid Power .....3 hours  
Principles of hydraulics and pneumatics fundamental to fluid power system design and component selection and application presented. The physical properties of hydraulic fluids, and operational and constructional features of pumps, motors, valves, seals, packing and conductors are covered giving the student an overview of the components in a fluid power system.

Prerequisite Physical Science 115 or Physics 114

Draft 283 Materials and Processes .....3 hours  
A survey of 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. New materials and processes and up-to-date process cost analysis are also studied.

Prerequisite Physical Science 115 or Physics 114

## 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

(Also see *Psychology*)

- Ed 113 Introduction to Education .....3 hours  
An introduction to all facets of American education including its historical background, its role in today's world, organization and administration, areas of education, personnel in education, provisions for educational materials and environment, and interpretation of education.  
Prerequisite. none

## ENGINEERING

- Engr 113 Engineering Drawing ... 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: none
- Engr 123 Descriptive Geometry ... 3 hours  
A course covering the fundamental theories of space relations with respect to points, lines, and surfaces, with application to practical industrial problems.  
Prerequisite or corequisite Engineering 113

## ENGLISH

- Eng 103 Communications I ... 3 hours  
A course dealing with the fundamentals of grammar, language usage, and composition. 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 appropriate score on the Missouri College English Test and consent of the instructor.
- Eng 113 Communications II ..... 3 hours  
A continued study of the fundamentals of language usage and

composition. 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: English 103 and/or consent of the instructor

Eng 123 English Composition I .....3 hours

A basic course in expository writing dealing with the fundamentals of English usage, structure and organization of themes, with emphasis on adequate development and rhetorical patterns of organization.

Prerequisite: demonstrated proficiency on the Missouri English Placement Test 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 Missouri English Placement Test and on a writing sample

Eng 133 English Composition II .....3 hours

A continuation of the study of English composition, with emphasis on the writing of the argument, the critical paper, and the research paper.

Prerequisite: English 123

Eng 143 Technical Writing ..... 2-3 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 composition course.

Eng 153 Introduction to Literature .....3 hours

An introduction to literature on the collegiate level, emphasizing appreciation but including a study of types of literature.

Prerequisite: none

Eng 163 Introduction to Essays and Fiction .....3 hours  
A study of literature concentrating on the forms and themes of essays and fiction. The course emphasizes the study and analysis of essays, short stories, and novels.  
Prerequisite: English 103 or English 123, or English 123 may be taken concurrently.

Eng 213 English Life and Literature I .....3 hours  
A survey of English literature from the Anglo-Saxon period through the Age of Reason, presented in a historical and sociocultural framework. Recommended especially for English majors and minors, but also open to other interested students.  
Prerequisite: English 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, presented in a historical and sociocultural framework. Recommended especially for English majors and minors, but also open to other interested students.  
Prerequisite: English 123 and sophomore standing, or consent of the instructor.

### GEOGRAPHY

Geog 103 Principles of Geography .....3 hours  
A study of the physical elements of the natural environment and the pattern of their distribution over the earth, with emphasis upon the effect of these patterns upon man's health, culture, and economic development in various environmental locations. Designed to acquaint the student with some of the natural causes for cultural conflicts in today's world and to provide a broader understanding of the opportunities available and the limitations imposed by environmental factors in both developed and underdeveloped areas.  
Prerequisite: none

### GEOLOGY

Geol 113-115 Introduction to Geology .....3-5 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 laboratory hours are provided.

Prerequisite: none

## HISTORY

**Hist 103** American Institutions .....3 hours  
A study of American history, institutions, and government. Special consideration will be given to the Constitutions of the United States and Missouri, and special historical emphasis will be placed on the twentieth century. Intended primarily for students in career curricula.

Prerequisite: none

**Hist 113** American History I ..... 3 hours  
A survey of the cultural, economic, institutional, political, and social forces and events which have shaped the United States through the Civil War.

Prerequisite: none

**Hist 123** American History II .....3 hours  
A survey of the cultural, economic, institutional, political, and social forces and events which have shaped the United States from the Civil War to the present.

Prerequisite: none

**Hist 213** Western Civilization I ..... 3 hours  
A survey of Ancient Near Eastern Civilization, including Egypt, Mesopotamia, and Israel; the classical civilizations of Greece and Rome; Christianity and Medieval Europe; Islam; and the cultural and religious changes of the Renaissance and Reformation. Attention is given to political developments, cultural achievements, and literary documents of each area.

Prerequisite: none

**Hist 223** Western Civilization II ..... 3 hours  
A survey of the cultural, economic, intellectual, political, and social forces which have shaped Western Europe and its areas of influence since the end of the fifteenth century.

Prerequisite: none

## MATHEMATICS

- Math 100 Basic Algebra** ..... 3 hours  
A beginning course primarily developmental in nature which will satisfy certain terminal program requirements but is not acceptable as degree or transfer credit. Programmed instruction is employed in this course with two class meetings weekly  
Prerequisite: Appropriate score on Missouri Math Placement Test
- Math 103 Business Mathematics** ..... 3 hours  
Commercial and financial applications of basic arithmetic and algebraic processes. This course is intended for students in commercial education and distributive education. This course does not meet the mathematics requirement for the Associate of Arts degree.  
Prerequisite: none
- Math 113 Modern Mathematics** ..... 3 hours  
This course is designed to make students who are potential elementary teachers or general education students familiar with the basic concepts and principles of modern mathematics. Topics are presented in such a manner that they can be mastered by the student who has not had previous training in modern mathematics. Topics covered include the following: sets and numeration systems, Venn diagrams, properties and laws, equations and inequalities, graphing of solution sets on the number line, ordered pairs and the Cartesian system, and equation and inequations in two variables  
Prerequisite: none
- Math 123 Technical Mathematics I** ..... 3 hours  
Treatment of measured data, significant figures, applications in geometry, basic algebra, ratio, proportion and variation  
Prerequisite: none
- Math 133 Technical Mathematics II** ..... 3 hours  
Numerical trigonometry of the right angle, analytic trigonometry, oblique triangles, and application of numerical trigonometry.  
Prerequisite: Math 123
- Math 143 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 year of high school algebra and for those students who have more than one year of high school algebra but score low on the Missouri Math Placement Test. Topics covered include the following: sets and integers, algebraic expressions, simple equations, factoring, solution of quadratic equations, fractions and the solution of fractional equations, functional relationships, measurement systems and logarithms.

Prerequisite: Math 103 or satisfactory score on Missouri Math Placement Test.

**Math 152** Trigonometry .....2 hours

A course designed to provide the student with a study of the trigonometric functions and their applications. Topics covered include the following: angles, approximate numbers, tables of trigonometric functions, application of right triangles, fundamental identities, trigonometric functions of several angles, graphic representation of the trigonometric functions, law of tangents, trigonometric equations, inverse functions, and complex numbers.

Prerequisite or corequisite: Math 143 or Math 153.

**Math 153** College Algebra .....3 hours

A modern approach to the study of algebra. Topics covered include the following: sets, numbers as a logical system, inequalities, functions, polynomials, and inverse and logarithmic functions.

Prerequisite: one and one-half years of high school algebra and satisfactory score on the Missouri Math Placement Test or Math 143.

**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 153 and Math 152 or satisfactory score on placement tests.

**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 285** 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 295** Differential Equations .....3 hours  
Topics include separable variables, homogenous equations, exact equations, integrating factors, linear differential equations, laplace transform, and applications.

Prerequisite: Math 285

### MID-MANAGEMENT

**MidM 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

**MidM 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

**MidM 233** Advertising ..... 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 advertising plans. Each student will be assigned an advertising project concerned with a marketing plan, advertising strategy, and an advertising budget.

Prerequisite: none

MidM 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

MidM 252 Display ..... 2 hours  
A study of the types and the role of visual merchandising in the retail store including creation, color and principles of design.

Prerequisite: none

MidM 263 Retailing .....3 hours  
The organization and management of retail establishments, store location, policies, sales systems, control of inventories, personnel, store publicity and advertising; summaries for management control.

Prerequisite: none

MidM 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

MidM 291, 292, 293 Internship .....1-3 hours  
This phase of the student's mid-management training will include actual work experience in a retail business with weekly discussions of the problems involved in applying classroom principles to the job

Prerequisite: none

## MUSIC

- 103 Fundamentals of Music .....2 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.  
Prerequisite none
- Mus 113 Music Appreciation ..... 3 hours  
A 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 123 Theory I .....5 hours  
A beginning course in music theory, study of intervals, triads, four part diatonic harmony, connection of triads and their inversions. Sight singing, dictation, and elements of music, aural recognition of all diatonic intervals, melodic phrases and rhythms. Two hours laboratory.  
Prerequisite none
- Mus 133 Music Theory II .....5 hours  
A second course in music theory, extending into areas of seventh chords and non-harmonic tones. Two hours laboratory  
Prerequisite: Music 123
- 213 Music Theory III ..... 5 hours  
A third course in music theory. A study of chromatic harmony including secondary dominants, modulation, and altered chords. Two hours laboratory  
Prerequisite: Music 133
- Mus 223 Music Theory IV .....5 hours  
A continuation of Music 213 to more complex areas of chromatic borrowed and altered chords, and finally to the vigorous appearance of complex modern techniques. Two hours laboratory.  
Prerequisite: Music 213
- Mus 111, 121, 211, 221 College Choir ..... .1 hour  
Open to all students interested in singing in the College Choir who have had chorus or choir experience on the high school level. Credit will be given for participation each semester in accordance

with the course numbering shown.

Prerequisite: none

Mus 111, 121, 211, 221 College Band .....1 hour  
Open to all students interested in participating in concert band, pep band and stage band, who have participated in a band organization on the high school level.

Prerequisite: none

Mus 111-222 Applied Music .....1 or 2 hours  
Applied music is offered in the following areas: piano, voice, brass and woodwind instruments.

Prerequisite: none

Additional courses in music education will be offered as the demand dictates. Such courses as Teaching Elementary Music, Teaching Secondary Music, Techniques of Teaching Instrumental Music, Vocal Music in the Secondary School may be offered within the near future.

## PHYSICAL EDUCATION

PE 101, 111, Physical Education for Men I, II, III, and IV..1 hr. per course  
201, 211 Participation in various games and sports. Course is required of all freshmen and sophomore men.

Prerequisite: none

PE 121, 131, Physical Education for  
221, 231 Women I, II, III, and IV .....1 hour per course  
Participation in various games and sports. Course is required of all freshmen and sophomore women.

Prerequisite: none

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

Prerequisite: none

- PE 212 - First Aid .....2 hours  
 Treatment of wounds, shock, poisoning, fractures, unconsciousness, and stoppage of breathing. American Red Cross certificate may be earned.  
 Prerequisite: none

### PHYSICAL SCIENCE

- P.Sci 115 Physical Science .....5 hours  
 A demonstration, lecture, reading course in physical science designed for students who do not expect to take the traditional courses in laboratory science. This course covers some of the fundamental concepts from the areas of physics, chemistry, and geology. It is not recommended as a course for majors or minors in the fields of science. Three hours of lecture and two two-hour laboratory periods per week.  
 Prerequisite: none

### PHYSICS

- Phy 114 Introductory Physics .....4 hours  
 Three hours of lecture and one lab period per week. A study of mechanics, heat, sound, light, electricity, and physical properties of matter. This is a non-calculus course which features problem solving and laboratory work.  
 Prerequisite: Math 152 and Math 153 or consent of the instructor
- Phy 215 General Physics I .....5 hours  
 Four hours lecture and one lab per week. A study of the mechanics of solids, liquids, and gases, study of heat and sound. This course is intended for the student who plans to major in mathematics, the physical sciences, or engineering.  
 Corequisite: Math 175
- Phy 225 General Physics II .....5 hours  
 Four hours lecture and one lab per week. A study of electricity, magnetism, light, and modern physics.  
 Prerequisite: Phy 215  
 Corequisite or prerequisite: Math 285

## 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. none
- 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

## 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 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 TECHNOLOGY

- ScS 112 Elementary Typewriting ..... 2 hours  
Techniques in touch typewriting; development of basic skill and speed, form, style, and arrangement of typewritten material  
Prerequisite: none
- ScS 122 Intermediate Typewriting .. ..... 2 hours  
Further development of typewriting skills with special attention given to speed building and control. Continued instruction in letter styles, tabulations, reports, and forms.  
Prerequisite. ScS 112 or speed of at least 40 wpm for five minutes with a maximum of five errors
- ScS 132 Advanced Typewriting ..... 2 hours  
An intensive continuation of ScS 122 with development of higher speed and accuracy in all forms of typewritten work.  
Prerequisite ScS 122
- ScS 113 Elementary Shorthand . . . . . 3 hours  
A study of the principles of Gregg shorthand theory and the taking of shorthand dictation at moderate rates.  
Prerequisite. ScS 122 or equivalent
- ScS 123 Intermediate Shorthand . . . . . 3 hours  
Development of speed and accuracy in writing shorthand from dictation and further development of ability to transcribe  
Prerequisite ScS 113 and ScS 122
- ScS 133 Advanced Shorthand ..... 3 hours  
Emphasis on ability to take dictation and transcribe mailable copy in conformity with occupational standards  
Prerequisite ScS 122 and 123
- ScS 143 Office Machines ..... 3 hours  
Basic training in the operation and use of office calculating and adding machines, duplicating machines, and transcription machines. Acquaints students with machine terminology and office problems.  
Prerequisite ScS 112 or equivalent
- ScS 212 Filing and Records Management ..... 2 hours  
Filing rules and their application to alphabetic, numeric, subject, and geographic filing. Attention is given to the selection and or-

ganization of a filing system, equipment and supplies, retention and disposition of records, and administrative duties.

Prerequisite: none

ScS 213 Business Communications .....3 hours

A study of the various types of business letters, reports, and other communication forms and development of the ability to compose clear, correct business letters according to current theories of business-letter writing. A review of grammar and mechanics and enlargement of the business vocabulary.

Prerequisite: one previous English composition course

ScS 223 Secretarial Procedures .....3 hours

Business information and skills applicable to the secretarial or clerical profession with emphasis on the following areas: mailing, filing, communications, reports, office equipment and supplies, banking procedures, travel and transportation, and job information and applications. Human relations and work efficiency are stressed.

Prerequisite: ScS 122 or equivalent

## 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: Sociology 113

Soc 203 Human Relations . . . . . 3 hours

This course is designed as an introduction to the basic principles of sociology, general psychology, and industrial psychology. Major

emphasis is placed on such topics as the origin and development of the social body, group behavior, and the problems attendant to leadership and cooperation. Designed to develop a thorough understanding of human relationships in the industrial complex.

Prerequisite. sophomore standing or consent of the instructor

Soc 213 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 Sociology 113

## SPANISH

Span 115 Elementary Spanish .....5 hours  
Presentation of basic written and oral aspects of Spanish. Additional practice in aural comprehension through use of the language laboratory.

Prerequisite none

Span 125 Intermediate Spanish .....5 hours  
Review of basic grammar, with increased practice in conversation, reading, and composition. Additional practice in aural comprehension through use of the language laboratory.

Prerequisite Spanish 115 or two units of high school Spanish.

Span 203 Spanish Reading .....3 hours  
Reading skill cultivated with an introduction to Spanish Literature

Prerequisite Spanish 125 or the equivalent

Span 212 Spanish Composition .....2 hours  
A review of Spanish grammar with practice in composition.

Prerequisite Spanish 125 or the equivalent

Span 223 Spanish Conversation .....3 hours  
Practice in conversation with emphasis on perfecting pronunciation.

Prerequisite: Spanish 125 or the equivalent



## SPEECH

Spe 112 Fundamentals of Speech .....2 hours  
A study and practice of basic rudiments of generating, designing, delivering, and evaluating ideas for speech situations facing adults of our society. This beginning course is for both speech majors and others who need an introductory course in speech. Persons with one unit of high school speech may enter Speech 123 directly.  
Prerequisite: none

Spe 123 Public Speaking .....3 hours  
An introduction to the basic elements of public speaking and platform performance. Materials and activities are used to make the course practical.  
Prerequisite: Speech 112 or one unit of high school public speaking.