

MISSOURI
ESTERN COLLEGE

CATALOG



St. Joseph, Missouri

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MISSOURI WESTERN COLLEGE

GENERAL CATALOG
with description of courses

1969-1970

St. Joseph • Missouri

Foreword . . .

The General Catalog of Missouri Western College serves as an authoritative guide to the academic programs of the College and is intended to assist students in the selection of their programs of study. The catalog contains general information on requirements for admission, regulations, student services and welfare, administration, facilities, and degree programs. It includes a description of all courses offered in the College and lists the officers of administration and faculty members.

For additional information, write to the specific office responsible for the matter of concern, as listed in the Directory of Correspondence on page 4 of this catalog.

visiting the college . . .

Prospective students are invited to visit the College. Regular office hours are 8 a.m. to 5 p.m., Monday through Friday. Given advanced notice, the Office of the Dean of Student Affairs will arrange tours for visiting groups.

correspondence . . .

Correspondence concerning various functions and services of the College should be directed as follows:

COLLEGE ADMINISTRATION	The President Dr. M. O. Looney
INSTRUCTION, CURRICULUM, AND SCHOLASTIC AFFAIRS	Dean of Academic Affairs Dr. N. B. Morrison
STUDENT AFFAIRS, CONVOCATIONS, AND STUDENT UNION	Dean of Student Affairs Mr. Lowell Clark
BUSINESS MATTERS AND PAYMENT OF FEES	Dean of Business Affairs Mr. Kenneth Hawk
FIELD SERVICES, ALUMNI, AND PLACEMENT	Director of Field and Special Services Mr. Sam Sharp
FINANCIAL AIDS	Director of Financial Aids Mr. George Ashworth
DATA PROCESSING	Director of Research and Computer Center Mr. William Wood
PUBLICATIONS, PUBLIC RELATIONS, AND NEWS RELEASES	Director of Publications and Public Relations Mr. Frank Smith
ADMISSION, REGISTRATION, SCHEDULING AND TRANSCRIPTS	Director of Admissions and Registrar Mr. Thomas Dewey
BUILDINGS AND GROUNDS	Director of Buildings and Grounds Mr. Donald Schoen
BOOK STORE	Director of the Bookstore Mr. Clifford Harlow
COLLEGE ENTRANCE, TESTING PROGRAM, GUIDANCE AND COUNSELING	Counselors Mrs. Dorothy Graham Mr. Thomas Robinson

MISSOURI WESTERN COLLEGE
ST. JOSEPH, MISSOURI TELEPHONE (816) 233-3134

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college calendar

SUMMER SESSION 1969

June 2 thru 5	Registration
June 9 and 10 (7:00-9:00)	Evening School Registration (Register 1st night of class)
June 9	Day and Evening Classes Begin
July 4	Holiday
August 1	Session Ends

FALL SEMESTER 1969-1970

June 16 thru September 12	Continuous Registration
September 8 and 9 (6:00-9:00)	Evening School Registration
September 15	Day and Evening Classes Begin
November 27	Thanksgiving Vacation Begins
December 1	Classes Resume
December 13	Christmas Vacation Begins
January 5	Classes Resume
January 20 thru 23	Final Examinations

SPRING SEMESTER 1970

January 19 thru 30	Registration (New and Transfer Students)
January 26 and 27 (6:00-9:00)	Evening School Registration
February 2	Day and Evening Classes Begin
March 28	Spring Vacation Begins
April 6	Classes Resume
May 25 thru 28	Final Examinations
May 29	Commencement

THE COLLEGE

With the opening of the 1969-1970 academic year, Missouri Western College will commence its existence as a four-year college offering baccalaureate degrees. The College evolved from the earlier St. Joseph Junior College, organized by the St. Joseph Board of Education in 1915.

In 1964, interested citizens in eleven school districts — Agency-Faucett, Avenue City, DeKalb-Rushville, Easton, Gower, Lake Contrary, Moore, Platte Valley, Savannah, Spring Garden, and St. Joseph — joined in petitioning the Missouri State Board of Education for the formation of a junior college district. At a district election in 1965, the voters approved the establishment of the Missouri Western Junior College District.

Subsequently, the Missouri State Legislature authorized the addition of junior-year and senior-year instructional programs.

The College offers a comprehensive academic program designed to provide a vital center of learning and culture for the Missouri Western region. The College is accredited by the North Central Association of Colleges and Secondary Schools for the associate degrees. Provisional accreditation for the baccalaureate degrees is currently being sought.

ACADEMIC PROGRAMS

APPLIED SCIENCE and TECHNOLOGY

Business and Economics
Computer Science
Engineering and Technology

EDUCATION and PSYCHOLOGY

Elementary and Secondary Education
Physical Education
Psychology

LIBERAL ARTS and SCIENCES

Biology
Chemistry
Fine Arts
Humanities and Communications
Physics and Mathematics
Social Sciences

DESCRIPTION OF COURSES

All courses offered at Missouri Western College are listed by divisions and departments in alphabetical order. Approximately eight weeks prior to the opening of each term a *Schedule of Courses* is published that lists the specific courses to be offered that term with the time of meeting, the building and the room number. The College reserves the right to cancel without notice any course listed in the *General Catalog* or in the *Schedule of Courses* for any term or to withdraw any course that does not have adequate student enrollment at the close of the registration period.

Course Numbering System

Each course bears a number that identifies it within a department and indicates its level, as follows:

000-099	Courses that usually do not apply toward a degree.
100-199	Freshman level courses
200-299	Sophomore level courses
300-399	Junior level courses
400-499	Senior level courses

Normally, courses numbered 100-299 are considered lower division courses, and those numbered 300-499 are considered upper division courses.

Credit Units

The unit of credit is the semester hour, which represents a period of weekly study for a semester. In general, a course carrying three hours credit meets for three periods weekly for one semester. The number of credit hours is shown in parentheses after the course title.

Semester Designation

The small Roman numerals, following the title of the course and the credit shown in parentheses, indicate the semester in which the course is normally offered:

- i the course is offered in the first or fall semester
- ii the course is offered in the second or spring semester
- iii the course is offered in the summer session

APPLIED SCIENCE and TECHNOLOGY...



Secretarial Training is but one phase of the opportunities available in the College Business and Economics Department. A wide selection of programs is available.



On-the-site use of the transit adds reality to the student's work in such courses as surveying and slide rule.



The Computer Center utilizes the latest in equipment for classroom training and improvement in the administrative functions of the College. Computer Science is one of the newest and most rapidly expanding curricula in the College, designed to keep pace with the modern world.

department of BUSINESS and ECONOMICS

The Department of Business and Economics offers diversified programs leading to careers in accounting, marketing, management, and teaching. Students receive a background in the fundamentals of business and economics in addition to the opportunity to specialize in the areas of their interests. Programs are designed to prepare the students to become highly qualified to meet the challenge of a career in the demanding world of business.

The Department offers a major in business education for the degree Bachelor of Science in Education, and majors in accounting, marketing, and management for the degree Bachelor of Science in Business Administration. In addition, the degree Associate in Applied Business is offered with majors in secretarial science and mid-management (data processing, accounting, or retailing). A One-Year Certificate in secretarial science is also offered. Consult the Department Chairman for required courses and hours.

ACCOUNTING

- 230 Elementary Accounting (3) i, ii, iii**
Principles of accounting and their application; analysis of the balance sheet and income statement in their usual and special forms.
- 231 Elementary Accounting (3) i, ii, iii**
Principles and procedures of accounting with emphasis on partnerships and corporations.
Prerequisite: Accounting 230.
- 232 Intermediate Accounting (3) i, ii, iii**
Valuation accounting, general accounting theory and practice, and fund accounting; accounting statements, the recording process, the periodic summary, cash and temporary investments, receivables, inventories, liabilities, and plant and equipment.
Prerequisite: Accounting 231.
- 233 Secretarial Accounting (3) i, ii**
Principles of accounting with emphasis on the practices applicable to secretarial science.
- 330 Cost Accounting (3) i, ii**
Principles of cost accounting as applied to the job order and process system; cost determinology, cost cycle, special ledgers in cost accounting, material records and inventory control, accounting for labor, factory wage systems, manufacturing expenses, departmentalization of factory costs, and cost summaries and financial statements.
Prerequisite: Accounting 231.
- 332 Managerial Accounting (3) i, ii**
Assembly and use of accounting data for managerial decision making; cost accounting, budgeting, cost-volume-profit analysis, alternative decisions, and cost of capital.
Prerequisite: Accounting 231.
- 430 Advanced Accounting (3) i, ii**
The theory and practice of specialized accounting systems of common business enterprises; comparative and consolidated financial statements, advanced problems pertaining to partnerships, corporations, and installment sales, consignments, reorganizations, joint ventures, and branch accounting.
Prerequisite: Accounting 232.
- 432 Auditing (3) ii**
Verification of records, valuation and analysis of accounts, and presentation of conditions; practical audit cases.
Prerequisite: Accounting 232.
- 438 Tax Accounting (3) ii**
Income tax, social security, and payroll tax accounting.
Prerequisite: Accounting 231.

BUSINESS EDUCATION

- 250 Seminar in Office Occupations (1) i, ii, iii**
Course designed to fulfill the requirement for work experience under the Missouri State Plan. On-the-job training stations provide a variety of experiences.

- 252 Seminar in Distributive Education (1) i, ii, iii**
On-the-job training that partially fulfills the requirement for work experience under the Missouri State Plan.
- 350 Seminar in Office Occupations (1) i, ii, iii**
A continuation of Seminar in Office Occupations 250.
Prerequisite: Business Education 250.
- 352 Seminar in Distributive Education (1) i, ii, iii**
A continuation of Seminar in Distributive Education 252.
Prerequisite: Business Education 252.
- 450 Methods of Teaching Business Subjects (3) i, ii**
Methods and activities in teaching typewriting, shorthand, bookkeeping, general business, and economics.

ECONOMICS

- 260 Principles of Economics (3) i, ii, iii**
Macro-economic concepts; production, employment, price levels, monetary and fiscal policy.
- 261 Principles of Economics (3) i, ii, iii**
Micro-economic concepts; economic problems of individual firms and industry, principles of supply and demand, consumption and expenditures of individuals, and business fluctuations.
Prerequisite: Economics 260.
- 306 Money and Banking (3) i, ii**
American monetary and banking systems; their influence on economic activities.
Prerequisite: Economics 261.
- 366 Intermediate Economic Theory (3) i, ii**
Theories of value and distribution; price and output determination for firms and industry under various market structures; the firm as decision maker.
Prerequisite: Economics 261.
- 362 Public Finance (3) i**
Public financial policies governing revenues and expenditures, public debts, financial administration, and tax problems of local, state, and national governments.
Prerequisite: Economics 261.
- 364 Corporate Finance (3) i**
Capital structure, corporate securities, capital markets, dividend policies, working capital, and business mergers.
Prerequisite: Economics 261 and Accounting 231.
- 368 Comparative Economic Systems (3) ii**
Survey of modern economic systems; the economic characteristics of free enterprise, capitalism, modern socialism, and communism.
Prerequisite: Economics 261 and Political Science 200 or 210.
- 460 National Income Analysis (3)**
Theory of National income, employment, and output; national income accounting, growth rates, and income determinations.
Prerequisite: Economics 360.

- 462 History of Economic Thought (3) ii**
Origin and development of the economic theories of the modern world; classical, neo-classical, and capital Keynesian schools of economic thought.
Prerequisite: History 120 and Economics 261.
- 464 Labor Economics (3) i**
Economic implications of the American labor movement; analysis of the labor force, the levels of wages, unemployment, and corresponding price movements.
Prerequisite: Economics 261 and Management 110.

MANAGEMENT

- 110 Introduction to Business (3) i, ii, iii**
General introduction to the study of business management. Required of freshman business majors.
- 112 Business Mathematics Principles and Problems (3) i, ii, iii**
Theory and application of business mathematics; computational and theoretical concepts applicable to specialized areas.
Prerequisite: High school algebra or Mathematics 101 or 103.
- 210 Business Statistics (3) i, ii**
Tabular and graphic methods, averages, dispersion, and skewness.
Prerequisite: Business Mathematics Principles and Problems 112.
- 310 Business Law (3) i, ii, iii**
General principles of business law; emphasis on contracts and negotiable instruments.
- 311 Business Law (3) i, ii**
General principles of business law; emphasis on the law of personal property, real property, partnerships, and corporations.
Prerequisite: Business Law 310.
- 312 Principles of Management (3) i, ii**
Functions of management, including organization, planning, operation, and control.
- 314 Office Management (3) i, ii**
Functions of office management including development and use of manuals; selection, training, pay and promotion of employees; control of expenses and measurement of efficiency; reproduction facilities; record retention systems; production standards.
- 316 Principles of Insurance (3) i, ii**
Nature and uses of insurance; structure, management, and regulation of insurance carriers; economic risk; principles of personal, property, life, and casualty insurance.
- 410 Business Communications (3) i, ii, iii**
Principles of effective business letter and report writing; machine and oral dictation procedures.
- 412 Personnel Management (3) i, ii**
Techniques of improving and maintaining employer-employee relations; personnel policies and procedures; wage and salary administration.

MARKETING

- 320 Marketing (3) i, ii, iii**
Marketing functions, channels of distribution, marketing institutions, and procedures.
- 322 Salesmanship (3) i, ii, iii**
Methods, procedures, and policies of selling.
- 324 Advertising (3) i, ii**
Purpose and function of retail sales promotion; color, design, display construction, equipment and sets.
- 326 Merchandising (3) i, ii**
Retail store operations; location, layout, purchasing, inventory, and pricing.
- 420 Marketing Management (3) i**
Problems of marketing from the business executive's point of view.
Prerequisite: Marketing 320.
- 422 Sales Management (3) ii**
Problems of training and handling salesmen; routing, sales meetings, and demonstrations in selling and training.
Prerequisite: Salesmanship 322.

SECRETARIAL COURSES

- 140 Elementary Typing (2) i, ii, iii**
Beginning typewriting. Minimum net speed of 25 words per minute required for passing grade. Course not open to students who have received one-half high school credit or more for typing. 3 hrs. lecture.
- 141 Intermediate Typing (2) i, ii, iii**
A continuation of Elementary Typing 140; speed and accuracy, typing business letter, manuscripts and business forms, tabulation. Minimum net speed of 40 words per minute is expected. Course not open to students who have received one and one-half or more high school credits for typing. 3 hrs. lecture.
Prerequisite: Elementary Typing 140 or equivalent.
- 144 Elementary Shorthand (3) i, ii, iii**
Fundamentals of Diamond Jubilee Shorthand. The equivalent of Preparatory English and Elementary Typing 140 should precede or parallel this course. Course not open to students who have received one high school credit for shorthand. 3 hrs. lecture, 2 hrs. lab.
- 145 Intermediate Shorthand (3) i, ii, iii**
A continuation of Elementary Shorthand 144. Daily dictation and practice. A minimum dictation speed of 60 words per minute on new material is expected. Intermediate Typing 141 should precede or parallel this course. 3 hrs. lecture, 2 hrs. lab.
Prerequisite: Preparatory English or equivalent, Elementary Shorthand 144 or equivalent.
- 147 Secretarial Mathematics (3) i, ii, iii**
The computation of practical financial problems of a business, civic, and personal nature.

- 148 Secretarial Procedures (3) i, ii**
Secretarial duties and responsibilities; handling of mail, office routines, and human relations.
Prerequisite: Intermediate Typing 141.
- 149 Secretarial Communications (3) ii**
Effective communication in business letters and reports; spelling business vocabulary.
Prerequisite: Preparatory English 010 and Elementary Typing 140 or equivalent.
- 240 Office Typing Problems (2) i, ii**
Office standards in typing business letters, forms, legal material, numbers, and tabulation; use of duplicating machines. 4 hrs. lecture.
Prerequisite: Two semesters college level typing or one year high school typing and one semester college typing.
- 340 Advanced Shorthand (3) i, ii**
A continuation of Intermediate Shorthand 145; the vocabulary of various businesses. A minimum dictation speed of 80 words per minute on new material is expected. Intermediate Typing 141 or Office Typing Problems 240 should precede or parallel this course. 3 hrs. lecture, 2 hrs. lab.
- 341 Secretarial Dictation and Transcription (3) i, ii**
Advanced dictation and speeds of 100-120 words per minute and transcription speed of 25-30 words per minute. 3 hrs. lecture, 2 hrs. lab.
Prerequisite: Three semesters college shorthand or one year high school shorthand and two semesters shorthand plus typing.
- 342 Records Management (2) i**
Filing rules, procedures, equipment, and management.
- 344 Office machines (2) i, ii, iii**
The operation of standard office machines. 4 hrs. lecture and lab.

department of
COMPUTER SCIENCE

Students in computer science prepare themselves to understand and participate in the use of data processing machines that acquire, organize, and process information. These machines have already made an indelible impact on nearly all areas of human endeavor, and conservative estimates indicate the need for personnel trained to communicate with these machines will triple by 1975. Students electing this curriculum, usually with a strong interest and aptitude in mathematics and related subjects, will be prepared to meet a part of this demand.

The Department offers a major in computer science technology for the degree Associate in Applied Science and a major in mid-management (data processing) for the degree Associate in Applied Business. Consult the Department Chairman for required courses and hours.

COMPUTER SCIENCE

- 180 Introduction to Data Processing Card Equipment (3) i**
Operating procedures, functions, and general study of unit record equipment. Designed for Business majors. 2 hrs. lecture, 2 hrs. lab.
- 182 Introduction to Electronic Data Processing (3) i, ii, iii**
Appreciation of computer equipment, languages, operating systems, logic operations, terminology and man-machine communication. Basic number systems, and the physical structure of the computer.
- 184 Unit Record Equipment I (5)i**
Purposes, features, functions, and operating procedures of IBM Unit Record Machines. 3 hrs. lecture, 4 hrs. lab.
- 186 Unit Record Equipment II (5) ii**
A continuation of 180. 3 hrs. lecture, 4 hrs. lab.
Prerequisite: Computer Science 184.
- 188 Scientific Digital Language (3) i, ii**
High level programming language; algorithmic, procedure oriented languages and their implementation, operation, and use. 2 hrs. lecture, 2 hrs. lab.
Prerequisite: Computer Science 182 and Mathematics 103.
- 280 Data Processing Programming (5) ii**
Introduction to Fortran in the nonscientific disciplines. Practical application. 3 hrs. lecture, 4 hrs. lab.
Prerequisite: Computer Science 182 and Mathematics 103.
- 282 Unit Record Applications (5) i**
Data Processing applications; flowcharting logic and combination of systems. 3 hrs. lecture, 4 hrs. lab.
Prerequisite: Computer Science 186
- 284 Symbolic Digital Language (3) i**
Assembly programming language. Combining IBM 1130 with IBM 360. 2 hrs. lecture, 2 hrs. lab.
Prerequisite: Computer Science 182 and 188.
- 286 Information Retrieval (3) ii**
Organization of system information; hierarchies of storage; sorting and searching of information from files; referencing and processing techniques based on structure list processing; content addressing; and cross referencing of files. 2 hrs. lecture, 2 hrs. lab.
Prerequisite: Computer Science 284.
- 288 Advanced Reading in Computer Science (3) ii**
Independent study.
Prerequisite: Consent of instructor.

department of ENGINEERING & TECHNOLOGY

The Department of Engineering and Technology prepares the student interested in a career as an engineer or an engineering technician in the skills necessary to plan, produce, inspect, maintain, install, and distribute technological products or services.

The course of study is designed to give the student a measure of versatility based upon an understanding of general engineering principles and closely related studies in science and mathematics. The pre-engineering program offered within the department closely parallels the programs at the University of Missouri at Columbia and Rolla as well as other accredited engineering schools.

The Department offers the four-year degree Bachelor of Science in Technology. It offers the two-year degree Associate in Applied Science with majors in agri-business, architectural and structural drafting technology, civil engineering technology, electronic engineering technology, engineering drafting technology, mechanical engineering technology, and professional pilot training. Consult the Department Chairman for required courses and hours.

ENGINEERING

- 104 Engineering Graphics (3) i**
Fundamentals of drawing, drafting room practices, and drafting interpretation of typical engineering and industrial drawings. Two hrs. lecture, four hrs. lab.
- 106 Descriptive Geometry (3) ii**
The relative position of points, lines, and planes in space. Two hrs. lecture, four hrs. lab.
Prerequisite: Engineering Drawing 104.
- 107 Slide Rule (1) ii**
Use of the slide rule in engineering problems.
Prerequisite: Technology 105 or Math 106.
- 200 Surveying (3) i**
Fundamentals of plane surveying; the use and care of equipment. Two hrs. lecture, three hrs. lab.
Prerequisite: Technology 105 or Math 106.
- 203 Methods of Manufacture (3) i**
Fabrication of industrial products; physical and chemical elements of industrial materials.
- 205 Statics (3) i**
Problems of equilibrium, vectors, force systems, trusses, friction, centroids, and moment of inertia.
Prerequisite: Physics 123 and concurrent with Math 209.
- 206 Circuit Theory I (4) i**
Circuits using resistances, capacitance, and inductions; types of driving sources.
Prerequisite: Physics 123 and Math 108.
- 208 Dynamics (3) ii**
Motion of a particle, kinetics of rigid bodies, work and energy, impulse and momentum.
Prerequisite: Engineering 205.
- 209 Circuit Theory II (4) ii**
Alternating current circuits, inductively coupled circuits, polyphase circuits, fourier analysis.
Prerequisite: Engineering 206.

TECHNOLOGY

- 100 Personal and Occupational Guidance (1) i**
Job requirements of engineering technician occupations; personality development and leadership training.
- 102 Fundamentals of Electricity (4) i**
Basic electric units, Ohm's law, Kirchoff's law, circuit solution, network solutions, magnetism, inductance, and capacitance. Three hrs. lecture, four hrs. lab.
- 105 Technical Mathematics I (5) i**
The mathematics of technical problems.
Prerequisite: One unit each of high school algebra and plane geometry.

- 108 Technical Mathematics II (4) ii**
Applied analytic geometry and calculus including graphs, functions, limits, derivatives, and integrals.
Prerequisite: Technology 105.
- 109 Technical Physics (4) ii**
Vectors, forces, moments, torque, equilibrium conditions, motion, velocity, acceleration, moment of inertia, radius of gyration, work, power, energy, fluids and heat; applied problems.
Prerequisite: Technology 105.
- 202 Graphic Statics (3) i**
Solving by graphic means forces acting on building structures.
Prerequisite: Technology 108 and Technology 109.
- 204 Principles of Metallurgy (4) i**
Physical and process metallurgy; production processes for iron and steel; pure metal and alloy characteristics; basic phase diagrams; and metal structures and effects of low alloy content on the iron carbide phase diagrams.
Prerequisite: Technology Physics 109.
- 207 Strength of Materials (3) ii**
Forces, stress, and strain on materials; analysis of trusses, torsion and couples. Two hrs. of lecture, three hrs. lab.
Prerequisite: Technology 108 and Technology 109.

AGRI-BUSINESS

- 120 Crop Production (4)**
Products and materials used in the growing of crops. 2 hrs. lecture, 6 hrs. lab.
- 123 Soil Science I (4)**
Understanding of the use of fertilizers. 2 hrs. lecture, 6 hrs. lab.
- 126 Animal Biochemistry (3)**
Digestion and supplying energy to livestock and poultry. 1 hr. lecture, 6 hrs. lab.
- 129 Structure of Agri-Related Industries (2)**
Study of industries related to agriculture.
- 133 Grain Grading (2)**
Grain grading according to the U.S. Grain Standards Act. 1 hr. lecture, 4 hrs. lab.
- 136 Soil Science II (4)**
Recommending, formulating, selling, and applying fertilizer. 2 hrs. lecture, 6 hrs. lab.
- 139 Animal Nutrition (4)**
Classification of forages and grains as feeds; techniques of formulating livestock and poultry feeds. 3 hrs. lecture, 4 hrs. lab.
- 240 Feed, Ingredients, Additives, Food, and Drug Regulations (4)**
Mineral and antibiotic livestock feed additives; food and drug regulations of State and Federal governments. 3 hrs. lecture, 4 hrs. lab.
- 243 Animal Husbandry (3)**
Animal husbandry management techniques. 2 hrs. lecture, 4 hrs. lab.

- 246 Grain Handling and Warehousing (3)**
Movement of grain; factors influencing grain market.
- 249 Agricultural Chemicals (3)**
Herbicides, insecticides, fungicides, and nematocides; external and internal parasites. 2 hrs. lecture, 3 hrs. lab.
- 252 Planting, Tillage, and Harvesting Equipment (4)**
Planting, tilling, and harvesting machinery. 2 hrs. lecture, 6 hrs. lab.

ARCHITECTURAL and STRUCTURAL DRAFTING TECHNOLOGY

- 120 Architectural Drawing (3) ii**
Plans, sections, elevations, and details in the preparation of a set of working drawings; mechanical inclusions in structure. 2 hrs. lecture, 4 hrs. lab.
Prerequisite: Technology 105.
- 240 Working Drawings I (4) i**
Working drawings for a residence and a commercial building of fire-resistant construction. 2 hrs. lecture, 6 hrs. lab.
Prerequisite: A. & S.D. 120.
- 243 Structural Drawing (4) i**
Structural analysis; design of simple static structural members and connections used in construction. 2 hrs. lecture, 6 hrs. lab.
Prerequisite: Technology 108.
- 246 Materials of Architectural Construction (2) i**
Structural and finish materials.
Prerequisite: A. & S.D. 120.
- 249 Working Drawing II (5) ii**
A continuation of 240; working drawings for a complex commercial building. 2 hrs. lecture, 9 hrs. lab.
Prerequisite: A. & S.D. 240.
- 252 Structural Fabrication Design (4) ii**
Structural design and representation; working drawings for complex steel and concrete structures. 2 hrs. lecture, 6 hrs. lab.
Prerequisite: A. & S.D. 243 and Technology 109.

CIVIL ENGINEERING TECHNOLOGY

- 255 Map Drafting (4) i**
Cartography; topological, petroleum, geophysical, and general construction maps; real estate sub-division. 2 hrs. lecture, 6 hrs. lab.
Prerequisite: Technology 108 and concurrent with Technology 200.
- 258 Highway Drafting (4) ii**
Working drawings for roads and highways; plans and profile sheets, cross-section sheets, earthwork computations, and government standards. 2 hrs. lecture, 6 hrs. lab.
Prerequisite: C.E. 255.

ELECTRONIC ENGINEERING TECHNOLOGY

- 120 Introduction to Electronics (4) i**
Transistors and thermionic tubes as elementary amplifiers; cathode-ray, gas filled, and photo tubes. 3 hrs. lecture, 4 hrs. lab.
Prerequisite: Concurrent with Technology 102.
- 123 15 Circuit Analysis (4) ii**
Characteristics of alternating current waves and time varying circuits; the behavior of alternating current components; phase and power factor; power measurement under balanced and unbalanced conditions in delta and wye connected systems; two-phase and three-phase systems; application of vector algebra in the analysis of series and parallel combinations of impedance. 3 hrs. lecture, 4 hrs. lab.
Prerequisite: Tech. 102 and concurrent with Tech. 109.
- 126 Electronic Amplifiers and Communication Systems (4) ii**
A continuation of 110; multi-stage transistor and vacuum tube amplifiers, compensation techniques, feedback principles, class B and class C amplifiers and oscillators, A. M. and F.M. modulation and detection, pulse modulation, tuned class A amplifiers, and television. 3 hrs. lecture, 4 hrs. lab.
Prerequisite: E.E. 120.
- 240 Instruments and Measurements (4) i**
Basic circuits in electronic measurements; oscilloscopes, vacuum-tube voltmeters, and bridges; irregular waveforms and bandwidth requirements of instruments. 3 hrs. lecture, 3 hrs. lab.
Prerequisite: E.E. 126.
- 243 Automatic Control Systems (3) ii**
Control systems and electronically timed operations; synchros in open-ended systems; error-sensing transducers and feedback control systems. 2 hrs. lecture, 3 hrs. lab.
Prerequisite: E.E. 126.
- 246 Electronic Computers (4) i**
Electronic circuits in computations; Analog and digital computers. 3 hrs. lecture, 3 hrs. lab.
Prerequisite: E.E. 240.
- 249 Electronic Design (4) ii**
Design and construction of individual projects. 2 hrs. lecture, 6 hrs. lab.
Prerequisite: E.E. 126 and concurrent with E.E. 252.
- 252 Microwave Systems (3) ii**
U.H.F. and V.H.F. components, circuits and measurement techniques; distributed constant elements; waveguides, microwave links, radar and similar systems. 2 hrs. lecture, 3 hrs. lab.
Prerequisite: E.E. 126.

ENGINEERING DRAFTING TECHNOLOGY

- 241 Machine Drafting (4) i**
Detail and assembly drawing of machines. 2 hrs. lecture, 6 hrs. lab.

- 244 Electronics Drafting (3) i**
Drafting communication of electronic components. 2 hrs. lecture, 3 hrs. lab.
Prerequisite: Tech. 104 and concurrent with Tech. 102.
- 247 Machine Drawing and Design (4) ii**
Methods and representation of machine design. 2 hrs. lecture, 6 hrs. lab.
Prerequisite: E.D. 241.
- 250 Production Illustration (4) ii**
Perspective drawings in industrial production. 1 hr. lecture, 9 hrs. lab.
Prerequisite: E.D. 241.

MECHANICAL ENGINEERING TECHNOLOGY

- 120 Materials of Industry (3) I**
Industrial uses of materials.
- 240 Hydraulics and Pneumatics (3) i**
Components of hydraulic and pneumatic systems. 3 hrs. lecture, 2 hrs. lab.
Prerequisite: Tech. 108 and Tech. 109.
- 254 Basic Mechanisms (5) ii**
Motion characteristics of a mechanism; motion study, absolute and relative velocities, accelerations, instant centers, and gearing. 2 hrs. lecture, 9 hrs. lab.
Prerequisite: E.D. 241.
- 256 Machine Design (3) ii**
A survey of the more important elements used in tool and machine design and their general characteristics pertaining to application, efficiency, economy, and standardization.
Prerequisite: M.E. 254.

PROFESSIONAL PILOT TRAINING

- 120 Private Flight (3) i**
Flight maneuvers leading to private pilot, single engine, Land Certificate; Algebra 3 or 5 must be taken concurrently. 2 hrs. lecture, 4 hrs. lab.
Prerequisite: Concurrent with Tech. 105.
- 123 Private Ground (3) i**
Ground training leading to a private pilot, single engine, Land Certificate. To be taken concurrently with Private Flight Course 110.
Prerequisite: Concurrent with P.P. 120.
- 126 Commercial Flight I (3) ii**
A continuation of flight training leading to qualification for commercial license. 2 hrs. lecture, 4 hrs. lab.
Prerequisite: P.P. 123 and concurrent with P.P. 126.
- 129 Commercial Ground (3) ii**
Advanced weights and balances, meteorology, flight computers, navigation and radio, Federal Aviation regulations, and flight maneuvers.
Prerequisite: P.P. 123 and concurrent with P.P. 126.

240 Commercial Flight II (3) i

Continuation of Commercial Flight I. May be taken at the convenience of the student and the flight school. 2 hrs. lecture, 4 hrs. lab.

Prerequisite: P.P. 126.

243 Instrument Flight (3) ii

Flight maneuvers and planning by sole reference to flight instruments. 2 hrs. lecture, 4 hrs. lab.

Prerequisite: P.P. 126.

246 Instrument Ground (3) ii

Aircraft instruments and systems; instrument flight rules, flight charts, shorthand clearances, visual omni-range flight procedure, instrument landing systems, and automatic direction finder approaches.

Prerequisite: P.P. 129 and concurrent with P.P. 243.

249 Instructor Flight (3) ii

Flight teaching procedure. 2 hrs. lecture, 4 hrs. lab.

Prerequisite: P.P. 240 and concurrent with P.P. 243 and P.P. 246.



EDUCATION and PSYCHOLOGY . . .



The outside world provides a multitude of study areas where a student may increase knowledge gained in the classroom.



Athletics are a part of the educational process which serve to unify the student body and provide a teaching method.



Audio-visual techniques aid in the teacher-training areas stimulating the thought processes for education and psychology.

department of EDUCATION

The Department of Education is concerned with the total process of learning and application. Students who wish to become elementary or secondary teachers or other educational specialists learn to use and understand principles of learning, human growth and development and interpersonal relationships. The Department of Education also supplies the student with specialized educational job experiences in participating elementary and secondary schools under the supervision of experienced master teachers. The professional training of the prospective teacher is placed largely in the third and fourth years of the program. The professional sequence complements a broad general education curriculum. A sound command of a major teaching field is integrated throughout the four year program.

The Department offers majors in elementary education and technical education for the degree Bachelor of Science in Education. Majors in secondary education for the degree Bachelor of Science in Education are offered in conjunction with other departments. Consult the Department Chairman for required courses and hours.

- 010 Reading Improvement (0) i, ii**
Basic reading skills for the advanced student; speed, comprehension, and vocabulary.
- 011 Career Orientation (0) i, ii**
Interdisciplinary seminar on professional opportunities and commitment. Required of education majors.

EDUCATION

- 202 Participation (2) i, ii**
Off-campus participation in schools as a non-teaching aide to develop an understanding of the role of the teacher, teaching procedure, evaluation.
- 203 Secondary School Reading (3) i, ii, iii**
Techniques of teaching upper-level reading in the various subject matter fields.
Prerequisite: Education 011, or Departmental approval.
- 204 Elementary School Reading (3) i, ii, iii**
Developmental reading; techniques of teaching reading in the elementary grades.
Prerequisite: Education 011, or Departmental approval.
- 304 The Junior Experience – The Student and Learning (5) i, ii**
Assignment as an instructional aide in a cooperating school concurrently with seminar studies on the principles of learning, growth and development.
Prerequisite: Education 202.
- 306 Current Trends in Education (2) i, ii**
Seminar on Education innovations, new media, current teaching problems and issues.
Prerequisite: Education 202, 304.
- 405 Internship (6) i, ii**
One (1) semester; off-campus teaching with full classroom responsibilities.
Prerequisite: Education 202, 304 (except for technical education).
- 406 Foundations in Education (6) i, ii, iii**
Problems in teaching; organization and management of the school; the teacher and society. Taken with the internship or student teaching.
Prerequisite: Education 202, 304 (except for technical education).
- 407 Individual Resources (2) i, ii**
Audio-visual materials; school resources and referral agencies. Taken with the Internship.
Prerequisite: Education 202, 304 (except for technical education).
- 408 Student Teaching (6) i, ii, iii**
Nine (9) weeks; off-campus teaching under supervising teacher.
Prerequisite: Education 202, 304.

TECHNICAL EDUCATION

- 441 Introduction to Technical Education (3) i**
Historical development and philosophy of technical education.
Prerequisite: Admittance to Technical Education Program.
- 442 Technical Education Program Planning (3) ii**
Program and curriculum development in technical institutes, junior colleges and area vocational-technical schools.
Prerequisite: Technical Education 441.
- 443 Curriculum Development in Technical Education (3) ii**
Technical curriculum design; interrelationship of mathematics, science, and technical courses in technical curricula.
Prerequisite: Technical Education 441.

department of PHYSICAL EDUCATION

Whether promoting intercollegiate sports, programming intramural competitions, or offering a planned sequence of exercises to help students develop strong and active bodies, the Department of Physical Education is interested in assisting all students to become healthy and productive members of society. Students who desire to prepare and teach physical education programs to elementary and high school youth are also the concern of this department. Students will find sports activities, recreational guidance, and safety training related to the specific needs of the individual. Majors in the Department of Physical Education also encounter the various strategies of successful team coaching as well as the various techniques of planning, teaching, and evaluating school physical activities programs.

The Department offers a major in physical education for the degree Bachelor of Science in Education. Consult the Department Chairman for required courses and hours.

GENERAL PHYSICAL EDUCATION CORE

- 191 Introduction to Physical Education (2) i**
For freshmen majors. Opportunities in the field. Meaning of physical education; evaluation of aptitudes and abilities.
- 201 First Aid (2) ii**
Major disaster, civil defense and major emergency call. Red Cross standard and advanced certification.
- 243 Theory of Team Sports (2) i**
Methods and procedures in the instruction of team sports.
- 250 Anatomy and Physiology (Biology) (5) i, ii**
- 303 Kinesiology (3) i**
Analysis of movement from the study of the anatomical structure of the human body.
- 333 Theory of Swimming (2) i**
Methods and procedures in the instruction of swimming.
- 342 Direction of Individual and Dual Sports (3) ii**
Methods and procedures in the instruction of individual and dual sports.
- 353 Theory of Gymnastics and Tumbling (2) i**
Methods and procedures in coaching gymnastics.
- 373 Organization and Administration of Physical Education (2) ii**
- 393 Measurement in Physical Education (3) i**
Methods of testing for physical fitness, motor ability, and skills.
- 465 Theory of Rhythms (2) i**
Methods and procedures in the teaching of folk dancing, square dancing, and social dancing.

SECONDARY SCHOOL SPECIALIZATION – Men

- 331 Coaching of Swimming (2)**
Theory and practice in coaching swimming.
- 341 Coaching of Baseball (2) ii**
Theory and practice in coaching baseball.
- 343 Coaching of Basketball (2) ii**
Theory and practice in coaching basketball.
- 345 Coaching of Football (2) i**
Theory and practice in coaching football.
- 351 Coaching of Track and Field (2) ii**
Theory and practice in coaching track.
- 353 Coaching of Wrestling (2) i**
Theory and practice in coaching wrestling.

- 391 Athletic Training (2) i**
Prevention and care of common athletic injuries; protective equipment, training methods.
- 392 Administration of Athletics (3) ii**
Policies and procedures in directing the interscholastic athletic program; national, state, and local controls.

ELEMENTARY SCHOOL SPECIALIZATION

- 300 Elementary School Health (2) i**
School health problems at various elementary grade levels.
- 362 Rhythms for Elementary Physical Education (2) ii**
Fundamental rhythms, singing, games, folk dances, simple square dancing for the elementary school child.
- 382 Sports and Games for Elementary P.E. (3) i, ii**
Planned activities for all elementary grade levels.
- 390 Elementary School P.E. Program (3) ii**
Methods and procedures in constructing an elementary physical education program; curriculum, budget, and facilities.
- 392 Sports Officiating (2) i**
Rules of major sports; techniques used in officiating athletic contests. Practical experience in the intramural program.

ACTIVITY COURSES—Women (2 hrs. wk.)

- 110 Adaptive Activities (1) iii**
For handicapped, by permission only. Recognition, prevention, and correction of functional and structural deviations from normal body mechanics.
- 120 Beginning Tennis and Badminton (1) i, ii**
- 122 Advanced Tennis and Badminton (1) i, ii**
Advanced activity for more skilled performer in tennis and badminton.
- 130 Beginning Swimming (1) i, ii**
(For non-swimmers).
- 133 Advanced Swimming (1)**
Prerequisite: Beginning Swimming (130) or ability to swim.
- 140 Fall Team Sports (1) i**
Soccer, speedball and basketball.
- 142 Spring Team Sports (1) ii**
Volleyball and softball.
- 150 Gymnastics and Tumbling (1) i**
Performance and evaluation of gymnastic skill.
- 160 Folk & Square Dance (1) i, ii**
Circle, square, line, and couple dances.

- 162 Social Dance (1) i, ii**
Waltz, Foxtrot, Lindy, and other social dances.
- 164 Modern Dance (1) i, ii, iii**
Introduction to creative modern dance.
- 170 Archery and Fencing (1) i, ii**
(Arrows furnished by students).
- 172 Golf and Bowling (1) i, ii, iii**
(Course fee required)
- 180 Recreational Games (1) i, ii**
Shuffleboard, table tennis, horseshoe pitching, dartboard, croquet.

ACTIVITY COURSES—Men (2 hrs. wk.)

- 111 Adaptive Exercise (1) i, ii**
For handicapped, by permission only. Guided program of individualized exercise. May be repeated for credit with consent of instructor.
- 125 Handball and Squash (1) ii**
(Students must furnish gloves).
- 127 Beginning Badminton and Tennis (1) i, ii, iii**
- 131 Beginning Swimming (1) i, ii**
(For non-swimmers).
- 133 Advanced Swimming (1) i, ii**
Prerequisite: Beginning Swimming (131) or ability to swim.
- 135 Skin and Scuba Diving (1) ii**
Techniques of skin and scuba diving; safety precautions. Students must furnish diving mask and foot fins. Fees for other equipment may be charged.
- 141 Beginning Soccer and Volleyball (1) i**
- 143 Fall Team Sports (1) i**
Soccer and basketball.
- 145 Spring Team Sports (1) ii**
Volleyball and softball.
- 151 Tumbling and Gymnastics (1) i**
Performance and evaluation of gymnastic skills.
- 152 Beginning Wrestling (1) ii**
- 153 Body Dynamics (1) i, ii**
Development of programs for strength, power and endurance.
- 160 Folk and Square Dance (1) i, ii**
Circle, square, line and couple dances.
- 162 Social Dancing (1) i, ii**
Waltz, fox trot, Lindy and other social dances.
- 171 Beginning Bowling and Golf (1) i, ii**
(Student must pay a course fee.)

- 173 **Beginning Archery and Fencing (1) ii**
(Arrows furnished by students.)
- 179 **Intercollegiate Sports (1) i, ii**
Varsity participation in team sports.

ELECTIVES

- 104 **Personal and Community Hygiene (2) i, ii**
Personal health concerns; family and community responsibilities.
- 381 **Outdoor Education (2) ii**
Techniques of teaching in an outdoor learning environment.
- 383 **Adaptive and Corrective Physical Education (2) ii**
Analysis of problems in body mechanics.
- 391 **Officiating of Sports (2) i**
Rules and techniques of athletic officiating. Participation in the intramural program.
- 393 **Intramural Management (2) i**
Organization and administration of intramural activities for boys. Practical work with the intramural program.

department of PSYCHOLOGY

Although the Department of Psychology does not grant a degree, it forms a significant portion of the study required for the general education of all students and meets the specific demands of several related majors.

The Department of Psychology also serves community businesses and agencies by providing special courses and services to fill their unique demands.

- 101 **General Psychology (3) i, ii, iii**
History, philosophy and scope of psychology.
- 201 **Applied Psychology (3) i, ii, iii**
Extension of psychological principles; especially interpersonal relationships, and vocational choice.
Prerequisite: Psychology 101 with a grade of C or better.
- 220 **Psychology of Personality (3) ii**
Dynamics of personality and human behavior; adjustment, group behavior, personality and behavior theories.
Prerequisite: Psychology 101 with a grade of C or better.
- 305 **Educational Psychology (3) i, ii, iii**
Introductory professional course for the education major. Psychology relevant for the educative process.
Prerequisite: Psychology 101 with a grade of C or better.
- 310 **Industrial Psychology (3) i, ii, iii**
Psychology for management and employee in business and industry.
Prerequisite: Psychology 101.
- 309 **Abnormal Psychology (3) i, ii**
Deviant behavior patterns and their causes, therapies and history.
Prerequisite: Psychology 101 with a grade of C or better.

LIBERAL ARTS and SCIENCES . . .



The blending or separation of chemicals determine the structure of the finished product. The study of life and its processes help to gain insight into the past and future.



Creativity comes from within and with training designed to cultivate the abilities of the gifted. Appreciation of the art and music forms makes education more comprehensive.



Intellectual abilities come with perseverance as academic champions receive recognition for their endeavors.

department of BIOLOGY

Students in the Department of Biology are concerned with the study of life, both plant and animal, at all levels of complexity and work in new laboratories using the most sophisticated tools and techniques available. The core of knowledge offered by the Department often serves as a background for advanced specialization in medicine, dentistry, pharmacy, optometry, forestry, and veterinary medicine. The Department also offers a sound major for those wishing to teach biology in high school and makes a significant contribution to the programs of those students who are studying for degrees in medical technology and natural science.

The Department offers a major in biology for the degree Bachelor of Science in Education. In conjunction with the Department of Chemistry, it offers a major in natural science for the degree Bachelor of Arts and a major in medical technology for the degree Bachelor of Science. Consult the Department Chairman for required courses and hours.

- 101 Principles of Biology (5) i, ii, iii**
Principles of living phenomena; meets the minimum biological science requirement. Elective credit for student who subsequently majors in biology. 3 hrs. lecture, 1 hr. discussion, 3 hrs. lab.

- 111 General Biology (3) i, iii**
Phenomena associated with living organisms; intended for biology majors only. 2 hrs. lecture, 3 hrs. lab.
- 112 General Biology (3) ii, iii**
Continuation of Biology 111. 2 hrs. lecture, 3 hrs. lab.
Prerequisite: Biology 111 and Chemistry 111.
- 211 Environmental Biology (3) i, iii**
Basic concepts and field techniques used in studying the relationships of organisms to their environment. 2 hrs. lecture, 3 hrs. lab.
Prerequisite: Biology 112 or consent of the instructor.
- 212 Cellular Biology (4) ii**
Molecular cell structure with relationship to such cell functions as transport, chemical transformations, growth, and reproduction. 3 hrs. lecture, 2 hrs. lab.
Prerequisite: Biology 112 and Chemistry 340.
- 250 Anatomy and Physiology (5) i**
Concepts of human function and structure and relationship of these concepts to cells, tissues, organs, and systems. 4 hrs. lecture, 2 hrs. lab.
- 305 Conservation of Natural Resources (3) ii, iii**
Major problems of conservation in the United States concerning soil, water, forests, minerals.
- 311 Structural and Functional Biology (4) ii**
Structure and function of plants and animals, their inter-relationships. 3 hrs. lecture, 2 hrs. lab.
Prerequisite: Biology 112.
- 312 Genetic Biology (4) i**
Hereditary and adaptive principles as applied to plants and animals. 3 hrs. lecture, 3 hrs. lab.
Prerequisite: Biology 112.
- 399 Microbiology (5) ii**
Identification, characteristics and importance of common forms of micro-organisms; their application to the needs of man, infectious diseases and immunity, microbiology of air, water, foods, and their uses in industrial and scientific processes. 3 hrs. lecture, 4 hrs. lab.
Prerequisite: Biology 112 and Biology 212 or consent of the instructor.
- 411 Developmental Biology (4) ii**
Plant and animal development; formation of organs and organ systems. 3 hrs. lecture, 3 hrs. lab.
Prerequisite: Biology 112.
- 412 Seminar in Biology (1) ii**
Individual reports and group discussions on problems and current research in biology.
Prerequisite: Senior standing.
- 499 Special Problems in Biology (1-5) i, ii, iii**
Research Problems in biology.
Prerequisite: Senior standing.

department of CHEMISTRY

The Department of Chemistry deals with a core of knowledge that is essential to much of the important scientific experimentation that continually influences our daily lives in the modern world. From atomic theories to basic chemical structures, the prospective chemist studies that material which forms a basis for important and exciting work in engineering, pharmacy, medicine, medical technology, dentistry, and research chemistry to name only a few fields. Like the other major areas of study in Liberal Arts and Sciences, the Department also assists in the preparation of prospective teachers. All of these students, plus those who study chemistry as a part of their basic education, work in new quarters fully equipped for such contemporary chemical developments as instrumental analysis.

The Department offers a major in junior high science for the degree Bachelor of Science in Education. In conjunction with the Biology Department, it offers a major in natural science for the degree Bachelor of Arts and a major in medical technology for the degree Bachelor of Science. Consult the Department Chairman for required courses and hours.

- 010 Principles of Chemistry (5) i**
Chemistry for students of nursing; inorganic, organic, and biochemistry in nursing. 4 hrs. lecture, 2 hrs. lab.
- 101 Introductory Chemistry (5) i, ii, iii**
Chemistry for Arts and Science students; meets the minimum physical science requirement. Credit reduced to two hours if student takes Chemistry 111 for credit. 3 hrs. lecture, 1 hr. discussion, 3 hrs. lab.
- 111 General Chemistry I (5) i, ii, iii**
Basic concepts of chemistry; atomic theory and periodic system, chemical calculations, oxidation-reduction, states of matter, theory of chemical bonding, atomic structures. 3 hrs. lecture, 1 hr. discussion, 3 hrs. lab.
- 112 Honors General Chemistry (5) i**
Parallels Chemistry 111 for honors students only. 3 hrs. lecture, 1 hr. discussion, 3 hrs. lab.
Prerequisite: Two units algebra and one unit high school chemistry or Chemistry 101; admission by selection of the Chemistry Department based on rank in high school graduating class and scores on College Entrance Examinations.
- 120 General Chemistry II (3) i, ii**
Continuation of Chemistry 111; thermochemistry, equilibrium, electrochemistry, radiochemistry, important elements and their compounds, periodic relationships.
Prerequisite: Chemistry 111 with a grade of C or better.
- 127 Qualitative Analysis (2) ii**
Separation and identification of some of the more common anions and cations by qualitative analysis; theories of chemical equilibrium; quantitative analytical techniques; introduction to instrumentation. 6 hrs. lab.
Prerequisite: Preceded or concurrent with Chemistry 120.
- 215 Elementary Organic Chemistry (3) ii**
Aliphatic and aromatic series; their relation to life processes.
Prerequisite: Chemistry 101 or 111 with a grade of C or better.
- 310 Organic Chemistry I (3) i**
Methods of synthesis of organic compounds, reaction paths, chemical bonding, and geometry of organic molecules; aliphatic and aromatic compounds studied concurrently. If Chemistry 215 or equivalent has been completed previously, course carries only one hour of credit.
Prerequisite: Chemistry 120 with a grade of C or better.
- 311 Organic Chemistry Laboratory I (2) i**
Laboratory course to accompany Chemistry 310. 6 hrs. lab.
Prerequisite: Chemistry 310 concurrently.
- 312 Organic Chemistry II (3) ii**
Continuation of Chemistry 310.
Prerequisite: Chemistry 310 with a grade of C or better.
- 313 Organic Chemistry Laboratory II (2) ii**
Laboratory course to accompany Chemistry 312. 6 hrs. lab.
Prerequisite: Chemistry 312 concurrently.

321 Quantitative Analysis (4) ii

Analytical chemistry; gravimetric, volumetric, colorimetric, and electroanalytical determinations. The instrumental approach to analysis is emphasized. 2 hrs. lecture, 6 hrs. lab.

Prerequisite: Chemistry 127 with a grade of C or better.

340 Biochemistry (3) i

Chemistry of biological compounds, metabolism, and biochemical genetics. 2 hrs. lecture, 3 hrs. lab.

Prerequisite: Chemistry 111 and 215.

MEDICAL TECHNOLOGY

451 Medical Technology Internship (12) i

Practical training and theoretical instruction in all phases of medical laboratory work; microbiology, basal metabolism, blood banking, chemistry, cytology, hematology, histology, serology, and urinalysis.

Prerequisite: Completion of ninety-four hours course work as required for award of B.S. degree in Medical Technology.

452 Medical Technology Internship (12) ii

Continuation of Course 451.

Prerequisite: Medical Technology Internship 451.

453 Medical Technology Internship (6) iii

Continuation of Course 452.

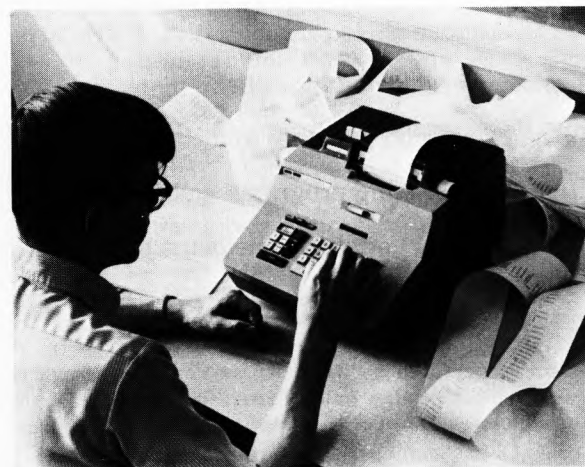
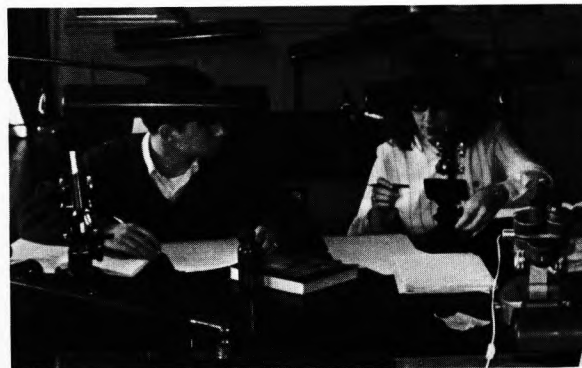
Prerequisite: Medical Technology Internship 452.

JUNIOR HIGH SCIENCE

460 Environmental Earth Science (4) ii

Basic concepts of geology, meteorology, astronomy, and related subjects; teaching techniques and special projects employed at the junior high level of instruction.

Prerequisite: Student must be enrolled in the Department of Education and pursuing a teaching degree.



department of FINE ARTS

Located in a new building with spacious art studios, instrumental and vocal music rehearsal and practice rooms, teaching studios, a library, and a music listening room, the Department of Fine Arts is concerned with developing and deepening the appreciation and understanding of music and art for the entire student body as well as improving the skills and disciplining the talents of majors. The Department also provides training in history, appreciation, and basic skills for those who wish to teach subjects in the fine arts area in elementary and secondary schools. In order to give all students at the College an opportunity to broaden their contact with the fine arts, the Department encourages attendance at the many cultural programs in the St. Joseph galleries and concert halls in addition to presenting programs and showings by student musicians and artists.

The Department offers a major in art for the degrees Bachelor of Arts and Bachelor of Science in Education. It offers a major in music for the degree Bachelor of Science in Education. Consult the Department Chairman for required courses and hours.

- 100 Art Appreciation (3) i, ii, iii**
For non-majors only. General background in the history, philosophy, principles, and techniques of the visual arts. 2 hrs. lecture, 1 hr. discussion.
- 101 Introduction to Methods (3) i, ii**
Media and concepts in studio art for education majors.
- 105 Introduction to Ancient and Medieval Art (3) i**
The history of art in western civilization from the time of prehistoric man to the beginnings of the Renaissance.
- 106 Introduction to Renaissance and Modern Art (3) ii**
A continuation of 105.
- 107 Introduction to the Art of Eastern Civilization (3)**
The history of art in eastern civilization from earliest records to the present day; visual arts of India, China, and Japan.
Prerequisite: Art 105 and 106.
- 108 The History and Technique of the Film (3)**
Film history, technical and esthetic advances since the inception of the medium.
- The following studio courses may be taken for two credit hours, rather than three credit hours, if desired. These classes will meet for six hours weekly, whether they are taken for two or three credit hours, unless otherwise stated on the schedule.**
- 130 Drawing I (3) i, ii, iii**
Elementary drawing with the figure, still life, landscape, and perspective in various media.
- 131 Drawing II (3) i, ii**
Intermediate drawing, the figure in various media.
Prerequisite: Art 130.
- 140 Printmaking I (3) i**
Wood block, etching, engraving, serigraph, and lithography.
Prerequisite: Art 130.
- 150 Oil Painting I (3) i, ii**
Beginning oil painting; color, composition, technique; the figure and still life.
Prerequisite: Art 131.
- 160 Design I (3) i**
Design in two-dimensional problems in various media.
Prerequisite: Art 130.
- 170 Sculpture I (3)**
Terra cotta, plaster, and wood sculpture.
Prerequisite: Art 130.
- 180 Water Media I (3) i, ii**
Water media, color, composition, and techniques.
Prerequisite: Art 130.
- 210 Modern Painting, Architecture and Sculpture (3)**
Art in the twentieth century.
Prerequisite: Art 105 and 106.

- 211 American Art (3)**
Origins and development of American Art; arts of Indian America.
Prerequisite: Art 105 and 106.
- 219 Research in Art History (3) i, ii, iii**
Research on selected topics of art history.
Prerequisite: Two of the following: Art 105, 106, 107, and permission of instructor.
- 232 Drawing III (3) i, ii**
Advanced drawing as a complete form.
Prerequisite: Art 131.
- 241 Printmaking II (3) ii**
Continuation of Printmaking I.
Prerequisite: Art 140.
- 251 Oil Painting II (3) ii**
Continuation of Oil Painting I
Prerequisite: Art 150.
- 261 Design II (3) ii**
Form in the third dimension and design principles and elements as they relate to three dimensions.
Prerequisite: Art 160.
- 271 Sculpture II (3)**
Sculpture employing terra cotta, plaster, wood, stone, metal or plastic.
Prerequisite: Art 170.
- 281 Water Media II (3)**
Continuation of Water Media I.
Prerequisite: Art 180.
- 320 Seminar: Art Criticism (3) i, ii, iii**
Readings in art Criticism.
Prerequisite: Nine hours art history and twelve hours studio art.
- 321 Seminar: Mass Media and Environment (Related Arts) (3)**
The new esthetic of creative forms; breakdown of the traditional distinctions among visual arts, music, literature, film, television, dance, theatre, and poetry.
Prerequisite: Nine hours art history and twelve hours studio art.
- 330 Individual Instruction (Arranged)**
Special problems in studio areas.
Prerequisite: Permission of instructor.
- 450 Individual Instruction (Arranged)**
Special problems in studio areas.
Prerequisite: Permission of instructor.

MUSIC

- 101 Music Appreciation (3) i, ii, iii**
General Education course for non-music majors; illustrated lectures on music materials, forms, historical-social development of composers and compositions.
- 110 Chorus (1) i, ii**
Group singing of various styles of musical literature. 3 hours.

- 111 Choir (1) i, ii**
Emphasizes tone production and musicianship; public performances of sacred and secular works. 3 hrs.
Prerequisite: Selection by the director.
- 112 Vocal Ensemble (1) i, ii**
Madrigal group, trios and quartets for public appearance. 3 hrs.
Prerequisite: Approval of the director.
- 120 Concert Band (1) i, ii**
Emphasizes musicianship, playing skill; representative literature. 3 hrs.
Prerequisite: Approval of the director.
- 121 Stage Band (1) i, ii**
Select group for public performance. 3 hrs.
Prerequisite: Approval of the director.
- 122 Wind Ensemble (1) i, ii**
Chamber music performance. 3 hrs.
Prerequisite: Approval of the director.
- 123 String Ensemble (1) i, ii**
Chamber music performance. 3 hrs.
Prerequisite: Approval of the director.

(Courses 110 to 123 may be repeated for credit.)

- 140 Elementary String Class (1) i**
Class lessons to develop a playing knowledge of all string instruments with a concentration on one instrument; techniques of teaching instrumental groups. 3 hrs.
- 141 Advanced Strings (1) ii**
Class lessons in playing all string instruments. Continuation of Music 140. 3 hrs.
Prerequisite: Music 140.
- 142 Wood Winds (1) i**
Same as Music 140 except for the instruments used. 3 hrs.
- 143 Brass and Percussion (1) ii**
Same as Music 140 except for the instruments used. 3 hrs.
- 144 Piano Class (1) i**
Scales, chords, harmonizing melodies, transposition, and performance of simple literature. 3 hrs.
- 145 Advanced Piano Class (1) ii**
Continuation of Music 144. 3 hrs.
Prerequisite: Music 144.
- 146 Voice Class (1) i**
Tone production, breath control, articulation, and interpretation. 3 hrs.
- 147 Advanced Voice Class (1) ii**
Continuation of Music 146. 3 hrs.
Prerequisite: Music 146.
- 160 Elementary Theory (4) i**
Simple chord progression, accessory tones, harmonizing melodies and figured bass, original compositions in simple two and three part forms; ear training, sight singing, and keyboard application of work studied in theory. 5 hrs.

- 161 Elementary Theory (4) ii**
Continuation of 160 adding modulation and seventh chords. 5 hrs.
Prerequisite: Music 160.
- 240 Fundamentals of Music (3) i, ii, iii**
Primarily for classroom teachers. Music fundamentals; development of skills necessary for sight singing, writing simple songs, playing accompaniments on auto harp and piano. Three class periods per week.
- 241 Elements of Conducting (2) i**
Basic baton techniques for all rhythmic patterns; score reading and analysis of vocal and instrumental music.
- 242 Elements of Conducting (2) ii**
Continuation of 241.
Prerequisite: Music 241.
- 250 Introduction to Music Literature (3) ii**
Vocal, keyboard, symphonic and chamber music.
Prerequisite: Music 160.
- 251 Music History (3) i**
Music from early times to the late 18th century; music forms, composers, and their development.
Prerequisite: Music 250 or permission.
- 260 Advanced Theory (4) i**
Continuation of 161 adding extended use of sevenths, accessory tones, harmonic elaboration, originals in larger forms.
Prerequisite: Music 161.
- 261 Advanced Theory (4) ii**
Continuation of 260. Extended modulations, altered chords, introduction to present-day harmonic practice, original work in larger forms. 5 hrs.
Prerequisite: Music 260.
- 330 Elementary School Music (2) i, ii, iii**
Materials and procedures for teaching singing, music reading, rhythm, instrumental, listening, and creative activities. 3 hrs.
Prerequisite: Music 240 or permission.
- 335 Secondary Music Methods and Materials (2) i, ii, iii**
Organization of public school instrumental and vocal organizations; techniques and problems of teaching music in junior and senior high school. 3 hrs.
Prerequisite: 16 hrs. of music theory.
- 351 Music History (3) ii**
A continuation of 251. Styles beginning with the Romantic period and moving to the present time.
Prerequisite: Music 250 and 261.
- 362 Form and Analysis (3) ii**
The elements, harmonic content, and formal structures of music; historical development.
Prerequisite: Music 250 and 261.
- 363 Orchestration (2) ii**
Classification of instruments, transpositions, and ranges; orchestrating and arranging for small orchestra and different combinations of instruments.
Prerequisite: Music 250 and 261.

Applied Music for Non-Music Majors. (Private Lessons—Piano, Voice, Strings, Winds.) 170, 171, 270, 271, 370, 371, 470, 471. (1)

Applied Music for Secondary Performance Area. (Private Lessons—Piano, Voice, Strings, Winds.) 172, 173, 272, 273, 372, 373, 472, 473. (1)

Applied Music for Major Performance Area. (Private Lessons—Piano, Voice, Strings, Winds.) 174, 175, 274, 275, 374, 375, 474, 475. (1)

department of HUMANITIES and COMMUNICATIONS

The Department of Humanities and Communications brings together an often widely scattered core of knowledge and experience and examines it from two points of view. The humanities point of view centers around the human being—his aspirations, his potentialities, his relationships with his fellow man—especially as seen through his literature, drama, philosophy, and religion. The communications point of view centers around the transactions between human beings that involve an expression and exchange of ideas in writing and in speaking, and it is from an understanding of this process that a picture of the total human being emerges. Students in this department are concerned with many aspects of man and his languages as a background for many and varied careers in such fields as linguistics, journalism, religion, law, politics, and teaching.

The Department offers a major in English for the degrees Bachelor of Arts and Bachelor of Science in Education, and a major in speech and theatre for the degree Bachelor of Science in Education. Consult the Department Chairman for required courses and hours.

ENGLISH COMPOSITION and LANGUAGE

- 010 Preparatory English (3) i, ii, iii**
Remedial instruction in reading and writing for students inadequately prepared for English Composition 104; does not exempt a student from the six-hour English Composition requirement.
- 104 English Composition I (3) i, ii, iii**
Composition, practices in writing, and reading for analysis of structure and style.
- 108 English Composition II (3) i, ii, iii**
Continuation of English Composition 104.
Prerequisite: English Composition 104.
- 112 Honors English Composition (3) i**
An enriched course, open to students with high class rank from high school and high score on Missouri English Placement test. These students take Exposition 224 as the second semester of Freshman Composition.
- 116 Technical Report Writing (3) i, ii**
Preparation of industrial technical reports; practice reports in the student's major area of interest.
Prerequisite: English Composition 104.
- 224 Exposition (3) i, ii, iii**
Expository writing.
- 332 History of the English Language (3) i**
The growth and nature of the English language.
- 338 Critical Reading and Creative Writing (3) ii**
Writing fiction, poetry, and other literary forms.
Prerequisite: Consent of instructor.
- 434 Descriptive English Grammar (3) ii**
The grammatical structure of present-day American English; criteria for correct usage.
- 436 The Critical Essay (3) ii**
Essays on ideas and literary values.
Prerequisite: Consent of instructor.

JOURNALISM

- 120 Journalism (3) i, ii**
Practical news reporting, production of the college newspaper, and use of broadcasting media.

LITERATURE

- 140 Introduction to Literature: Fiction and Narrative Poetry (3) i, ii, iii**
The short story, the novel, and narrative poetry by American, British, and European writers. Not open to students enrolled in Preparatory English 010.

MODERN LANGUAGES

A student with one unit of credit from high school in a modern foreign language will be allowed full credit if he enrolls in the elementary course of the same language; with two units, three hours credit; with three units, zero credit. All other courses carry the maximum credit.

FRENCH

- 105 Elementary French (5) i, iii**
Basic structural patterns of the language and essential grammar; development of active proficiencies and comprehension of grammatical concepts. 5 hrs. lecture, 2 hrs. lab.
- 110 Intermediate French (5) ii, iii**
Continuation of French 105. 5 hrs. lecture, 2 hrs. lab.
Prerequisite: French 105 or equivalent.
- 215 French Composition and Conversation (3) i**
Structural patterns of French idiomatic usages and vocabulary distinctions. 3 hrs. lecture, 1 hr. lab.
Prerequisite: French 110 or equivalent.
- 220 French Conversation and Reading (3) ii**
Short contemporary French masterpieces. 3 hrs. lecture, 1 hr. lab.
Prerequisite: French 110 or equivalent.
- 325 French Phonetics (3) i**
The French sound system.
Prerequisite: French 110 or equivalent.
- 330 Introduction to the Development of French Civilization and Culture (3) i**
The cultural basis of modern France.
Prerequisite: French 220 or consent of instructor.
- 335 Advanced French Conversation and Composition (3) ii**
Advanced French grammar and syntax, less common idiomatic forms and subtle vocabulary distinctions.
Prerequisite: French 220 or consent of instructor.
- 440 Survey of French Literature (3) i**
Representative French literary works from the Middle Ages to the end of the seventeenth century.
Prerequisite: French 220 or consent of instructor.
- 445 Survey of French Literature (3) ii**
Continuation of French 440. French literature from the eighteenth century to the present.
Prerequisite: French 220 or consent of instructor.

SPANISH

- 150 Elementary Spanish (5) i, iii**
The basic structural patterns of the language and essential grammar; the Spanish-speaking cultures and their backgrounds. 5 hrs. lecture, 2 hrs. lab.

- 144 Introduction to Literature: Drama and Lyric Poetry (3) i, ii, iii**
Drama from Sophocles to the modern dramatists and an introduction to lyric poetry. Not open to students enrolled in Preparatory English 010.
- 148 European Literature (3) iii**
European literature studied in connection with a summer European tour.
- 252 English Literature (3) i, iii**
English literature from the Old English period to 1785.
- 253 English Literature (3) ii, iii**
A continuation of English Literature 252, from 1785 to the present.
Prerequisite: English Literature 252.
- 360 American Literature to 1865 (3) i**
American literature from Bradford to Lincoln.
- 361 American Literature after 1865 (3) ii**
American literature from Whitman to the present.
Prerequisite: American Literature 360.
- 368 Shakespeare (3) i, ii, iii**
Shakespearian comedies, histories, and tragedies.
- 372 Seventeenth Century English Literature (3) i, ii**
The poetry and prose of the seventeenth century.
- 374 The Age of Reason: Eighteenth Century English Literature (3) i, ii**
The major literary movements and writers of the eighteenth century.
- 476 Nineteenth Century English Literature (3) i, ii**
Major writers and movements of nineteenth century English literature; the Romantic and Victorian poets.
- 478 Modern Drama (3) i, ii**
European, British, and American drama from Ibsen to the present.
- 480 The Twentieth Century Novel (3) i, ii**
The modern novel, British, European and American.
- 482 Chaucer**
The Canterbury Tales and other works; the social background of Chaucer's England.
- 484 Milton (3) i, ii**
Milton's life, period, and representative works.
- 486 Introduction to Literary Criticism (3) i, ii**
Principles of criticism; the work of selected critics.
- Courses offered in cooperation with the Education Department.
- 288 Children's Literature (3) i, ii, iii**
Children's books; the use of literature with children.
- 392 Literature for Adolescents (3) i, ii**
Contemporary material suitable for secondary schools; standards of evaluation; listings and reliable evaluations of appropriate books.

THEATRE

- 155 Intermediate Spanish (5) ii, iii**
Continuation of Spanish 150. 5 hrs. lecture, 2 hrs. lab.
Prerequisite: Spanish 150 or equivalent.
- 260 Beginning Spanish Conversation and Composition (3) i**
Speaking and writing skills based on short written conversations and readings from contemporary Spanish short stories. 3 hrs. lecture, 1 hr. lab.
Prerequisite: Spanish 155 or equivalent.
- 265 Advanced Spanish Conversation and Reading (3) ii**
Language patterns and idioms of Spanish; short literary works by well known authors. 3 hrs. lecture, 1 hr. lab.
Prerequisite: Spanish 260.
- 370 Introduction to Peninsular Spanish Culture and Civilization (3) i**
Spanish culture from the beginning to the present.
Prerequisite: Spanish 265.
- 375 Introduction to Spanish-American Culture and Civilization (3) ii**
Historical development of the Spanish-American colonies since 1492.
Prerequisite: Spanish 265.
- 480 Survey of Spanish Literature (3) ii**
From its beginnings to 1700.
Prerequisite: Spanish 265.
- 485 Survey of Spanish Literature (3) i, ii**
From 1800 to the present.
Prerequisite: Spanish 265.

PHILOSOPHY

- 210 Introduction to Philosophy (3) i, ii**
The meaning, function, and scope of philosophic inquiry; the relationship of philosophy, religion, and science.
- 220 Readings in Philosophy (3) ii**
The principle works of the great philosophers.
Prerequisite: Philosophy 210.
- 330 Comparative Religions (3) ii**
The major religions of the world.
Prerequisite: Philosophy 210.

SPEECH

- 107 Voice and Articulation (3) i, ii**
Techniques for improving articulation, pronunciation, and voice quality.
- 114 Public Speaking (3) i, ii, iii**
The planning and delivery of speeches; effective communication of ideas.
- 321 Discussion (3) i, ii**
Cooperative group problem solving.
Prerequisite: Public Speaking 114.
- 328 College Debate (3) i, ii**
Collegiate debating procedures and practices.
Prerequisite: Public Speaking 114.

- 135 Introduction to Theatre (3) i, ii**
The contributions made by directors, actors, designers, technicians, and playwrights to modern dramatic productions. Participation in a production as performer, member of stage or construction crew, or member of production committee is required.
- 242 Oral Interpretation (3) i, ii**
Oral reading of literature, designed for teachers of English and Speech and for theatre majors.
- 249 Stagecraft (3) i, ii**
The technical aspects of play production.
Prerequisite: Introduction to Theatre 135.
- 356 Acting (3) i, ii**
Acting and stage movement and practice in make-up.
Prerequisite: Voice and Articulation 107 and Introduction to Theatre 135.
- 363 Readers' Theatre (3) i, ii**
Group reading of literature.
Prerequisite: Voice and Articulation 107 and Oral Interpretation 242.
- 470 Directing (3) ii**
Play production, planning and bringing to fulfillment a theatrical production.
Prerequisite: Introduction to Theatre 135, Oral Interpretation 242, Stagecraft 249, and Acting 356.

department of PHYSICS and MATHEMATICS

The Department of Physics and Mathematics contributes to the liberal education of all students and, in addition, provides specialized work designed for students who need a more thorough background in these fields for jobs in government, industry, and educational institutions. Some specific positions which often demand students, both men and women, to elect a curriculum in this department are the electrical industry, radio and television, transportation, government research, and air and space programs. Students in the department work with the most modern and sophisticated instruments, methods, and materials and are well prepared to do successful graduate work in leading universities or to teach classes in physics and mathematics in the secondary schools.

The addition of an astronomy course is planned utilizing the equipment donated to the college by the Tarbell Family of southern Missouri. The planetarium and the observatory equipment, along with various reading materials, were included in the donation.

The Department offers a major in mathematics for the degrees Bachelor of Arts and Bachelor of Science in Education. Consult the Department Chairman for required courses and hours.

MATHEMATICS

- 101 Fundamental Concepts of Mathematics (3) i, ii, iii**
Elementary logic and application to proofs; historical development of numerals; bases other than 10; operations and mapping on sets; functions and relations; a brief systematic development of the number system; basic algebra; groups and fields; intuitive geometry; systems of measurement; introduction to statistics.
- 103 Intermediate Algebra (3) i, ii, iii**
Quadratic systems, exponents, radicals, ratio, proportion, variation, the binomial theorem.
Prerequisite: One unit of high school algebra.
- 105 College Algebra (3) i, ii, iii**
Quadratic systems, exponents, radicals, ratio, proportion, variation, the binomial theorem, progressions, inequalities, permutations, and combinations.
Prerequisite: Two units of high school algebra or Mathematics 103.
- 106 Trigonometry (3) i, ii, iii**
Circular functions, logarithms, identities.
Prerequisite: Two units of high school algebra or Mathematics 103.
- 107 Calculus with Analytic Geometry I (5) i, ii, iii**
Plane analytic geometry, differential calculus, and integral calculus.
Prerequisite: Mathematics 105 and 106.
- 108 Calculus with Analytic Geometry II (5) i, ii**
Selected topics from analytic geometry, calculus.
Prerequisite: Mathematics 107.
- 112 Modern Elementary Mathematics (5) ii**
Modern arithmetic, algebra and geometry; designed primarily for elementary education majors.
Prerequisite: Two units of high school algebra, or Mathematics 103.
- 201 Elementary Statistics (3) i, ii, iii**
A basic course for students in business, the behavioral sciences, and social sciences; tabulation of data, graphic representation, measures of central tendency and dispersion, probability, types of distributions, sampling, hypothesis testing, elementary aspects of correlation.
Prerequisite: Mathematics 101.
- 209 Calculus with Analytic Geometry III (5) i, ii**
Integration, vectors, solid analytic geometry, partial differentiation, multiple integrals, infinite series, and hyperbolic functions.
Prerequisite: Mathematics 108.
- 212 Differential Equations (3) ii, iii**
Common types of ordinary differential equations, differential operators, Laplace transforms, applications.
Prerequisite: Mathematics 209.
- 305 Elementary Matrix Theory (3) i**
Computational methods with matrices and determinants; numerical techniques for inverting matrices and solving systems of equations.
Prerequisite: Mathematics 209.
- 315 Topics in Geometry (3) ii**
Synthetic projective geometry, collineation groups, finite geometries; abstract

definitions of geometries from the algebraic viewpoint; geometry and combinatorial topology.

Prerequisite: Mathematics 108.

316 Modern Algebra (3) ii

Groups, rings, fields and vector spaces; definitions and fundamental theorems; homomorphisms and isomorphisms; polynomials and field extensions.

Prerequisite: Mathematics 108.

321 Mathematical Statistics (3) i

The theory of mathematical statistics; probability, distribution theory and point estimation.

Prerequisite: Mathematics 108.

325 Vector Analysis (3) i

Vector differential calculus; scalar, cross and dyadic products; operators; Cartesian tensors.

Prerequisite: Mathematics 209.

332 Probability (3) ii

Concepts and terminology, occupancy problems, limit theorems, stochastic processes.

Prerequisite: Mathematics 108.

406 Complex Variables (3) i

Complex numbers, Cauchy's theorem and complex differentiation and integration; analytic functions, analytic continuation, the Riemann mapping theorem.

Prerequisite: Mathematics 209.

417 Numerical Analysis (3) i

Algebraic and transcendental equations; finite differences; interpolation, numerical differentiation and integration; numerical solutions of ordinary differential equations.

Prerequisite: Mathematics 212.

428 Topology (3) ii

Elementary point set topology; homotopy groups, extensions, fiber spaces; homology groups; applications to geometry and analysis.

Prerequisite: Mathematics 209.

PHYSICS

101 Introductory Physics (5) i, ii

Fundamentals of physics; mechanics, sound, heat, electricity, magnetism, light and structure of matter. Two hrs. credit will be allowed students who later register for credit in Physics III or Physics 223. 4 hrs. of lecture and 2 hrs. of lab per week.

Prerequisite: Two units of high school algebra or Mathematics 103.

111 Elementary Physics I (5) i, ii

Mechanics, sound, heat, structure of matter, and wave phenomena. 4 hrs. of lecture and 3 hrs. of lab per week.

Prerequisite: Mathematics 105 and 106.

112 Elementary Physics II (3) i, ii

Continuation of Physics 111. Electricity, magnetism, light and modern physics. 3 hrs. of lecture and 1½ hrs. of lab per week.

Prerequisite: Physics 111.

223 General Physics I (5) i, ii

Mechanics, heat, sound and wave theory. 4 hrs. of lecture and 3 hrs. of lab per week.

Prerequisite: Mathematics 107.

224 General Physics II (5) i, ii

Electricity, magnetism, light and modern physics. 4 hrs. of lecture and 3 hrs. of lab per week.

Prerequisite: Physics 223 and Mathematics 108.

department of SOCIAL SCIENCE

The social sciences study human societies to understand their history, their components, their varieties, and their behavior. These sciences study the changes, organization, and disorganization of societies. In addition, they examine the varieties of people in society, their character and conduct, and the evidences of their "human nature." Students in the Department of Social Science generally prepare for careers in teaching, government, law, and social work.

The Department offers a major in history for the degree Bachelor of Arts, a major in political science for the degree Bachelor of Arts, a major in sociology for the degree Bachelor of Arts, and a major in social science for the degree Bachelor of Science in Education. Consult the Department Chairman for the required courses and hours.

HISTORY

- 100 Ancient and Medieval Civilization (3) i, ii, iii**
The Western World from antiquity to the fifteenth century; The emergence of civilization in the Nile and Tigris-Euphrates valleys, the political, social economic, and intellectual contributions of Greece, Rome, and Medieval Europe.
- 110 Modern Civilization (3) i, ii, iii**
The Western World from 1500 to 1815; national states, the geographical revolution and the founding of European Empires overseas; the Reformation, the emergence of constitutional governments, the Scientific Revolution, and the American and French Revolutions.
- 120 Europe 1815-1870 (3) i, ii**
Europe from the Congress of Vienna to the unifications of Germany and Italy; the period of Reaction and Revolution, the Nationalistic movements in Germany and Italy, and the rise of Socialism-Communism.
- 130 Europe 1870-1914 (3) i, ii**
European history from the Nationalistic movements of Italy and Germany to World War I; the Nationalistic movements in the Balkans, the growth of materialism and democracy; the beginnings of imperialism and colonialism; the diplomatic background of World War I.
- 140 American History to 1865 (3) i, ii, iii**
The discovery of America to the end of the Civil War; Colonial America, the Revolution, National Development, Sectionalism, and the Civil War.
- 150 American History Since 1865 (3) i, ii, iii**
Continuation of History 140; Reconstruction, Industrialization, Urbanization, emergence as a world power, Progressivism, World War I, the New Deal, World War II, and post-war America.
- 200 Recent United States History (3) ii, iii**
The United States since 1914.
Prerequisite: History 140 and 150.
- 210 Recent European History (3) ii, iii**
Europe in World War I, the rise of dictatorships, the League of Nations, new alignments, World War II and the post war period.
Prerequisite: History 130 or sophomore standing.
- 220 History of Missouri (3) i, ii, iii**
Missouri under French and Spanish rule, the American acquisition, the role of the state in the slavery crisis and in the settlement of the West; study of the state's contributions to politics, art, literature, education, industry, and transportation.
- 240 American Economic History (3) i**
English mercantilism, laissez-faire and its effect on American economic development, the emergence of the corporation and the trust, the issue of government regulation, and the role of government in the economy today.
Prerequisite: Six hrs. of American History.
- 250 English History (3) i, ii**
English history from feudal England to the present; Anglo-Saxon England, the Norman influence, development of English political, social, economic, and intellectual ideas, Tudor England, the Stuarts, the Glorious Revolution, the founding of the British Empire, and the role of England in the modern world.

- 300 The Far East (3) i**
East Asia and the Pacific from antiquity to the present; Oriental religion, politics, and economy; the impact of European and American traders and missionaries, the founding of the European Empires, Oriental resistance to Westernization, and the emergence of modern China, Japan, and Pacific nations.
Prerequisite: History 110 or 130
- 310 Latin America (3) ii**
History of Central and South America and the West Indies: the Colonial era, Latin American Revolutions, relationships with the United States and Europe.
- 320 American Social and Intellectual History (3) i, iii**
Education, religious, intellectual, and artistic development from Colonial times; Puritanism, the Enlightenment, Transcendentalism, Realism.
Prerequisite: Six hrs. of American History.
- 330 The British Empire (3) ii**
The Age of Discovery and the founding of the old British Empire, the Empire after the American Revolution, the Commonwealth of Nations, and the decline of Empire after 1945.
Prerequisite: History 110 or 250.
- 340 American Colonial History (3) ii**
The founding of the British North American colonies; origins of American cultural, religious, and racial diversity; British colonial administration to the Revolution.
Prerequisite: Six hrs. of American History.
- 350 The French Revolution and Napoleon (3) ii**
The Old Regime in France, failure of the Bourbon monarchy, the Revolution, the rise of Napoleon, the Napoleonic Wars to the Congress of Vienna 1815.
Prerequisite: Six hrs. of European History.
- 400 History of Africa (3) ii**
North Africa in the ancient world, Africa during the Age of Geographical Discoveries, 19th century European imperialism, the emergence of modern African states and their problems.
Prerequisite: Six hrs. European History.
- 410 Civil War and Reconstruction (3) i**
The American Civil War and Reconstruction and its effect on national politics, economy, society, and thought; its relation to the modern South and the civil rights movement.
Prerequisite: Six hrs. American History.
- 420 English Legal and Constitutional History (3) i**
Magna Carta to the twentieth century; the Petition of Right, the Puritan Revolution, the Glorious Revolution, the Bill of Rights and the Act of Succession; the development of cabinet government, the Reform Bills of 1832 and 1867, the Budget Act of 1911, the Statute of Westminster.
Prerequisite: History 110 and 250.
- 430 History of the American Negro (3) ii**
Colonial origins of Negro slavery, the Old South and slavery; Negro contributions to American culture; Negro leadership from Douglas to the present; the influence of the Negro on American politics from the writing of the Constitution to modern civil rights legislation.
Prerequisite: Six hrs. American History.

- 440 European Intellectual History (3) i**
Greek and Roman contributions, the Church Fathers, the Carolingian, Ottonian, and Twelfth Century Renaissance, Italian and Northern Humanism, the Age of Reason, Romanticism, and modern European thought.
Prerequisite: Six hrs. of European History.

POLITICAL SCIENCE

- 101 American National Government (3) i, ii, iii**
The American constitutional system; government finance, regulation of commerce, agriculture, labor, and conservation of resources.
- 110 American State and Local Government (3) i, ii, iii**
State and local government and its colonial and revolutionary origins; state constitutions, legislatures, governors, courts, state services and functions, and problems in twentieth century America.
- 120 International Politics (3) ii, iii**
The nature of politics at the international level, the national state system, state capabilities, foreign policy objectives, formulation and execution, international organizations, alignments, and contemporary world tensions.
- 200 Political Theory (3) i**
Political theories of the Ancients, Aristotle and Plato; the Church Fathers; Renaissance thought of Machiavelli and More; the Age of Enlightenment and Locke, Montesquieu, and Jefferson; the theories of Marx, Welfare State ideas of Roosevelt; the theories of Fascism and Nazism.
Prerequisite: Three hrs. of American Government.
- 210 Comparative Governments (3) ii**
The governments of selected European states.
Prerequisite: Three hrs. of American Government.
- 300 Political Parties and Pressure Groups (3) ii**
The development, organization, functions, and activities of major and minor parties and pressure groups.
Prerequisite: Six hrs. of Political Science.
- 310 Public Administration (3) i**
Organization, functions, and problems of public administration in the United States.
Prerequisite: Six hrs. of Political Science.
- 320 Municipal Government (3) i**
The growth of cities, their legal status, municipal politics and elections, forms of city government, municipal services and functions.
Prerequisite: Six hrs. of American Government.
- 410 The Legislative Process (3) ii**
The American Congress, its organization, its rules, its role in the law making; the role of interest groups, congressional investigations, and the modern Presidency in the legislative process.
Prerequisite: Six hrs. of American Government.
- 420 The Supreme Court (3) i**
The role of the Supreme Court in the American system; judicial review and its significance under Marshall, Fuller, Taft, Hughes, and Warren; majority and minority opinions; the process of decision making.
Prerequisite: Six hrs. of political science.

- 430 The American Presidency (3) i**
The Presidency from Washington to the present; the growth of executive powers; the mode of elections and its influence on the office.
Prerequisite: Six hrs. of American Government.

SOCIOLOGY

- 100 Introduction to Sociology (3) i, ii, iii**
For non-social science majors. Factors which determine social organization and behavior; social interaction of individuals and groups; culture, social class, population, and institutions.
- 110 Elementary Sociology (3) i, ii, iii**
For social science majors. Sociological concepts; human cultures, groups, social order, population, and social change.
- 120 Social Institutions (3) ii, iii**
The structure of human society; social stratification, and the familial, religious, and educational institutions.
Prerequisite: Sociology 110.
- 200 General Anthropology (3) i, ii**
Physical anthropology, the living races of man, the growth and differentiation of the cultures of man from their origins to the development of civilizations.
- 210 Social Deviation (3) ii, iii**
Individual and social disorganization; delinquency, alcoholism, minority groups, discrimination, and marital conflict.
Prerequisite: Sociology 110 and 120.
- 310 Cultural Anthropology (3) i, ii**
The nature of culture, language, society, and personality with emphasis on the cultural forms, processes, evolution and change.
Prerequisite: Six hrs. of sociology.
- 320 Urban Sociology (3) i**
The modern city and metropolitan area, ecological and demographic aspects; urban problems and programs of action.
Prerequisite: Six hrs. of sociology.
- 330 The Family (3) ii**
The family as a basic institution; the structure and functions of the modern family in a changing urban environment.
Prerequisite: Six hrs. of sociology.
- 340 Personality and Culture (3) i**
The inter-relationships of society, culture, personality.
Prerequisite: Six hrs. of sociology.
- 400 Ethnic and Race Relations (3) ii**
Inter-racial and inter-cultural relations in various cultures; Minority groups in the United States; conflict, accommodation, and assimilation.
Prerequisite: Six hrs. of sociology.
- 410 Dynamics of Population (3) ii**
National and international population characteristics, trends, and problems. Factors in birth and death rates and in migration.
Prerequisite: Six hrs. of sociology.

- 420 Collective Behavior (3) i**
Analysis of collective phenomena, propaganda, crowds, public opinion polls, pressure groups, and social movement.
Prerequisite: Six hrs. of sociology.
- 430 Criminology (3) i**
Theories of criminal behavior, legal concepts, criminal statistics, corrective treatment, and crime control.
Prerequisite: Sociology 110, 120, 300.
- 440 Research Methods (3) i**
Techniques of research in sociology.
Prerequisite: Sociology 110 and 120 plus six additional hrs. in sociology.

GEOGRAPHY

- 100 World Geography (3) i, ii, iii**
The geography of the world; earth-sun relationships, weather and climate, formation of land forms, vegetation, and soils.
- 200 Geography of Europe (3) ii**
The nations and regions of Europe west of the Soviet Union, with present economics as a result of cultural and physical differences in the environment; trends of development as affected by new political and economic factors.
Prerequisite: A course in geography, European history, or consent of the instructor.

ADMISSIONS POLICIES . . .

APPLYING FOR ADMISSION

The student who wishes to be admitted to Missouri Western College must follow the following procedures:

1. Submit an application for admission provided by the Admissions Office. A \$5.00 application fee must accompany the application for admission.
2. Submit a complete medical health form provided by the Admissions Office.
3. Submit test scores from the Missouri College Testing Program (MCTP). This battery may be taken on designated Saturdays in the spring at the College or at other testing centers in Missouri on certain Saturdays. There is no charge for this test battery if taken on one of the designated Saturdays. If, however, the tests are taken at another time, a fee of \$3.00 will be assessed. Transfer students with 15 or more hours are not required to submit test scores.
4. Arrange to have a complete eight-semester high school transcript of credits sent to the Admissions Office. A seven-semester transcript plus evidence of graduation will be acceptable.

HIGH SCHOOL GRADUATES

As a public supported institution, Missouri Western College admits all graduates of accredited Missouri high schools who have not previously attended college. A prospective student with a high school grade average of less than 2.00 (on a 4 point scale) will be admitted; however, he will be limited to an enrollment of 12 credit hours during his first semester.

Graduates of accredited high schools from other states will be admitted to Missouri Western under the following conditions:

1. That they rank in the upper half of their graduating class.
2. That they present average, or above average, scores on the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board or the American College Test (ACT).

TRANSFERS FROM COLLEGES and UNIVERSITIES

A student who has previously attended accredited colleges or universities must present official transcripts of credit from each institution attended. No transfer student is considered officially enrolled until all college transcripts have been received and evaluated. Students presenting transcripts after registration may be required to pay a late enrollment fee or be subject to scholastic suspension.

No prospective transfer student will be accepted unless he is eligible to return to the college last attended. A transfer student with less than a 2.00 grade point average may be required to enter under restricted enrollment. A prospective transfer student on scholastic probation at the college last attended may be admitted to Missouri Western College with the following restrictions:

1. That his attendance in all classes be regular and punctual.
2. That he fail no course and earn a minimum grade point average of 2.00 (on a 4 point scale) in any grade period.
3. That he carry a maximum load of 12 credit hours.

Any student who misrepresents information will be subject to immediate dismissal.

TRANSFERS FROM JUNIOR COLLEGES

Missouri Western College will accept a maximum of sixty-four semester hours of course work from junior colleges of recognized standing.

ADMISSION BY CERTIFICATION

A student may be admitted to Missouri Western College through Admission by Certification as a visiting student from another accredited college or university. The visiting student is required to present certification from authorized personnel stating that he is in good standing and has permission to enroll in specified courses and transfer credit earned to that institution.

Missouri Western College may admit a high school student as a visiting student. The visiting high school student must be recommended by his high school principal. The high school principal must certify:

1. That the high school student can benefit from instruction at Missouri Western College.
2. That the high school student is a superior student.

The visiting high school student must realize that his high school is his home school and that he cannot participate in social activities sponsored by Missouri Western College.

GENERAL EDUCATION DEVELOPMENT TESTS

Students who have made acceptable scores on the General Education Development Tests (GED) may be accepted as having met the requirements for admission to Missouri Western State College.

SPECIAL STUDENTS

Persons over twenty-one years of age who have not completed requirements for admission and who present evidence of special preparation and attainment, may be admitted to the college as special students. These students may become candidates for degrees when regular admission has been established or when the entrance deficiencies have been removed by showing college level abilities through maintenance of at least a "C" average in the first thirty hours attempted. Special students are required to take all examinations in their courses and are subject to the same scholastic requirements as other students.

Students in the lowest ten percent of their graduating class and with low placement test scores may be accepted as special students on probation. They may be dismissed at the end of any grading period for lack of scholastic progress.

VETERANS

Credits earned through the United States Armed Forces Institute (USAFI) are generally recognized in accordance with the recommendation of the Commission on Accreditation of Service Experiences of the American Council of Education. Veterans must furnish copies of discharge or separation papers at the time of application for admission. No credit will be given until such papers are received.

FOREIGN STUDENTS

Foreign students are welcomed at Missouri Western College, but due to the fact that Missouri Western does not have courses designed for students whose English background may be limited, only those foreign students who can show a high degree of proficiency in English are encouraged to apply for admission. The prospective foreign student applying for admission must fulfill the following requirements:

1. Make application for admission.
2. Present proof of ranking in the upper half of his graduating class.
3. Demonstrate proficiency in the use of the English language through a satisfactory score on the Test of English as a Foreign Language (TOEFL).
4. Show evidence of financial responsibility.

The foreign student must pay the same non-resident fees as that paid by out-of-state students.

CLASS AUDITORS

A class auditor is a student registered for a course for no credit. Usually a student audits a course for review or prior to registering for credit. Registration and participation is at the discretion of the instructor.

Students who wish to pursue course work at Missouri Western College as auditors need not go through the regular admission procedure. Auditors may enroll in the Registrar's Office the second week classes are in session provided space and facilities are available.

Auditors will pay the regular fee but will not be required to take the examinations. No academic credit is given for auditing a class.

REGISTRATION PROCEDURES and FEES . . .

PRE-REGISTRATION

All first-time college students and transfer students must plan to visit the College during the summer months for pre-registration. Students will report at a designated time, prior to the beginning of classes, for final registration.

RESIDENCE

To be considered a resident of the Missouri Western Junior College District or the State of Missouri, a person twenty-one years of age or older must have established residence in the District or the State for a minimum of six consecutive months preceding the date of his initial enrollment as a student in the College. A person who is not twenty-one years of age is considered a District or State resident if his parents or legal guardian have resided in the District or State for a minimum of six consecutive months preceding the date of the minor student's initial enrollment.

Any student claiming residency in the Missouri Western Junior College District or the State of Missouri may be required to furnish evidence in support of his claim.

SCHEDULE OF FEES

INCIDENTAL FEES

- I. Residents of the Missouri Western Junior College District
 - A. Junior College Division \$5.00 per credit hour
 - B. Senior College Division \$8.00 per credit hour
- II. Residents of Missouri (Outside the Missouri Western Junior College District)
 - A. Junior College Division \$8.00 per credit hour
 - B. Senior College Division \$8.00 per credit hour
- III. Non-Residents (Outside the State of Missouri)
 - A. Junior College Division \$12.00 per credit hour
 - B. Senior College Division \$12.00 per credit hour

OTHER FEES

Application Fee	\$5.00	Applied Music Fee	
Registration Fee	\$5.00	(per credit hour)	\$35.00
Student Center (If facilities are available)	\$20.00	Late Registration Fee	\$5.00
Student Health Fee (If facilities are available)	\$5.00	Transcript Fee	\$1.00
		Commencement Fee	\$10.00
		Laboratory Breakage & Materials . . .	Cost

(The College reserves the right to change fees without notice)

Application Fee—This is a non-refundable fee paid at the time of application for initial admission.

Registration Fee—Students are required to pay a registration fee for each registration period.

Applied Music Fee—All students participating in applied music are required to pay this fee for private lessons and consultation.

Transcript Fee—A student is entitled to one transcript free of charge. Each additional transcript request must be accompanied by a \$1.00 payment.

Commencement Fee—A fee used to defray the cost of the diploma, rental of cap and gown, and other commencement activities is charged all degree candidates.

Laboratory Breakage and Materials—There is no charge for the use of laboratory equipment. However, students will be expected to pay for materials used in individual projects and for excessive breakage or loss of materials and equipment due to negligence.

Audit Fee—Auditors will pay the regular incidental fee.

PAYMENT OF FEES

All fees are payable in the Business Office during the second week classes are in session. Fee payment will be made according to the first letter of the student's last name and will follow this schedule:

A thru D	Monday
E thru I	Tuesday
J thru N	Wednesday
O thru S	Thursday
T thru Z	Friday

Students not paying fees at the above time will pay a late registration fee of \$5.00.

REFUND OF FEES

Refunds are given only to students who drop out of college entirely; no refund is given to students who drop individual classes or make schedule changes that result in a reduced semester hour class load.

Withdrawal during 2nd week of classes	80% Inc. Fee
Withdrawal during 3rd week of classes	50% Inc. Fee
Withdrawal after 3rd week of classes	No Refund

DEGREES AND REQUIREMENTS FOR GRADUATION . . .

Graduation marks the end of the efforts of the body and mind over a period of years. Missouri Western offers a variety of completion programs . . . one-year certificate . . . two-year Associate Degrees and four-year Bachelor Degrees. Basic requirements are included in this section.

BACCALAUREATE DEGREE PROGRAMS

Missouri Western College offers five baccalaureate degrees with majors in various fields. Students must complete a minimum of 124 credit hours with a grade point average of 2.00 (C average) and a minimum of forty semester hours in upper division courses (those with numbers in the 300's and 400's) to qualify for these degrees. Consult the Department Chairman for adjustments in the two plus two programs.

The baccalaureate degrees offered are:

- Bachelor of Arts
- Bachelor of Science
- Bachelor of Science in Business Administration
- Bachelor of Science in Education
- Bachelor of Science in Technology

The Bachelor of Arts degree is broadly based in the liberal arts and sciences. It is usually pursued by students who plan, upon graduation, to enter graduate school or a professional school such as law, medicine, or dentistry and by students who plan to seek employment in the areas of the arts, languages, social work, and government service. One of the requirements for this degree is thirteen credit hours in a foreign language. This degree is available with majors in mathematics, natural science, English, history, political science, sociology, and art.

The Bachelor of Science degree is based on concentrated study in one or more of the natural sciences. It is usually pursued by students who plan to apply this knowledge in the scientific areas of health, research, and industry. This degree is available with a major in medical technology.

The Bachelor of Science in Business Administration degree is designed for the student who desires a broad foundation in several areas related to business principles as applied in business, industry, or government employment. This degree is available with majors in accounting, marketing, and management.

The Bachelor of Science in Education degree is designed to equip well-qualified individuals for careers in teaching or education. Upon completion of the degree requirements, the candidate will meet certificate requirements for the State of Missouri and be prepared for graduate study in education and related fields. This degree is available with majors in elementary education, elementary music, junior high science, technical education, and secondary education in the areas of business, mathematics, biology, English, speech and theatre, social science, art, music, and physical education.

The Bachelor of Science in Technology degree is designed for the student who has completed an Associate degree program and desires the Bachelor's degree with an emphasis in a technology in preparation for the world of work in business, industry, or government.

GENERAL EDUCATION REQUIREMENTS FOR BACCALAUREATE DEGREES

	Credit Hrs.
AREA I Communications	
English Composition (104 and 108).....	6
Speech (114).....	<u>3</u>
	9
AREA II Social Sciences	
*American Government (101 or 110) or American History (140 or 150).....	3
Ancient Civilization (100) or Modern Civilization (110).....	3
Elective (Geography, Sociology, Political Science, or American History).....	<u>3</u>
	9
*Required by State Law	
AREA III Natural Sciences	
**Mathematics (101).....	3
**Biological Science (101).....	5
**Physical Science (101).....	<u>5</u>
	13
**Higher level courses also satisfy this requirement	
AREA IV Humanities	
Art Appreciation (100) or Music Appreciation (101).....	3
Literature.....	3
Elective.....	<u>3</u>
	9
AREA V Environmental Living	
Physical Education Activities.....	4
General Psychology (101).....	3
Computer Science (182).....	<u>3</u>
	10
TOTAL	<u>50</u> Credit Hrs.

STATE LEGISLATION REQUIREMENT

Sections 10370, 10374, 10374a, 10374b, 10374c (SCS for SB4) of the laws of Missouri, 1947 (6th General Assembly), prescribe that all candidates for a degree issued by the colleges and universities of Missouri must have completed courses of instruction in and "satisfactorily passed an examination on the provisions and principles of the Constitution of the United States and of the State of Missouri, and in American History, including the study of American Institutions."

Students may comply with the law (1) by completing courses embracing the subject matter specified by the law and receiving credit therein, preferably before admission to senior college work, or (2) by certification of the completion of such requirements in another collegiate institution.

CHANGES OF CATALOG

The degree requirements in this catalog, 1969-1970, become effective June 1, 1969.

A candidate for a degree may use as a basis for degree requirements the general catalog issued for any year following the date of his first registration in the college, so long as it is not more than six years prior to the date the degree is to be conferred. The candidate must have been enrolled during the year of the catalog selected.

TRANSFER RESIDENCE REQUIREMENT

The maximum credit that a student may transfer from a junior college toward advanced standing is 64 semester hours.

Upper division courses with a grade of D will not be accepted for credit at Missouri Western College.

Transfer students seeking a baccalaureate degree must complete the last thirty credit hours at Missouri Western College. Transfer students applying for the associate degree must complete the last fifteen credit hours at this institution.

ASSOCIATE DEGREE PROGRAMS

Missouri Western College offers two associate degrees with majors in various fields. Students must complete a minimum of 62 credit hours with a grade point average of 2.00 (C average) to qualify for these degrees.

The associate degrees offered are:
Associate in Applied Business
Associate in Applied Science

The Associate in Applied Business degree is designed for the student who desires a concentrated program in preparation for employment in business, industry, or government. The degree is available with majors in secretarial science and mid-management (accounting, data processing, or retailing).

The Associate in Applied Science degree is designed for the student who desires a concentrated program (usually technical in nature) in preparation for employment in business, industry, or government. The degree is available with majors in agri-business, architectural and structural drafting technology, civil engineering technology, computer science technology, electronic engineering technology, engineering drafting technology, mechanical engineering technology, and professional pilot training.

Note: This degree is also designed to recognize the first two years of a four or more year program for transfer purposes.

**GENERAL EDUCATION REQUIREMENTS
FOR ASSOCIATE DEGREES**

	Credit Hrs.	
AREA I Communications		
English Composition (104)	3	
Public Speaking (114)	<u>3</u>	6
 AREA II Social Sciences		
American Government (101 or 110) or American History (140 or 150)	<u>3</u>	3
 AREA III Humanities		
One of the following courses: Art Appreciation (100) Music Appreciation (101) Literature	<u>3</u>	3
 AREA IV Physical Education		
Physical Education Activities	2	
Personal and Community Hygiene (104)	<u>2</u>	4
TOTAL		16 Credit Hrs.

ONE-YEAR CERTIFICATE PROGRAM

Missouri Western College offers a One-year Certificate in Secretarial Training designed for the student who desires a concentrated program in preparation for the secretarial field. Students must complete a minimum of 26 credit hours with a grade point average of 2.00 (C average) to qualify for this certificate.

**GENERAL EDUCATION REQUIREMENTS FOR THE
ONE-YEAR CERTIFICATE**

	Credit Hrs.	
AREA I Communications		
English Composition (104)	3	
 AREA II Social Sciences		
One of the following courses: American Government (101 or 110) American History (140 or 150)	<u>3</u>	
 AREA III Physical Education		
Physical Education Activities	<u>1</u>	
TOTAL		7 Credit Hrs.

TWO-YEAR TRANSFER PROGRAMS

Missouri Western College offers pre-professional programs in specialized fields in which students transfer to another college or university for the completion of their studies. Students choosing these programs should select their transfer institution early and should work closely with their academic adviser and counselor while at Missouri Western.

The following areas are those which serve most students interested in transfer programs:

Agriculture	Law	Pharmacy
Chemistry	*Medicine	Physical Therapy
*Dentistry	Mortuary Science	Physics
Engineering	Nursing	*Veterinary Medicine
Journalism	Optometry	

*A four-year degree is desirable before applying for acceptance into the professional school of your choice. Therefore, students with aspirations in these areas are invited to consider the Bachelor of Arts degree with a major in natural science offered by Missouri Western College.

ACADEMIC POLICIES and REGULATIONS . . .

COURSE LOAD

The maximum number of credit hours, exclusive of courses in physical education and music activities, to be carried by a student is sixteen per semester; however, there are exceptions. Students in engineering may carry loads comparable to those permitted by the institution to which they wish to transfer. Moreover, a student whose cumulative grade point average is above 2.75 may enroll in seventeen credit hours, exclusive of physical education and music activities. Students with a cumulative grade point average of 3.00 may enroll in eighteen credit hours, exclusive of physical education and music activities.

Students who find it necessary to work in order to attend Missouri Western College should adjust their course load to their work load. Students should use the following schedule to determine their course load:

Hours Worked Per Week	Course Load
15–20 hrs.	12 credit hrs.
20–30 hrs.	9 credit hrs.
30–35 hrs.	6 credit hrs.
35–40 hrs.	3 credit hrs.

CLASSIFICATION OF STUDENTS

Students are classified according to the number of semester hours earned. The classification is as follows:

Freshmen	0–28 hrs.	Junior	59–88 hrs.
Sophomore	29–58 hrs.	Senior	89 hrs.

A student will be classified as a full-time student only if an academic load of twelve or more credit hours per semester is carried.

CLASS ATTENDANCE

Regular attendance is required as evidence of a student's active interest in completing the work for which he enrolled. There is no such thing as a permissible number of cuts. Irregular attendance may be sufficient cause for dropping a student from class.

RECORDS OF ACADEMIC WORK AND TRANSCRIPTS

A student may secure an unofficial student copy of his Missouri Western College record in the MWC Registration and Records Office. Official transcripts bearing the seal of the college and the signature of the registrar are issued only to other educational institutions and employers; and, since student records are confidential, transcripts are issued only by written request or authorization from the student. No transcript is issued to or for a student who is indebted to the college until such indebtedness has been paid in full.

Each student will be issued one transcript free of charge. For each additional transcript, a fee of \$1.00 is charged.

GRADING SYSTEM

Grades used in evaluating the work of students are as follows:

Letter Grade	Level of Performance	Grade Points Earned
A	superior	4 for each credit hr.
B	good; above average	3 for each credit hr.
C	average	2 for each credit hr.
D	minimum passing; below average	1 for each credit hr.
F	failing	0 for each credit hr.
Inc.	incomplete	
W	withdrawal	
WP	withdraw passing	
WF	withdraw failing	
Aud.	audit	

Grade point averages are used to determine an individual's class standing and eligibility for graduation, the Dean's and President's Honor Lists, and membership in honor societies.

CHANGE OF SCHEDULE

All class or schedule changes must be made by petition. In order to drop or add a course, it is necessary for a student to have a petition approved by his counselor, his advisor, and the Registrar. A fee of one dollar is charged for each petition.

Courses cannot be added after the first week of a regular session without special permission of the Registrar.

REPEATING COURSES

A student who has made "D" or "F" in a course will be permitted to repeat the course. Grades earned in the second attempt are used in calculating grade point average.

WITHDRAWAL FROM COLLEGE

Students who, for any reason, find it necessary to withdraw from college during the course of a semester, are required to notify the Dean of Student Affairs, who in turn will notify the Registrar. The Registrar will notify each instructor and request that he return the student's course card. On the course card, the instructor will record the date of withdrawal and mark it appropriately. Since honorable dismissal is ordinarily required for transfer from one college to another, a student should not discontinue his college work without formal withdrawal. Students who do not withdraw officially will have "Failing" recorded in all subjects.

WITHDRAWAL FROM CLASS

1. A student may withdraw "W" from a Class until the end of the sixth week.
2. A student may withdraw "WP" or "WF" from a class from the beginning of the seventh until the end of the fourteenth week. After the end of the fourteenth week, a student cannot withdraw from a class.
3. When a student withdraws from COLLEGE after the sixth week, his status in each subject must be recorded "WP" or "WF", not "W".

A "W" or "WP" grade does not count as attempted course work.

A "WF" does count as a course attempted, but may be removed by repeating and earning a higher grade.

INCOMPLETE GRADES

An incomplete grade must be removed within six weeks after the close of the semester in which it was received; otherwise, the grade will be recorded as "F".

SCHOLASTIC PROBATION

A student places himself on scholastic probation if his cumulative grade point average drops below the minimum requirements as outlined by the following scale:

Hours Attempted	Cumulative G.P.A.
0-15	1.50
16-30	1.65
31-45	1.75
46-60	1.90
over 60	2.00

A student placed on scholastic probation may be required to do one or more of the following things:

1. Reduce his academic course load.
2. Reduce his out-of-school work load.
3. Lighten or forego his social and extra-curricular activities

SCHOLASTIC SUSPENSION

The following students are subject to scholastic suspension:

1. Any student who, at the completion of his first term at Missouri Western, fails to have a minimum grade point average of 0.50.
2. Any second semester student on probation who fails to raise his cumulative grade point average to a minimum of 1.50 in the following semester.
3. A continuing student whose term grade point average is below 1.25.
4. Any student on probation for the second consecutive semester whose term grade point average is below 2.00, and whose cumulative grade point average is less than 1.75.

A student suspended from Missouri Western College who feels his case warrants special consideration may petition the Scholastic Standards Committee. Mitigating circumstances must be very grave in order to secure reinstatement, and when reinstatement is granted, it will be on a probationary basis.

READMISSION

A student placed on scholastic suspension for any of the above reasons may be readmitted after the lapse of one semester provided that he file a written petition for return and be accepted by the Scholastic Standards Committee. His continued attendance will be subject to the following conditions:

1. That he fail no course and earn a minimum grade point average of 2.00 in any grading period.
2. That he carry a maximum load of twelve credit hours the first semester after reinstatement.
3. That his attendance be regular and punctual.

DISMISSAL

A student whose performance appears to offer little prospect for success, or whose conduct is such that his continued presence would be detrimental to the college, may be dismissed without privilege of reinstatement.

DEAN'S HONOR LIST

A Dean's Honor List is published at the end of each semester. To be included on the Dean's List, a student must be carrying twelve or more credit hours of work with a grade point average of 3.00 or higher.

PRESIDENT'S HONOR LIST

A President's Honor List is published at the end of each semester. To be included on the President's List, a student must be carrying twelve or more credit hours of work with a grade point average of 4.00.

GRADUATION HONORS

Students completing degree requirements with a grade average of 3.90 or higher, will be graduated with Highest Honors (summa cum laude). Those who have earned a grade average of 3.75 or higher but below 3.90 will be graduated with High Honors (magna cum laude). Those who have earned a grade average of 3.50 or higher but below 3.75 will be graduated with Honors (cum laude).

COMMENCEMENT

A candidate for graduation is required to attend the commencement exercises. In case of an extreme emergency, a permit to graduate in absentia may be obtained from the Dean of Academic Affairs. Candidates for graduation are charged a \$10.00 commencement fee. This covers the cost of the diploma, rental of cap and gown, and other commencement activities. The fee is subject to refund only when the candidate fails to qualify for graduation.

SUMMER PROGRAM

Missouri Western College summer sessions are designed for:

1. Students who wish to accelerate their progress.
2. Students who carry only a partial course load during the regular semesters.
3. Students who have academic deficiencies which they wish to correct.
4. June high school graduates who wish to get an advanced start in their college studies.

Missouri Western welcomes summer session students from other collegiate institutions.

EVENING PROGRAM

Missouri Western College offers an extensive evening program in all three academic divisions. The evening program serves the following purposes:

1. Service to the adult community by offering courses which
 - a. lead to the Associate and Bachelor's degrees
 - b. promote improvement of professional competencies
 - c. enable the individual to broaden his cultural knowledge
2. Provides flexibility in scheduling for regular college students.

All services offered by Missouri Western are available to those adults who pursue their education in the evening program. The Assistant to the Dean is on duty during the evening classes to assist students in gaining the maximum benefit from their college work.

MISSOURI ACADEMIC CONTRACT

As a teacher education institution, Missouri Western College may enter into the Academic Contract with the State Department of Education and eligible persons. This contract qualifies teachers for a two-year certificate, leading to a permanent certificate.

Eligible persons include degree teachers new to Missouri who do not have at least 5 semester hours earned credit in student teaching, and degree teachers having more than 8 semester hours of deficiencies for the life certificate.

Interested persons should consult the Chairman of the Department of Education.

STUDENT ACTIVITIES, ORGANIZATIONS, and SERVICES . . .

Extracurricular activities are planned because of the significant contribution they make to the education of the student. The objectives of general education are not complete unless some provision is made for student participation, actual governmental and judicial experience, the opportunity for cultural and social growth, and a chance to pursue and develop an avocation.

DRAMATICS At least two major productions, sponsored by the Department of Speech and Theater are scheduled each year. A reader's theater, oral interpretation, and debate are also offered as student interest develops in this area.

MUSIC Musical activities include participation in the college band, various instrumental ensembles, the college chorus, and vocal ensembles. Although these activities are sponsored by the Department of Music, any student may be eligible for participation.

SOCIAL LIFE The social life at Missouri Western changes from year to year in an effort to meet the current needs and interests of the student body and the college community. Some of the traditional events are: the Icebreaker Dance at the beginning of the year, the Homecoming Dance, and the Spring Formal. Additional social events are developed and sponsored by the various organizations and interest groups on the campus.

THE STUDENT SENATE is the main governing body on the campus and is made up of elected representatives from the student body. Its main objectives are to secure cooperation between the administration and the student body and, subject to approval by the administration, make laws governing the student body.

INTRAMURALS

A full intramural sports program is offered to college personnel. The program of activities includes individual, dual, and team sports for the enjoyment and competitive need of Missouri Western College students and faculty members.

The intramural program encourages the development of mental, physical, emotional, and social instruction. Through the intramural program the college hopes to help the student maintain better health through exercise. In general, Missouri Western provides the opportunity for every individual, regardless of his ability, to realize the fun of participation in his favorite sport against good competition.

ATHLETICS

Missouri Western has an athletic program of intercollegiate competition, including basketball, wrestling, baseball, golf, tennis, and other competitive sports.

The athletic program is an important unifying factor in campus life. The facilities were constructed for the safety of the participant and the comfort of the spectator.

The "MW" Club is for varsity intercollegiate award winners. The purpose of this group is to foster the sportmanship, citizenship, and general wholesomeness acquired in intercollegiate athletics. This club is governed by elected officers under the supervision of the athletic department.

STUDENT PUBLICATIONS

NEWSPAPER The college newspaper is published bi-monthly during the school year. Students in the journalism class handle the various assignments.

YEARBOOK Student life for a school year is in the yearbook. The entire staff is voluntary. Cost of the yearbook is paid by activity ticket funds and a copy of the yearbook is mailed to each two-semester student.

STUDENT ORGANIZATIONS

THE STUDENT CENTER BOARD of control, consisting of five elected students and a faculty advisor, concerns itself with the activities and operation of the Student Center. It has also been active in providing events such as films in the Student Center and sponsoring trips to professional football games.

THE PREXY CLUB consists of the president of each officially recognized organization on the campus and the President of the college. The primary purpose of this organization is to afford a channel of communication between the President of the college and responsible student representatives.

CAMPUS ORGANIZATIONS Numerous organizations, sponsored by department and specialized interest groups, provide students with the opportunity to become better acquainted with other students and faculty, as well as to explore and perpetuate interests outside the classroom. Many of the organizations have no membership requirements other than an active interest in the work for which the club exists and regular attendance at the meetings. Participation in such organizations broadens the individual and helps him to become acquainted with new ideas.

DELTA PSI OMEGA (National Dramatic Honor Society) Purpose: To encourage active and cooperative participation in the drama program of the college and to give students a broader outlook and a sense of unity with other college students of similar interest.

Entrance Requirements: Entrance is gained by acquiring a specified number of points representing participation in various dramatic activities.

BUSINESS CLUB Purpose: To further interest in the business field through lectures and other presentations.

PSYCHOLOGY CLUB Purpose: To increase student interest in Psychology and in knowledge of its principles through discussion and experimentation and to extend the friendliness and comradeship of the college to the patients at the State Hospital.

Entrance Requirements: A sincere interest in psychology and a willingness to devote time to its study.

ALPHA DELTA KAPPA (Social Science Fraternity) Purpose: To stimulate interest in the social sciences, i.e., history, political science, sociology, and geography. To create a desire for more critical inquiry on the part of the student.

Entrance Requirements: Anyone interested in the social sciences, especially majors and minors in the field.

ENGINEERS CLUB Purpose: To give the student a better understanding of the field of engineering and its application to industry. The club promotes fellowship among students of engineering.

Entrance Requirements: Open to any student interested in engineering, technical education, or science.

EL CLUB DE ESPANOL (Spanish Club) **LE CERCLE FRANCAIS** (French Club) Purpose: To provide additional opportunities for the student to develop his ability to speak and understand, especially in the area of social intercourse, the foreign language which he is studying. To provide greater understanding of the countries and the culture of the people using the language.

Entrance Requirements: Two years of a foreign language in high school or one year in college. Students in the first year classes are eligible the second semester.

CHOIR Purpose: To study and perform distinguished musical literature. To integrate the musical activities of the college with the cultural interest of the city and surrounding communities by giving a series of concerts.

Entrance Requirements: Open to all who sing, subject to the approval of the director.

BAND The band is a very active, growing organization. All students with instrumental experience are encouraged to join this group.

NEWMAN CLUB Purpose: The Newman Club believes that the Church must involve itself with the institutions of higher education if it is to carry out its mission to society.

Entrance Requirements: Open to anyone concerned with a mature Christian faith that is viable and meaningful in the modern world.

BAPTIST STUDENT UNION Purpose: To provide a forum for integrating students' faith with expanding knowledge.

Entrance Requirements: The majority of the members are of the Baptist faith, but membership is open to anyone.

HONORARIES

PHI THETA KAPPA Purpose: To encourage high scholastic standards.

Entrance Requirements: This is a national scholastic honor organization for freshmen and sophomores. To be eligible for Phi Theta Kappa membership, a student must have a semester enrollment of twelve or more credit hours and obtain a GPA of from 3.1 to 3.5, depending upon the number of hours he is carrying. Students are pledged, after meeting the above standards, if they are in the upper ten per cent of the lower division. If the student maintains this average for an additional semester, he is then initiated into the organization. Not more than ten per cent of the total number of freshmen and sophomores may be chosen.

THE MACE Purpose: The Mace was organized in 1926 to encourage constructive student activity in service to the college.

Entrance Requirements: Membership is based upon activities and services to the college. To be elected to The Mace by his fellow students is considered one of the highest honors that can come to a student.

SOCIAL ORGANIZATIONS

THE DELTA NU FRATERNITY is the only officially recognized social organization on the campus at the present time.

STUDENT SERVICES

STUDENT CENTER

The Student Center is open from 8:00 a.m. until 9:30 p.m. and is maintained for the purpose of providing all students with a place for fellowship and relaxation. Food service is available, as well as a barbershop, bookstore and recreation facilities, such as bowling alleys, pool table, table tennis, etc.

HEALTH SERVICE

The Student Health Center is located in the Student Center and provides a registered nurse and limited dispensary service.

PLACEMENT

Missouri Western College has a free Placement Service which assists graduates and alumni in finding appropriate employment in their chosen careers. Services offered by the Placement Service include: (1) a credentials service, including the compiling of a personal information file and recommendations from references; (2) employer contacts and campus interviews; (3) employment, placement, and job opportunity information.

ALUMNI

Missouri Western College has an active Alumni Association which maintains up-to-date information on present and former students. All graduates or former students of Missouri Western College are considered alumni and are eligible for membership in the State Alumni Association.

HOUSING

The Office of the Dean of Student Affairs maintains a list of approved off-campus housing. The college does not make individual rental agreements. It would be wise for the student to arrive in St. Joseph prior to the beginning of the session to locate suitable housing.

A new residence hall, housing 100 men and 100 women students is available for occupancy. For additional information, contact the Dean of Student Affairs.

COUNSELING

The counseling center is located in the Administration Building and provides facilities for testing and counseling students to assist them in making wise choices in their studies and in solving academic and personal problems.

Students are assigned an academic adviser at the beginning of their freshman year. Usually this adviser is a member of the faculty who has particular interest or training in the student's proposed area of concentration. Although the student himself is responsible for meeting graduation requirements and requirements for transfer to other colleges or universities, he is given every opportunity for academic counseling.

The counselor-adviser system attempts to (1) help the student reach a state of self-reliance through a clearer understanding of his own capacities and habits, (2) assist him in

analyzing and handling any difficulties he may have in his program of study, (3) provide him with information about the occupational world.

INTERNATIONAL STUDENT ADVISER

A member of the staff of the Office of Student Affairs serves as a special adviser to students from abroad who are attending Missouri Western. He assists with personal problems and with adjustments to the customs and procedures of American educational systems.

SELECTIVE SERVICE

College Student Certificates (Form SSS 109) are completed at the time of registration by all male students who are registered with the Selective Service and who have not completed their military service obligation.

It is the responsibility of the student to see that his draft board is informed of his status as a full-time student.

VETERANS

The college is approved by the Veterans Administration to offer programs for veterans and for those attending under the War Orphans Act. Veteran's application forms and general information are available at the Financial Aids Office.

SCHOLARSHIPS and STUDENT AID

SCHOLARSHIPS

Scholarships and financial aid are available to Missouri Western College students who qualify.

High School Scholarships Missouri Western College offers scholarships to honor graduates of high schools in the College District. One scholarship is offered each year in each high school in the district. Such scholarships cover the cost of the incidental fee.

To be eligible a student must:

1. Rank in the upper ten percent of his graduating class.
2. Rank higher than the seventy-fifth percentile on the Ohio State Psychological Senior Test.
3. Be recommended by his high school principal.
4. Not be the recipient of another college scholarship.

The scholarships may be renewed for each semester if the student maintains a grade point average of 2.50 or better the first semester, and 3.00 thereafter.

Fine Arts Scholarships The Board of Trustees has voted to offer scholarships each year in the amount of incidental fees to students who show particular ability in art or music. Selections are made by the Scholarship Committee with recommendations from the Fine Arts faculty.

Athletic Scholarships The Board of Trustees has agreed to give a number of athletic scholarships to male students who plan to participate in basketball. These athletic scholarships are awarded at the recommendation of the basketball coach and with the approval of the Scholarship Committee. The scholarship is a waiver of all or part of the fees incurred at Missouri Western College.

Dr. Wayne Toothaker Scholarship By the will of the late Dr. Wayne Toothaker, a sum of \$5,000 was invested, the interest from which is to be awarded to a student who expects to enter the medical profession and is taking the pre-medical course at Missouri Western College. Application is made to the Scholarship Committee.

Anne Lowell Wells Fund This fund was created by the International Relations Club and furthered by the Cheshire Cheese Club in memory of Miss Anne Lowell Wells, a deceased member of the faculty. The interest from this fund is available to a deserving student who is attending Missouri Western College.

Harry Monson Memorial Fund The Harry Monson estate, through the Downtown Rotary Club of St. Joseph, donated \$2,500 to be used for scholarship purposes. Two thousand dollars of this total is invested and the earnings are used to grant some young person a scholarship in the name of Harry Monson.

A. J. Einbender Memorial Scholarships This fund was created by Sylvia, Lester, Alvin, Edwin, and Larry Einbender in memory of A. J. Einbender, founder of the A. J. Einbender firm. Two scholarships of \$175 each will be granted to Missouri Western College students. Application is made through the Scholarship Committee.

The Culver-Gettys Memorial Scholarships This scholarship is given in memory of Lt. Col. Charles M. Culver and Captain Hugh M. Gettys. The scholarship is awarded to a young man or woman who has completed a minimum of 28 college hours. The student must have a cumulative grade point average of 2.75 or better and show evidence of need of financial assistance. The scholarship shall be in the amount of the incidental fees for the first semester; and, if the student continues to achieve a cumulative grade point average of 2.75, it may be continued for the second semester. Preferably, the student should be planning to go into education.

The Mr. and Mrs. Clark C. Glaze Scholarship. A \$7,500 scholarship fund has been established by Mr. and Mrs. Clark C. Glaze, the interest from which is to be awarded to students at Missouri Western State College. If used by a student taking a pre-medical course, the scholarship is to be known as the Emily B. Glaze Scholarship. If used by a student taking pre-engineering, the scholarship will be known as the Clark C. Glaze Scholarship. Application is to be made to the Scholarship Committee.

First National Bank Merit Scholarships. These scholarships were established in 1961 by the First National Bank of St. Joseph as an expression of its interest in the importance of higher education and in appreciation of the contribution Missouri Western College is making for the betterment of St. Joseph and the surrounding area. Two scholarships are available each year, one to a graduate of a St. Joseph high school, and one to a graduate of any high school in the district. The scholarships cover fees and the cost of necessary textbooks. Ordinarily, the scholarships are for one year only and new recipients are named each year. However, should conditions warrant, a student may be awarded the scholarship for a second year. Application is made to the Scholarship Committee. From the applicants the Committee selects the two students who seem best qualified from the standpoint of scholarship and financial need.

National Association of Power Engineers, Missouri Chapter No. 1, St. Joseph, Scholarship This organization has made a scholarship available to a pre-engineering student who is in his freshman year and who expects to complete his second year at Missouri Western College. Application blanks are obtained from instructors who teach pre-engineering subjects. A committee made up of members of the Society makes the final selection.

C. R. Bray Annual Arts Award. Established in 1959 by the Bray Studio, this award is an expression of interest in the future leadership of our community and country. The aim of this award is to encourage interest in higher education among students participating on high school and college annual staffs. Several awards are presented each year in the amount of \$50 or \$100 to worthy students in recognition of their outstanding achievements and services. Applications should be submitted to the Scholarship Committee.

The Ada Lyon Creative Writing Award The St. Joseph Women's Press Club offers an award of \$25 each year to the Missouri Western College student who submits the best example of creative writing. Members of the organization are the judges for this award.

B'Nai B'Rith Women's Division Award Selection is made from a list of eligible students by a committee from the organization. Two are selected. It usually amounts to one-half of the incidental fee. This award has been made for many years.

American Business Women's Association Award Officers of the organization select the recipient. It ordinarily amounts to the incidental fee. These awards are made on the basis of scholastic achievement and financial need. Information concerning applicants is forwarded to officers of the organizations who make the final selection and inform the student well in advance of the time for final registration at the College.

Carolyn B. Ullman Teacher Education Scholarship The Missouri Congress of Parents and Teachers, aware of the shortage of teachers in the elementary field, offers a scholarship to students wishing to prepare to teach in the public elementary schools of the state of Missouri. The awards are based on: (1) character, (2) scholastic record, (3) aptitude for teaching, (4) sound health. Application forms may be secured from the Counseling Office.

American Association of University Women, St. Joseph Branch Scholarship The St. Joseph Branch of the A.A.U.W. offers a scholarship to a high ranking sophomore girl at Missouri Western College. Application for this scholarship is made through the College Counseling Office.

Missouri Society of Professional Engineering, Northwest Chapter Award Sophomore pre-engineering students at Missouri Western College are invited to apply for this award. Application is made through the Scholarship Committee, with final selection being made by a committee of members of the Society.

Feeney Construction Company Scholarship This scholarship was established in November 1961, and first awarded to a member of the 1962 graduating class. It is expected to be made available to former graduates of one of the five St. Joseph high schools, in accordance with provisions established by the donor. Sophomores may apply to the Scholarship Committee in March.

The News-Press-Gazette English Scholarship The News-Press-Gazette Corporation offers each year an award of \$100 to the student completing the sophomore year with the best record in English courses at Missouri Western College. The recipient of this award is chosen by an evaluating committee from the English Department.

Buchanan County Medical Society Nursing Scholarship A \$6,000 scholarship endowment fund was established by the Buchanan County Medical Society to provide one or more scholarships for Missouri Western students enrolled in a nurses training program. Application should be made to the Scholarship Committee.

STUDENT AID

Institutional Loan Missouri Western College has various student loan funds available to its students and prospective students. These funds are used to loan worthy and needy individuals the money necessary for their enrollment at this institution. The interest charge for the use of these funds is nominal. Liberal repayment schedules are available. Any interested individual is encouraged to visit or write the Financial Aids Office.

United Student Aid Fund Missouri Western College participates in the United Student Aid Funds program. This is a loan program whereby students are loaned necessary funds from their local banks. Applicants should contact their local bank or the Office of Student Personnel for more information.

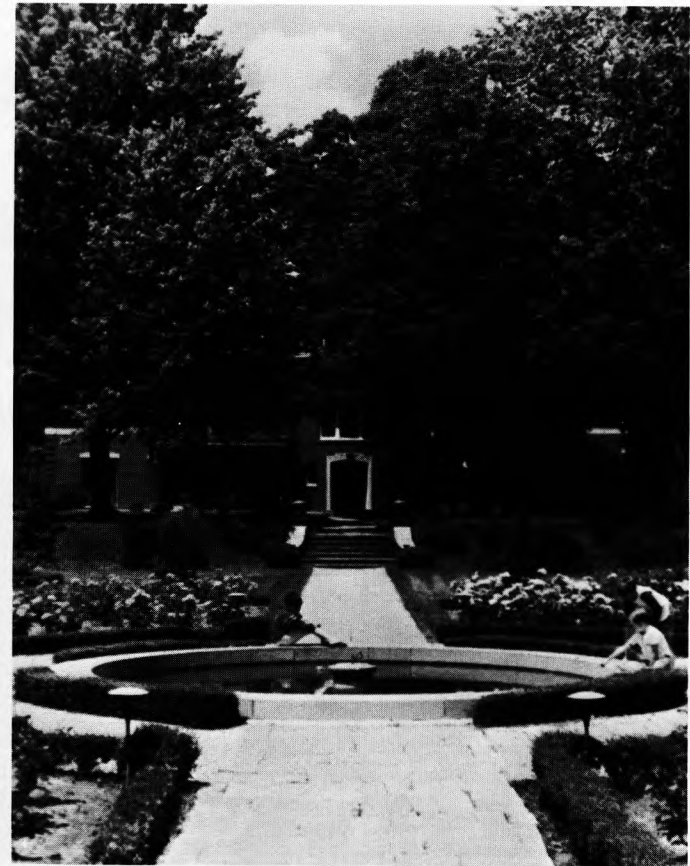
National Defense Student Loans The National Defense Loan Program, established under Title II of the National Defense Education Act of 1958, is a long-term program from which eligible and deserving students may be granted substantial loans to supplement other income for educational purposes.

Educational Opportunity Grants Students who qualify on the basis of need may apply for an Educational Opportunity Grant, made available under Title IV of the Higher Education Act of 1965. College officials recommend students making application for a government grant, loan, or employment, arrange a personal interview with the Financial Aids Officer.

College Work-Study Program. Under Title I, Part C, of the Economic Opportunity Act of 1964, a student may be employed part-time while attending college. Part-time employment means working a maximum of 15 hours per week while classes are in session. Prospective students who qualify under the guidelines of the College Work-Study Program may be employed 40 hours per week in the summer months preceding the academic year.

Part-time Employment Each year there are opportunities for students to find part-time employment on the campus or in the community. Information concerning job opportunities may be secured from the Financial Aids Office.

CAMPUS FEATURES
AND FACILITIES . . .



Historic St. Joseph offers

a variety of attractions to the visitor or the native

with preservation of natural beauty blended

with momentoes of the past and monuments to the future.

Rolling hills and rich plains hold fertile

soil for growth.

Minute measurements are part of Quantitative Analysis and new equipment is available for students at Missouri Western, who use instruments to emphasize analysis.



Checks and balances are a basis on which we function.



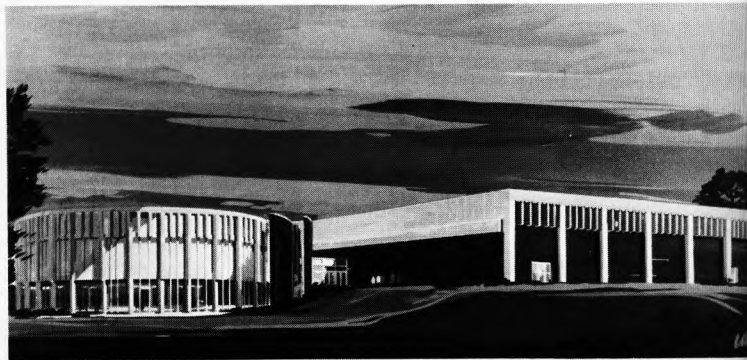
Student Center life provides an outlet for activities and a gathering point for ideas.

The science of the mind and mental activities is a popular field of study at Missouri Western.

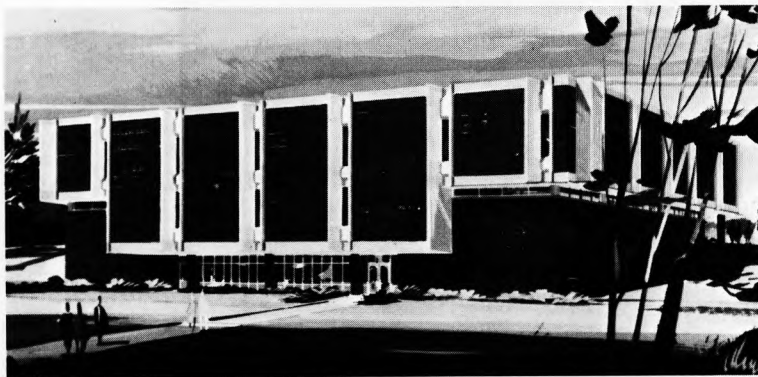


Study is the backbone of success in college and the central study area is the library which has undergone continued expansion.

THE NEW CAMPUS



Classrooms and activities rooms are included in the Physical Education building planned for the future.



The Warren E. Hearnes Learning Resources Center was named to honor the efforts of the governor in behalf of Missouri Western College.



The Classroom-Administration building on the new Missouri Western College Campus.



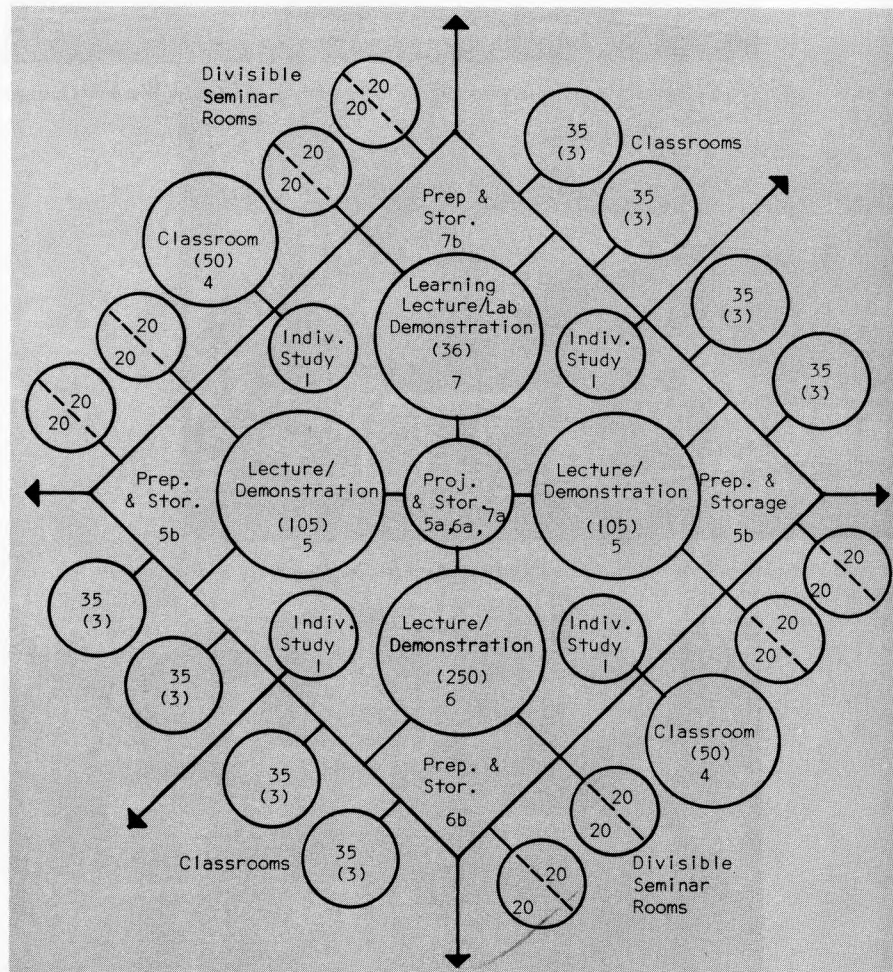
Music and Art classes are held in the new Fine Arts Building which is designed for expansion.



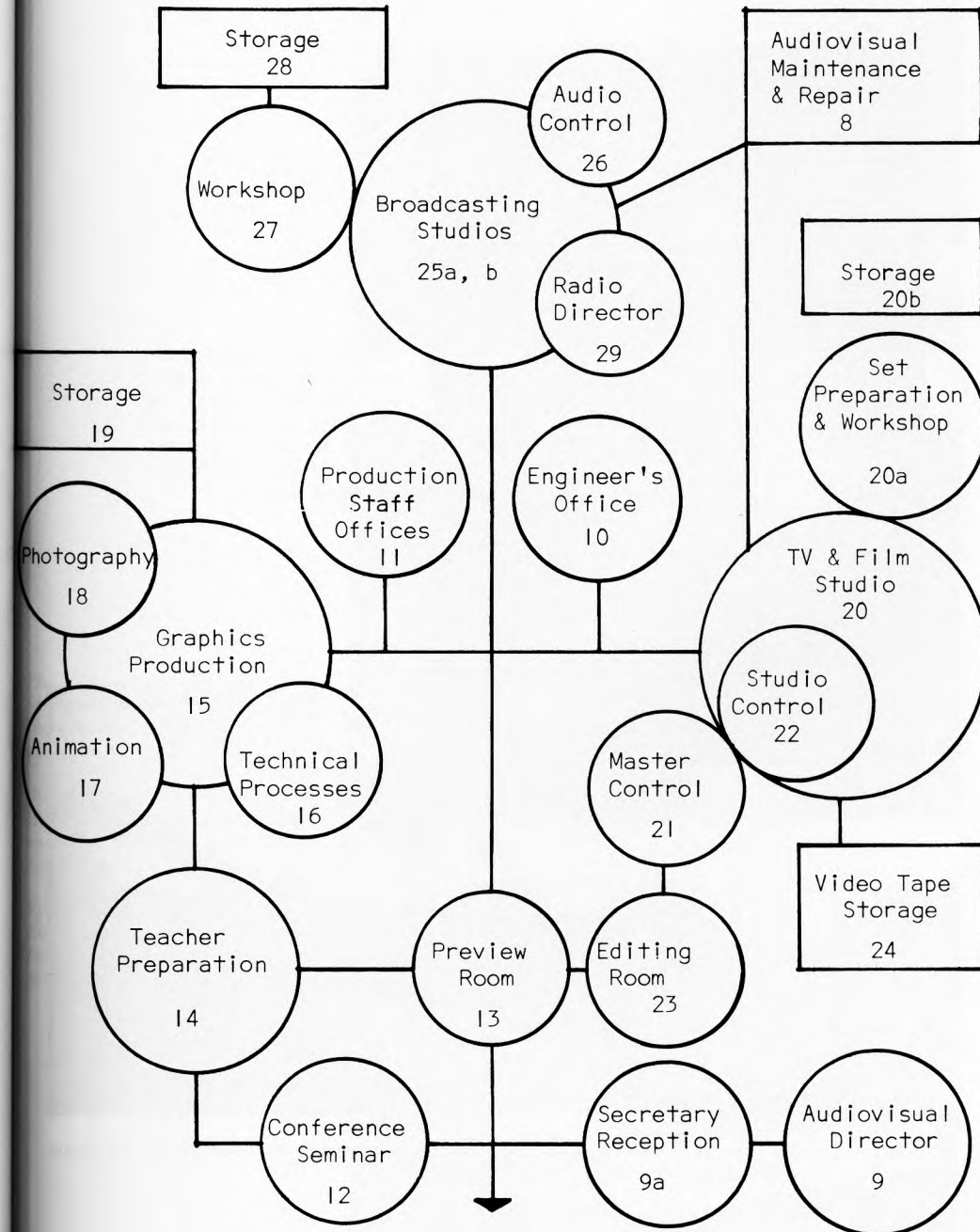
Technician programs are taught in the Engineering and Technology Building.

SPATIAL COMPONENTS

These relationships were developed by Arthur D. Little, Incorporated as recommendations between the major college service and selected instructional facilities. These relationships were developed through conferences with all involved.



Mixed group multiple media instructional center in the Warren E. Hearnes Learning Resources Center.



The audiovisual section of the new Warren E. Hearnes Learning Resources Center



Educational opportunities continue to expand at Missouri Western College, set on rolling land which typifies the Midwest . . . a combination of lush fields and spreading trees.



The president's home! A masterpiece of beauty both outside and inside. The house and grounds provide a natural social center.



The culmination of dreams and hard work as graduates walk the stage to receive the all-important diploma.



Students enjoy the dress-up affairs with three main dances annually, the Icebreaker, Prom and Spring Formal.



Fun along the way includes the traditional homecoming, which features a parade and basketball game.

ADMINISTRATIVE OFFICERS AND FACULTY . . .

BOARD OF REGENTS

President	Dr. Thompson E. Potter
	Term Expires: October, 1969
Vice-President	Mr. Loren Schneider
	Term Expires: October, 1971
Secretary	Mrs. Georgie Goldsberry
Treasurer	Mr. Kenneth Hawk
Members	Mr. William F. Enright
	Term Expires: October, 1970
	Mayor Douglas A. Merrifield
	Term Expires: October, 1968
	Mr. T. V. Teare
	Term Expires: October, 1972

BOARD OF TRUSTEES

President	Mr. T. V. Teare
	Term Expires: April, 1970
Vice-President	Mr. Robert E. Douglas
	Term Expires: April, 1970
Secretary	Mrs. Georgie Goldsberry
Treasurer	Mr. Kenneth Hawk
Members	Mr. William F. Enright
	Term Expires: April, 1974
	Mr. John Newhart
	Term Expires: April, 1972
	Dr. Thompson E. Potter
	Term Expires: April, 1974
	Mr. Loren Schneider
	Term Expires: April, 1972

ADMINISTRATION

LOONEY, Marvin O.	President
	B.S. – Southwest Missouri State College
	M.Ed. – University of Arkansas
	Ed.D. – University of Arkansas
MORRISON, Nolen B.	Dean of Academic Affairs
	B.S. – Southwest Missouri State College
	M.Ed. – University of Arkansas
	Ed.D. – University of Arkansas
CLARK, Lowell W.	Dean of Student Affairs
	B.S. – Kansas State University
	M.S. – Kansas State University
	Graduate Study – University of Colorado
HAWK, Kenneth L.	Dean of Business Affairs
	B.A. – Fort Hays Kansas State College
	M.S. – Fort Hays Kansas State College
SHARP, Sam H.	Director of Field and Special Services
	B.S. – University of Alabama
	M.S. – Alabama Polytechnic Institute
ASHWORTH, George M.	Director of Financial Aids
	B.S. – Northwest Missouri State College
	M.Ed. – University of Missouri
SMITH, Frank R.	Director of Publications and Public Relations
	B.J. – University of Missouri
WOOD, William A.	Director of Research and Computer Center
	B.S. – University of Denver
OATES, Harvey B.	Division Director, Applied Science and Technology
	B.A. and B.S. – West Virginia Institute of Technology
	M.A. – University of Kentucky
	Ed.D. – West Virginia University
COYNE, Charles E.	Division Director, Education and Psychology
	B.A. – Iowa State Teachers College
	M.A. – Northeast Missouri State College
	Ed.D. – North Texas State University
SCOTT, Bob Ray	Division Director, Liberal Arts and Sciences
	B.S. – University of Missouri
	M.A. – Washington University, St. Louis, Missouri
	Ed.D. – University of Missouri
DEWEY, Thomas E.	Director of Admissions and Registrar
	B.S. – Kansas State College at Pittsburg
	M.S. – Kansas State College at Pittsburg
SCHOEN, Donald M.	Director of Buildings and Grounds
	B.S.E. – University of Michigan

- HARLOW, Clifford D. Director of the Bookstore
Missouri Western College
- BENSYL, Conrad N. Assistant to Dean of Academic Affairs
B.S. – Northwest Missouri State College
M.S. – Kansas State Teachers College at Emporia
- BISHOP, George L. Assistant Director of Computer Center
B.S. – Northwest Missouri State College
M.Ed. – Kansas State Teachers College
- GRAHAM, Dorothy B. Director of Counseling
B.A. – University of Iowa
M.A. – San Diego State College
Graduate Study – University of Illinois
Fort Hays Kansas State College
Oklahoma State University
- ROBINSON, Thomas J. Counselor
B.A. – Northwestern State College, Oklahoma
M.S. – Oklahoma State University
Graduate Study – University of Illinois
Fort Hays Kansas State College
Oklahoma State University
- WIGERSMA, Helen C. Librarian
B.A. – University of Missouri
M.L.S. – University of Illinois
- LIBEL, Marie S. Assistant Librarian
B.A. – Maryville College, St. Louis, Missouri
M.A. – University of Wisconsin

FACULTY

- AGENSTEIN, Evan R. Department Chairman, Math and Physics
B.S. – Northwest Missouri State College
M.A. – University of Missouri at Kansas City
Graduate Study – University of Missouri
- ALBERTS, Florence Social Science
B.A. – University of Denver
M.A. – University of Missouri
- ARCHER, Leonard J. Chemistry
B.S. – Northwest Missouri State College
- BALLEW, Elizabeth A. Chemistry
B.S. – University of Missouri
M.S. – University of Missouri
- BENSYL, Conrad N. Chemistry
B.S. – Northwest Missouri State College
M.S. – Kansas State Teachers College at Emporia

- BISHOP, George L. Computer Science
B.S. – Northwest Missouri State College
M.Ed. – Kansas State Teachers College
- BURRI, Charles R. Department Chairman, Physical Education
B.S. – Northwest Missouri State College
M.Ed. – University of Missouri
Graduate Study – University of Missouri
- COPELIN, Merlene S. Business and Economics
B.S. – Central State College, Oklahoma
M.S. – Oklahoma State University
- COYNE, Charles E. Division Director, Education and Psychology
B.A. – Iowa State Teachers College
M.A. – Northeast Missouri State College
Ed.D. – North Texas State University
- CRUMLEY, Richard E. Biology
B.S. – Kansas State College at Pittsburg
M.S. – Kansas State College at Emporia
- DECKER, Roxanne Humanities and Communications
B.A. – Arizona State University
M.A. – University of Colorado
- DOHERTY, Mary Lee Humanities and Communications
A.B. – William Jewell College
M.A. – University of Colorado
- DURHAM, Lu M. Humanities and Communications
B.A. – University of Iowa
M.A. – University of Missouri at Kansas City
- ERTMAN, Irene P. Humanities and Communications
B.S. – Kansas State College at Pittsburg
M.A. – Kansas State College at Pittsburg
Graduate Study – Kansas State College at Pittsburg
University of Arkansas
- FINDERS, Robert C. Business and Economics
B.A. – University of Maryland
M.B.A. – University of Iowa
Graduate Study – University of Iowa
- FLANAGAN, Frances Humanities and Communications
A.B. – Mount St. Scholastica College
M.A. – University of Iowa
Graduate Study – University of Wyoming
University of Colorado
Scottish Universities, Edinburgh
Central Missouri State College
University of California at Berkeley
Appalachian State Teachers College

FORCE, Harry F. Department Chairman – Biology
 B.S. – State Teachers College, Florence, Alabama
 M.A. – George Peabody College, Tennessee
 Graduate Study – Kansas State Teachers College at Emporia

GETTYS, Helen C. Department Chairman – Education
 B.S. – University of Missouri
 M.Ed. – University of Missouri
 Graduate Study – University of Chicago
 University of Missouri
 University of Missouri at Kansas City

GIBBS, Ramona Humanities and Communications
 B.A. – Denison University, Ohio
 M.A. – University of Colorado

GILMOUR, F. Matthew Fine Arts
 B.M. – Missouri Valley College
 M.M. – University of Missouri at Kansas City
 Graduate Work – University of Missouri at Kansas City

GRAINGER, Don L. Department Chairman – Business and Economics
 B.S. – Central Missouri State College
 M.A. – Central Missouri State College

GREENE, Bonnie J. Physical Education
 B.S. – University of Arizona
 M.A. – Arizona State University

GROH, Sharon L. Fine Arts
 B.S. – Park College
 Study – University of Missouri at Kansas City

HALVORSEN, Betty M. Physical Education
 B.S. – Kansas State College at Pittsburg
 M.S. – Kansas State College at Pittsburg

HARDEN, Vernon W. Humanities and Communications
 B.S. – Tarkio College
 M.A. – Arizona State University
 Graduate Study – University of Arizona
 University of Iowa

HARVEY, Marian V. Social Science
 A.B. – Northwestern University
 M.A. – University of Chicago
 Graduate Study – University of Wisconsin

HAYNES, Solon E. Education
 B.S. – Central Missouri State College
 M.S. – Central Missouri State College
 Ed.D. – University of Kansas

HECKEL, Achsah M. Chemistry
 B.S. – Kansas State University at Manhattan
 Study – Northwest Missouri State College

HEIM, Theodore L. Social Science
 B.S. – Kansas State University at Manhattan
 M.A. – University of Kansas
 Graduate Work – University of Kansas

HOFFMAN, Rosemary L. Humanities and Communications
 B.S. – Northwest Missouri State College
 M.A. – Middlebury College

HOLMAN, Richard W. Engineering and Technology
 B.S. – Northwest Missouri State College
 M.A. – State College of Iowa
 Graduate Work – University of Missouri at Rolla
 University of Minnesota

HUGHES, John T. Fine Arts
 B.F.A. – Kansas City Art Institute
 M.F.A. – University of Nebraska

HUSTON, Bill L. Physics and Math
 B.A. – Tarkio College
 M.A. – Duke University
 Graduate Study – University of Missouri

JENKINS, Vernon Fine Arts
 B.S. – Northwest Missouri State College
 M.A. – Colorado State College

JOHNSTON, Ernest A. Physics and Math
 B.S. – University of Kansas
 Graduate Study – University of Kansas

JORDAN, James R. Department Chairman – Social Science
 B.S. – Central Missouri State College
 M.A. – University of Missouri at Kansas City
 Graduate Study – Northwestern University
 University of Missouri

KELLER, Sandra Computer Science
 B.A. – University of Colorado
 Study – Colorado State University

LAMBING, Larry L. Chemistry
 B.S. – Kansas State College at Pittsburg
 M.S. – Kansas State College at Pittsburg
 Graduate Study – University of Arkansas

LONG, James Physical Education
 B.S. – Southwest Missouri State College
 M.Ed. – University of Missouri

MARION, Glenn E. Department Chairman – Engineering and Technology
 B.S. – Northwest Missouri State College
 M.S. – Oregon State College
 Graduate Study – University of Missouri at Rolla
 Colorado A&M

MC CANN, Willis H. Department Chairman – Psychology
 A.B. – University of Missouri
 M.A. – Cornell University
 Ph.D. – Indiana University
 Ll.B. – University of Missouri at Kansas City

MEYER, Myron M. Humanities and Communications
 B.A. – University of Cincinnati
 B.H.L. – Hebrew Union College
 D.D. – Hebrew Union College
 Graduate Study – New York School of Hebrew Union College
 University of Missouri at Kansas City

MILLER, Richard T. Humanities and Communications
 B.S. – Northeast Missouri State Teachers College
 M.A. – Northeast Missouri State Teachers College

MILLER, Robert E. Physics and Math
 B.S. – Kansas State Teachers College at Emporia
 M.A. – Kansas State Teachers College at Emporia

MITCHELL, Marian Business and Economics
 B.S. – Northwest Missouri State College
 M.S. – Central Missouri State College

NIX, Jimmie R. Social Science
 B.S. – Northwest Missouri State College
 M.S. – Kansas State College at Pittsburg

OWNBEY, Sandra Jane Business and Economics
 B.S. – Northeast Missouri State College
 M.A. – Northeast Missouri State College

PETTIJOHN, Harriett Physical Education

PHELAN, Elizabeth J. Social Science
 B.S. – St. Mary's College
 M.S. – Creighton University

PITTER, Herman A. Humanities and Communications
 B.A. – William Penn College
 Graduate Study – Kansas State University

POPPINO, Mary A. Humanities and Communications
 B.A. – University of Omaha
 M.A. – Southern Illinois University

POPPLEWELL, Frank S. Social Science
 B.S. – Kansas State College at Pittsburg
 M.S. – Kansas State College at Pittsburg
 M.A. – University of Missouri
 Graduate Study – University of Missouri

RACHOW, Thomas E. Biology and Chemistry
 B.S. – University of Iowa
 M.S. – Southern Illinois University

REDMOND, John Department Chairman – Chemistry
 B.S. – University of Missouri
 M.S. – University of Missouri
 Graduate Study – University of Missouri

RICHMOND, David L. Business and Economics
 B.S. – Kansas State Teachers College at Emporia
 M.S. – Kansas State Teachers College at Emporia

RIEMER, Roberta S. Department Chairman – Fine Arts
 A.B. – Park College
 M.M. – Northwestern University
 Graduate Study – Chicago Musical College
 Columbia University
 University of Missouri at Kansas City

ROBBINS, Donald J. Biology
 B.S. – Kansas State College at Pittsburg
 M.S. – Kansas State College at Pittsburg
 Graduate Study – University of Oklahoma

SANDSTAD, Neil A. Fine Arts
 B.A. – Carleton College
 M.A. – State University of Iowa

SCHMITZ, JR., Leo H. Physics and Math
 B.S. – University of Missouri
 M.Ed. – University of Missouri
 M.A. – University of Illinois

SCOTT, Bob R. Division Director – Liberal Arts and Sciences
 B.S. – University of Missouri
 M.A. – Washington University, St. Louis, Missouri
 Ed.D. – University of Missouri

SHROUT, Ethel H. Business and Economics
 B.S. – Northwest Missouri State College
 M.S. – University of Missouri
 Graduate Study – University of Missouri
 Oklahoma State University

SIRENO, Peter Business and Economics
 B.S. – Northeast Missouri State College
 B.S.E. – Northeast Missouri State College
 M.A. – Northeast Missouri State College

SMITH, Frank R. Humanities and Communications
 B.J. – University of Missouri

SPARKS, Isabel L. Department Chairman – Humanities and Communications
 B.A. – University of Kansas
 M.A. – University of Kansas City
 M.Ph. – University of Kansas
 Graduate Study – University of Kansas

SPICER, Clyde E. Humanities and Communications
 B.S. – Hardin-Simmons University
 M.S. – North Texas State University

TAYLOR, Richard B. Humanities and Communications
 B.S. – Northeast Missouri State College
 B.J. – University of Missouri
 M.A. – University of Missouri

TOMLINSON, Veva B. Humanities and Communications
 B.S. – Central Missouri State College
 M.A. – Duke University
 Graduate Study – University of Missouri at Kansas City

VARGAS, Eduardo E.	Humanities and Communications
B.A. – Westminster College	
M.A.T. – University of Missouri	
Graduate Study – Vanderbilt University	
VEHLOW, Paula M.	Humanities and Communications
B.S. – Northwest Missouri State College	
M.A. – University of Missouri at Kansas City	
WIESE, W. Roland	Biology
B.S. – University of Arizona	
M.S. – Arizona State University	
Graduate Study – University of Kansas	
WILKERSON, Jerry M.	Physics and Math
B.S. – Central Missouri State College	
M.S. – Central Missouri State College	
Graduate Study – University of Missouri at Kansas City	
WOOD, William	Department Chairman – Computer Science
B.S. – University of Denver	

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will be available upon completion of
Phase I of the building program.

Published November 1, 1968

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The College

Academic Programs

Division of Applied
Science &
Technology

Division of Education
& Psychology

Division of Liberal
Arts & Sciences

Admissions
Policies

Registration
Procedures & Fees

Degrees &
Requirements for
Graduation

Academic Policies
and Regulations

Student Activities,
Organizations &
Services

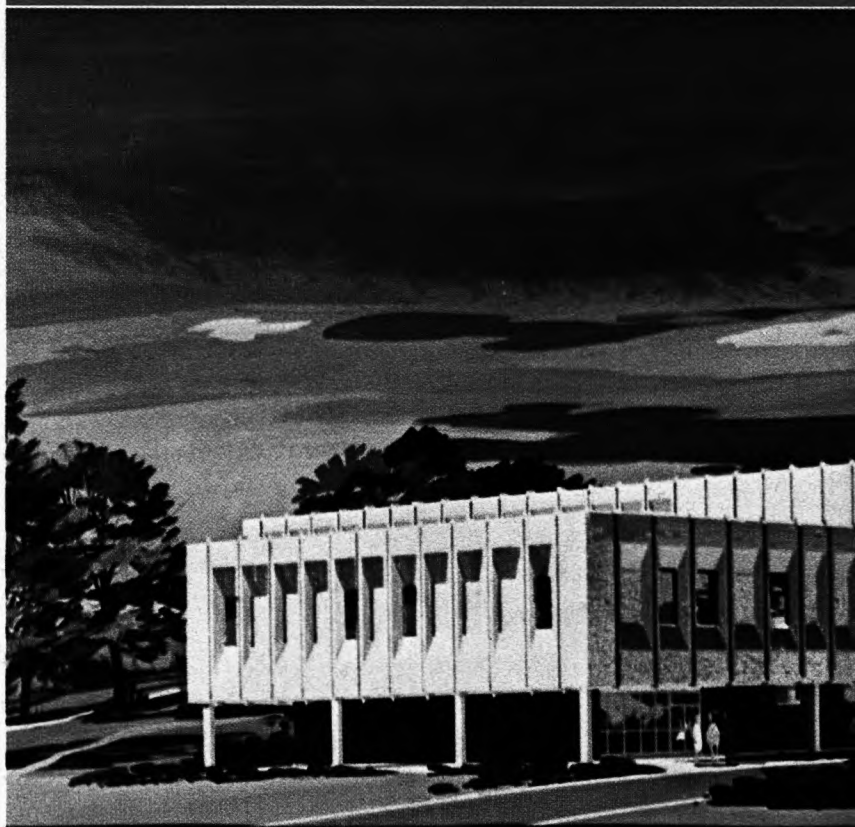
Scholarships &
Student Aid

Campus Features &
Facilities

The New Campus

Administrative
Officers & Faculty

*A four year college borne of
the need for education
to help the people compete*



Phone (816) 233-3134