

**ACCT Courses
(Accounting)**

ACCT 2213 Principles of Accounting I

3 credits: 3 hours lecture

Theory of accounts, fundamental books, interpretation and classification of accounts, and analysis of financial statements.

ACCT 2223 Principles of Accounting II

3 credits: 3 hours lecture

Prerequisites: ACCT 2213

Theory of accounts, fundamental books, interpretation and classification of accounts, and analysis of financial statements.

ACCT 3403 Intermediate Accounting I

3 credits: 3 hours lecture

Prerequisites: ACCT 2223

Comprehensive overview of the conceptual framework of the American accounting profession. Includes the preparation of the required financial statements; present/future value concepts; inventories; liabilities; operational assets; intangibles; property, plant, and equipment; investments; owner's equity; leases; pensions; and other relevant financial accounting topics.

ACCT 3413 Intermediate Accounting II

3 credits: 3 hours lecture

Prerequisites: ACCT 3403

Comprehensive overview of the conceptual framework of the American accounting profession. Includes the preparation of the required financial statements; present/future value concepts; inventories; liabilities; operational assets; intangibles; property, plant, and equipment; investments; owner's equity; leases; pensions; and other relevant financial accounting topics.

ACCT 3523 Intermediate Accounting III

3 credits: 3 hours lecture

Prerequisites: ACCT 3413

Comprehensive overview of the conceptual framework of the American accounting profession. Includes the preparation of the required financial statements; present/future value concepts; inventories; liabilities; operational assets; intangibles; property, plant, and equipment; investments; owner's equity; leases; pensions; and other relevant financial accounting topics.

ACCT 3433 Cost Accounting I

3 credits: 3 hours lecture

Prerequisite: ACCT 2223

Accounting for materials, labor, overhead; cost records, summaries, statements; job order cost systems; process cost techniques; introduction to standard costs, estimated costs, distribution costs.

ACCT 4613 Advanced Accounting I

3 credits: 3 hours lecture

Prerequisite: ACCT 3413

Application of accounting principles to accounting for partnerships, business combinations, consolidated financial statements, international operations, and estates and trusts.

ACCT 4623 Advanced Accounting II

3 credits: 3 hours lecture

Prerequisite: ACCT 4613

Application of accounting principles to accounting for partnerships, business combinations, consolidated financial statements, international operations, and estates and trusts.

ACCT 4633 Governmental Accounting**3 credits: 3 hours lecture**

Prerequisite: ACCT 3403 with "C" or higher

Fund accounting for governmental and not-for-profit entities. Financial and budgetary control, the budgetary process in governments, special accounting and reporting problems of the public and not-for-profit sector.

ACCT 4673 Cost Accounting II**3 credits: 3 hours lecture**

Prerequisite: ACCT 3433

A continuation of the study of cost accounting with emphasis on standard costs, analysis of cost for profit decision-making purposes; comprehensive profit planning and control, cost/volume/profit analysis, capital budgeting; responsibility reporting, performance measurement and transfer pricing in a decentralized organization.

ACCT 4683 Federal Tax Accounting I**3 credits: 3 hours lecture**

Prerequisite: ACCT 2213

Income tax concepts, principles, practice. Instruction in tax planning, determination, and return preparation for individuals, businesses, and fiduciaries. Income, social security, payroll, and other federal tax programs.

ACCT 4693 Federal Tax Accounting II**3 credits: 3 hours lecture**

Prerequisite: ACCT 4683

Income tax concepts, principles, practice. Instruction in tax planning, determination, and return preparation for individuals, businesses, and fiduciaries. Income, social security, payroll, and other federal tax programs.

ACCT 4773 Auditing I**3 credits: 3 hours lecture**

Prerequisites: ACCT 3413

Basic functions/objectives of auditing, audit principles and procedures application; internal control preparation of working papers; report writing; types of audits.

ACCT 4783 Auditing II**3 credits: 3 hours lecture**

Prerequisites: ACCT 4773

Basic functions/objectives of auditing, audit principles and procedures application; internal control preparation of working papers; report writing; types of audits.

ACCT 479V Independent Study in Accounting**Variable credit**

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**AGEC Courses
(Agricultural Economics)**

AGEC 2273 Agricultural Economics

3 credits: 3 hours lecture

Application of economic principles to agriculture and their effect on the incomes and living standards of farm people; present-day farm economics in the United States.

AGEC 4613 Agricultural Policy

3 credits: 3 hours lecture

Prerequisite: AGECE 2273 or ECON 2213

A study of the effect of government agricultural policies on farm income, crop acreage, food supply, food prices, agricultural exports, trade barriers, world hunger, and economic development.

AGEC 4623 Farm Management

3 credits: 3 hours lecture

Prerequisite: AGECE 2273 or ECON 2213

Decision-making in the organization and operation of the farm business involving the use of basic principles of farm management.

AGEC 4683 Commodity Marketing

3 credits: 3 hours lecture

Prerequisite: AGECE 2273 or ECON 2213

Economic aspects of the marketing of specific commodities. Factors affecting supply, demand, prices, trends, marketing methods, and distribution channels will be examined.

AGEC 4703 Contract Marketing and Futures Trading

3 credits: 3 hours lecture

Prerequisite: AGECE 2273 or ECON 2213

Theory and practice of trading in commodity futures: 1) hedging, 2) speculator strategies, 3) mechanics of the future market.

AGEC 4713 Agricultural Finance

3 credits: 3 hours lecture

Prerequisite: AGECE 2273 or ECON 2213

Methods and procedures of acquiring and utilizing funds. Emphasis is placed upon financial planning and financial firms serving agriculture.

AGEC 479V Independent Study in Agricultural Economics

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

AGEC 4803 Agribusiness Firm Management

3 credits: 3 hours lecture

Prerequisites: AGECE 2273 or ECON 2213.

Application of economic decision-making processes as they relate to the management of agricultural businesses.

AGEC 4813 Agricultural Price Analysis

3 credits: 3 hours lecture

Prerequisite: AGECE 2273 or ECON 2213.

An application of economic theory to solve problems relating to agricultural price analysis. Techniques for predicting price behavior and the relationships between the general economy and prices of agricultural commodities will be analyzed.

AGEC 4823 Economics of Environmental Management

3 credits: 3 hours lecture

Prerequisite: AGEC 2273 or ECON 2213

An economic approach to problems of evaluating the private and social benefits and costs of altering the environment. Emphasis will be placed on the problems associated with determining and maintaining acceptable levels of environmental quality. These problems will deal with the interactions between individuals, institutions, technology and the environment.

AGEN Courses
(Agricultural Engineering)

AGEN 2263 Soil and Water Conservation

3 credits: 2 hours lecture, 2 hours laboratory

Prerequisite: Sophomore standing

Soil and water conservation practices on agricultural lands involving surveying, leveling, terracing, drainage, irrigation, water supply, excavating, mapping, and farm pond measurements. Spring offering in even numbered years.

AGEN 479V Independent Study in Agricultural Engineering

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

AGRI Courses
(General Agriculture)

AGRI 1101 Agriculture Orientation

1 credit: 1 hour lecture

NOTE: Required of all freshmen majoring in Agriculture and all transfer students with less than 30 hours. An overview of agriculture with emphasis on its social, economic, and environmental importance.

AGRI 472V Special Topics

Variable credit

Prerequisite: Junior standing and 3.00 GPA or better in major area of interest

Selected topics not covered in other courses or a more intensive study of specific topics in agriculture. Topics vary.

Type of instruction depends on subject. Field trips may be required.

AGRI 4771 Seminar

1 credit: 1 hour lecture

Prerequisite: Senior standing.

NOTE: Maximum of 2 credit hours.

Papers and assigned topics dealing with current issues. Participation includes oral presentation and written reports.

AGRI 4783 Internship

3 credits: 3 hours lecture

Prerequisite: Junior standing; approval of project proposal prior to enrollment; and 2.50 GPA or consent of instructor.

Supervised work in agriculture to develop professional competence. Written and oral reports are required at the completion of the project. A non-repeatable course.

AGRI 479V Independent Study in Agriculture

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**AGRO Courses
(Agronomy)**

AGRO 1033 Principles of Field Crops

3 credits: 2 hours lecture, 2 hours laboratory

Field crops, types of varieties relating to the management and environment and to their value as cash, grain, feed, and cover, or green manure crops.

AGRO 2053 Applied Plant Pathology

3 credits: 2 hours lecture, 2 hours laboratory

Prerequisite: BIOL 1144

NOTE: Extended field trips in addition to regular lab hours may be required.

Basic principles of plant pathology will be introduced. Lecture hours will deal with agronomic and horticulture crops common to Arkansas. Fall offering in odd-numbered years.

AGRO 2233 Weed Identification, Morphology and Ecology

3 credits: 2 hours lecture, 2 hours laboratory

Prerequisite: AGRO 1033

Weeds as economic pests are emphasized. Gross morphological characteristics to aid in identification, growth, and distribution are discussed. Spring offering in odd-numbered years.

AGRO 2244 Soils

4 credits: 3 hours lecture, 2 hours laboratory

Prerequisites: CHEM 1113, CHEM 1131

NOTE: Extended field trips required in addition to regular lab hours.

The study of soil as a natural body from the standpoint of how to produce agronomic and horticulture plants.

AGRO 2251 Soil Judging, Sophomore Level

1 credit: 2 hours laboratory

Emphasis on soil morphology. Possible participation in intercollegiate judging competition. Field trips required.

AGRO 3421 Soil Judging, Junior Level

1 credit: 2 hours laboratory

Prerequisite: AGRO 2251

Emphasis on soil classification. Possible participation in intercollegiate judging competition. Field trips required.

AGRO 3453 Forage Crops

3 credits: 3 hours lecture

Prerequisite: AGRO 1033

NOTE: Extended field trips required in addition to regular lecture.

Forage crops for pastures, hay, soiling, and silage, with reference to adaptation, production, utilization, and improvement.

AGRO 3503 Cereal Crops

3 credits: 3 hours lecture

Prerequisite: AGRO 1033

NOTE: Extended field trips required in addition to lecture.

Soil and climatic adaptation, utilization, production, cultural practices, and improvement.

AGRO 3513 Fiber and Oilseed Crops

3 credits: 3 hours lecture

Prerequisite: AGRO 1033

NOTE: Extended field trips required in addition to lecture.

Biological principles generally involved in field crop production with emphasis given to specific agronomic implications as related to products of cotton and soybeans.

AGRO 4733 Principles of Weed Control

3 credits: 2 hours lecture, 2 hours laboratory

Prerequisite: CHEM 1113, CHEM 1131

Mechanical, biological, and chemical control measures employed in weed science. Herbicide usage relative to selectivity and control measures in specific crops are stressed.

AGRO 4743 Soil Fertility

3 credits: 3 hours lecture

Prerequisite: AGRO 2244

NOTE: Extended field trips required in addition to regular lecture.

Soil fertility principles, soil amendments, and cultural practices for maintaining and increasing soil productivity. Spring offering in even-numbered years.

AGRO 4753 Crop Physiology

3 credits: 3 hours lecture

Prerequisite: BIOL 1144

Effects of various physiological and environmental factors on crop production and the effects of post-harvest treatments on crop quality. Spring offering in odd-numbered years.

AGRO 4761 Soil Judging, Senior Level

1 credit: 2 hours laboratory

Prerequisites: AGRO 2244

Emphasis on pedology and geomorphology. Possible participation in intercollegiate judging competition. Field trips required.

AGRO 479V Independent Study in Agronomy

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

ANSC Courses (Animal Science)

ANSC 1003 Principles of Animal Science

3 credits: 2 hours lecture, 2 hours laboratory

Livestock in agriculture of Arkansas and the United States. Types, breeds, market classes, judging, care, and management of livestock.

ANSC 2213 Feeds and Feeding

3 credits: 3 hours lecture

Study of nutritive components and values of feedstuffs. The application of various food factors in the compounding of a balanced ration for farm animals.

ANSC 3314 Aquaculture

4 credits: 3 hours lecture, 2 hours laboratory

Prerequisites: BIOL 1153 and 1161

A study of the scientific principles of commercial aquaculture with emphasis on production systems. Spring offering in odd-numbered years.

ANSC 3413 Livestock Breeding

3 credits: 3 hours lecture

Prerequisites: ANSC 1003

Fundamentals of livestock improvement with special emphasis on heredity and selection. Fall offering in odd-numbered years.

ANSC 3463 Poultry Production

3 credits: 3 hours lecture

Prerequisite: ANSC 1003

NOTE: Extended field trips required in addition to regular lecture.

Management of poultry with respect to breeding, housing, judging, brooding, disease control, and marketing.

ANSC 3473 Beef Production

3 credits: 2 hours lecture, 2 hours laboratory

Prerequisite: ANSC 1003

NOTE: Extended field trips required in addition to regular lab hours.

Systems of beef production with emphasis on management, breeding, and feeding of purebred and commercial herds under Arkansas conditions.

ANSC 3493 Swine Production

3 credits: 3 hours lecture

Prerequisite: ANSC 1003

NOTE: Extended field trips required in addition to regular lecture.

Systems of swine production with emphasis on management, breeding, and feeding of purebred and commercial herds under Arkansas conditions. Fall offering in even-numbered years.

ANSC 4633 Advanced Animal Nutrition

3 credits: 3 hours lecture

Prerequisite: ANSC 2213

Nutrient requirements of farm animals. Functions and deficiency symptoms of the major vitamins and minerals will be included. Spring offering in even-numbered years.

ANSC 4653 Reproduction of Farm Animals

3 credits: 3 hours lecture

Prerequisite: ANSC 1003

The reproductive process which includes reproductive endocrinology, anatomy and physiology of the male and female, and specific characteristics of fertility and infertility. Spring offering in odd-numbered years.

ANSC 479V Independent Study in Animal Science Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**ANTH Courses
(Anthropology)**

ANTH 2203 Cultural Anthropology

3 credits: 3 hours lecture

Culture and its influence on human behavior through a comparative study of a selected sample of world cultures.

ANTH 2213 North American Indians

3 credits: 3 hours lecture

A survey of the various Indian tribes of North America and the interaction of European and Indian cultures. May be taken for credit in either Anthropology or Sociology.

ANTH 2223 World Prehistory

3 credits: 3 hours lecture

Biological and cultural evolution of humankind; cultural ecology; surveys of hunter-gatherers, domestications of plants and animals, rise of complex agricultural societies and early civilizations in the old and new worlds. May be taken for credit in either Anthropology or Sociology.

ANTH 2233 Arkansas Regional Archeology

3 credits: 3 hours lecture

Introduction to prehistoric and historic archeology of southeast Arkansas and adjacent regions. Field and/or laboratory component required.

ANTH 479V Independent Study in Anthropology

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

ART Courses (Art)

ART 1013 Drawing

3 credits: 6 hours lecture and studio

Study of proportion, perspective, light and shade, basic elements of pictorial composition.

ART 1023 Design and Color

3 credits: 6 hours lecture and studio

A basic study of the use of line, shape, texture, value, and color and their relationships in composition.

ART 1053 Art Appreciation

3 credits: 3 hours lecture

A basic introductory course in man's cultural heritage through the visual arts.

ART 1103 Art for Elementary Teachers

3 credits: 3 hours lecture

Art and handicrafts for children of various age levels with instruction and practice in executing appropriate projects on each level.

ART 2203 Watercolor

3 credits: 6 hours lecture and studio

Basic techniques in handling transparent watercolor with work in still life and landscape.

ART 2223 Ceramics I

3 credits: 6 hours lecture and studio

Introduction to design and production of pottery. Hand building, decorating, and glazing.

ART 2233 Figure Drawing

3 credits: 6 hours lecture and studio

Study of the human figure. Visual analysis through a study of proportion, bone structure, and external musculature. Studio practice in drawing a live model.

ART 2253 Sculpture

3 credits: 6 hours lecture and studio

Introduction to the processes and media of sculpture to include both additive and subtractive processes.

ART 3303 Elementary Art Methods

3 credits: 3 hours lecture

A course designed for prospective teachers of art in the schools. Lecture, discussion, and appropriate projects concerning art theory, curriculum content, and strategies for the teaching of art to elementary children.

ART 3313 Advanced Drawing

3 credits: 6 hours lecture and studio

Prerequisite: ART 1013

Continuation of ART 1013 with emphasis on theory and content.

ART 3403 Art History I

3 credits: 3 hours lecture

Survey of the history and development of Western World art from pre-historic through 1400 A.D. as shown in painting, sculpture, architecture, and the minor arts.

ART 3413 Art History II

3 credits: 3 hours lecture

Prerequisite: ART 1023.

Survey of the history and development of Western World art from 1400 A.D. to 1800 A.D.

ART 3423 Advanced Watercolor

3 credits: 6 hours lecture and studio

Prerequisite: ART 2203.

Continuation of ART 2203 with emphasis on expression.

ART 3443 Painting I

3 credits: 6 hours lecture and studio

Alla prima (direct) oil painting

ART 3453 Printmaking

3 credits: 6 hours lecture and studio

Prerequisite: ART 1013, ART 1023.

Introduction to the four processes in Printmaking: planographic, intaglio, relief, and stencil.

ART 3463 Metals

3 credits: 6 hours lecture and studio

Prerequisite: ART 1023.

Techniques in silver smithing and art metal. Design and construction of projects in silver.

ART 3473 Ceramics II

3 credits: 6 hours lecture and studio

Prerequisites: ART 1023, ART 2223.

A continuation of ART 2223 with special emphasis on the potter's wheel.

ART 4603 Advanced Printmaking

3 credits: 6 hours lecture and studio

Prerequisite: ART 3453.

Refinement and control of Printmaking processes with emphasis on individual expression.

ART 4613 Painting II

3 credits: 6 hours lecture and studio

Prerequisites: ART 1013, 1023, and 3443.

Continuation of ART 3443.

ART 4633 Ceramics III

3 credits: 6 hours lecture and studio

Prerequisite: ART 3473.

Recommended: CHEM 1004

Continuation of ART 3473. Additional potter's wheel techniques. Study of glazes and glaze formulation.

ART 4643 Painting III

3 credits: 6 hours lecture and studio

Prerequisites: ART 1013, ART 1023, ART 3443, ART 4613.

Continuation of ART 4613. Experimentation with various techniques.

ART 4651 Seminar in Art Teaching

1 credit: 1 hour lecture

Co-requisite: S ED 3363

Curriculum planning and major objectives for a creative art program. Classroom organization and management.

ART 4663 Art History III

3 credits: 3 hours lecture

Survey of the history and development of Western World art from 1800 A.D. to the present, and an introduction to

Non-European art.

ART 468V Art Practicum

Variable credit

Prerequisite: Advanced standing and permission of Dean and Instructor.

Selected topics not covered in other courses or a more intensive study of specific topics in art, which will include practical application of these topics.

ART 479V Independent Study in Art

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for Prerequisites and description.

**ASTR Courses
(Astronomy)**

ASTR 1033 Elements of Astronomy

3 credits: 3 hours lecture

A study of astronomy from the past to the present including examinations of the solar system, properties of stars, and characteristics of galaxies.

ASTR 1041 Elements of Astronomy Laboratory

1 credit: 2 hours laboratory

A laboratory course to supplement Astronomy 1033.

ASTR 3503 Advanced Astronomy

3 credits: 3 hours lecture

Prerequisite: ASTR 1033

Analysis, makeup, and operation of planetary systems; star formation and types; classes and variations of galaxies; operation of the universe.

ASTR 4652 Special Topics

2 credits: 2 hours lecture

Selected topics from the areas of astronomy designed to be of particular interest and use to in-service teachers. May be taken by regular students only with permission of the Vice Chancellor for Academic Affairs. May be repeated for a total of six hours credit.

BIOL Courses (Biology)

BIOL 1063 Biological Science

3 credits: 3 hours lecture

Corequisite: ENGL 1013

Basic concepts of biology: cell and molecular biology, genetics, evolution, and ecology.

BIOL 1071 Biological Science Laboratory

1 credit: 2 hours laboratory

Corequisite: BIOL 1063

Basic studies of plants and animals, cells, biochemistry, metabolism, and inheritance, designed to illustrate and complement concepts discussed in BIOL 1063.

BIOL 1143 General Botany

4 credits: 3 hours lecture, 3 hours laboratory

Corequisite: ENGL 1013

Structure, physiology, and phylogeny of plants, fungi, and plant-like protista.

BIOL 1153 General Zoology

3 credits: 3 hours lecture

Corequisite: ENGL 1013

Animal kingdom; classification, phylogenetic relationships, morphology, function, and life histories of animals.

BIOL 1161 General Zoology Laboratory

1 credit: 3 hours laboratory

Corequisite: BIOL 1153

Study and dissection of representative animals, emphasizing morphology, phylogeny, and life histories.

BIOL 1171 General Botany Laboratory

1 Credit: 3 hours laboratory

Corequisite: BIOL 1143

Morphological survey of plants, fungi, and plant-like protista, including the anatomy of seed plants.

BIOL 1403 Cell and Molecular Biology

3 credits: 3 hours lecture

Corequisites: ENGL 1013, MATH 0183, or equivalents

Introduction to cell structure and function, with emphasis on chemistry, ultra-structure and cell organelles.

BIOL 2223 Human Anatomy

3 credits: 3 hours lecture

Corequisite: ENGL 1013

A basic course in anatomy with emphasis on cells, tissues, organs, and systems of the human body.

BIOL 2261 Human Anatomy Laboratory

1 credit: 3 hours laboratory

Corequisite: ENGL 1013

Identification of cells, tissues, and organ systems of the human body.

BIOL 2273 Human Physiology

3 credits: 3 hours lecture

Prerequisite: CHEM 1023 or CHEM 1103

Recommended: BIOL 1153 or BIOL 2223

Introduction to the function, mechanism, and controls of the various organ systems of the human body. Annual Fall

offering.

BIOL 2281 Human Physiology Laboratory

1 credit: 3 hours laboratory

Corequisite: BIOL 2273

Laboratory exercises that demonstrate physiological principles treated in Human Physiology lecture. Annual Fall offering.

BIOL 3314 Ichthyology/Herpetology

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: BIOL 1153, 1161

Taxonomy and natural history of fishes, amphibians, and reptiles, emphasizing the local fauna. Spring offering in odd-numbered years.

BIOL 3324 Ornithology/Mammalogy

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: BIOL 1153, 1161

Taxonomy and natural history of birds and mammals, emphasizing the local fauna. Spring offering in even-numbered years.

BIOL 3354 Genetics

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: BIOL 3553, 3561; CHEM 1113, 1131 Principal laws of heredity, including Mendelian, molecular, and cytogenetics. Annual Spring offering.

BIOL 3411 Mammalian Anatomy Laboratory

1 credit: 3 hours laboratory

Prerequisites: BIOL 1153, 1161

Basic mammalian anatomy, with emphasis on the human skeleton and cat organ systems.

BIOL 3423 Plant Morphology

3 credits: 1 hour lecture, 6 hours laboratory

Prerequisite: BIOL 1143, 1171

Structure, reproduction, and life histories of the vascular plants: ferns and fern allies, gymnosperms, and flowering plants.

BIOL 3434 Regional Flora

4 credits: 2 hours lecture, 6 hours laboratory

Prerequisite: BIOL 1143, 1171

Identification and classification of the vascular plants of the southeastern United States, emphasizing flowering plants. Annual Spring offering.

BIOL 3484 General Ecology

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: BIOL 1143, 1171, 1153; CHEM 1113, 1131

Principles of ecology; study of environments and their components, the flow of energy and materials, ecological succession, pollution, and radiation ecology. Annual Fall offering.

BIOL 3493 Environmental Science

3 credits: 3 hours lecture

Prerequisite: 3 hours of biology or earth science

NOTE: Same as ESCI 3493

A survey of the environment to provide an understanding of and respect for the ecosystems upon which the human species is dependent. Fall offering in even-numbered years.

BIOL 3553 Microbiology**3 credits: 3 hours lecture**

Prerequisites: 6 hours of chemistry, 3 hours of biology

The biology of microorganisms including bacteria, viruses, fungi, and protozoans, with emphasis given to their importance in health and disease.

BIOL 3561 Microbiology Lab**1 credit: 3 hours laboratory**

A laboratory course designed to supplement the basic lecture course in microbiology with experimentation and demonstration.

BIOL 3574 Comparative Anatomy**4 credits: 2 hours lecture, 6 hours laboratory**

Prerequisites: BIOL 1153, 1161

Structure, development, function, and evolution of organs and organ systems in the different vertebrate groups with emphasis on basic principles. Annual Fall offering.

BIOL 358V Natural History**Variable credit**

Prerequisite: 3 hours biology or 3 hours earth science

NOTE: May be taken for a maximum of 3 hours credit. Same as ESCI 358V, FOR 358V and WL F 358V.

A field course in earth science and biology of natural ecosystems, consisting of travel, study and/or research in unique natural areas of North America.

BIOL 3594 Invertebrate Zoology**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisites: BIOL 1153, 1161

Classification, phylogenetic relationships, morphology, function, and life histories of invertebrates, emphasizing marine invertebrates and the economic importance of all invertebrate groups.

BIOL 4602 Seminar in Evolutionary Biology**2 credit: 2 hour lecture**

Prerequisite: 20 hours of biology, including BIOL 3354

Evidence and mechanism for evolutionary change; Charles Darwin's *Origin of Species*. Students present different topics each semester.

BIOL 4624 Vertebrate Embryology**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisites: BIOL 1153, 1161, 3574

Embryonic development of the chordates as applied to amphioxus, frog, chick, and pig. Spring offering in even-numbered years.

BIOL 4634 Vertebrate Physiology**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisites: 20 hours of biology and 8 hours of chemistry

Fundamental concepts of vertebrate physiology, emphasizing function, mechanism, and controls of the various vertebrate organ systems. Spring offering in odd-numbered years.

BIOL 4664 Mammalian Histology**4 credits: 2 hours lecture, 6 hours laboratory**

Prerequisites: BIOL 1153, 1161

A morphological study and identification of mammalian tissues (human when available) and their organization within mammalian organs.

BIOL 4683 Pathophysiology

3 credits: 3 hours lecture

Prerequisites: BIOL 3553; BIOL 2273/2281 or 4634

Introduction to the physiological basis of the disease process. Annual spring offering.

BIOL 469V Senior Research

Variable credit

Prerequisites: 20 hours of biology, 8 hours of chemistry, Senior standing, and approval of a project proposal by the division chair.

NOTE: Open only to biology majors and minors. May be repeated for a maximum of 6 hours of credit.

Literature search and laboratory work on individual research projects.

BIOL 4711 Seminar in Classroom Teaching

1 credit: 1 hour arranged conference

Prerequisites: 16 hours of biology and enrollment in S ED 3663.

Evaluation and critique of classroom teaching including topic selection, instructional materials, and test design and evaluation.

BIOL 4753 Selected Topics in Biology

3 credits: 3 hours lecture

Prerequisites: Junior or senior standing and approval of the instructor and Dean of Mathematical and Natural Sciences.

Selected topics in biology.

BIOL 479V Independent Study in Biology

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**CART Courses
(Communication Arts)**

CART 4601 Methods Seminar in Teaching Foreign Language

1 credit: 1 hour lecture

Evaluation and critique of micro classroom teaching (required in SED 3363), history of academic discipline, philosophy development, test design and evaluation, and materials for on-site teaching.

CART 4611 Methods Seminar in Teaching English

1 credit: 1 hour lecture

Evaluation and critique of micro classroom teaching (required in SED 3363), history of academic discipline, philosophy development, test design and evaluation, and materials for on-site teaching.

CART 4621 Methods Seminar in Teaching Speech 1 credit: 1 hour lecture

Evaluation and critique of micro classroom teaching (required in SED 3363), history of academic discipline, philosophy development, test design and evaluation, and materials for on-site teaching.

CHEM Courses (Chemistry)

CHEM 1023 Introductory Chemistry

3 credits: 3 hours lecture

Corequisites: ENGL 1013, MATH 0183, or equivalents

Introduction to the structure of matter, its classification, and the physical, chemical, and nuclear changes it undergoes.

CHEM 1031 Introductory Chemistry Laboratory

1 credit: 2 hours laboratory

Corequisite: CHEM 1023

Basic studies in chemical experimentation including measurements, properties of elements and compounds, and reactions of matter.

CHEM 1103 General Chemistry I

3 credits: 3 hours lecture

Corequisites: CHEM 1121, ENGL 1013, MATH 1043

The study of measurement systems, significant figures, atomic and molecular structure, gas laws, thermochemistry, solutions, states of matter, chemical bonding, chemical reactions, and stoichiometry.

CHEM 1113 General Chemistry II

3 credits: 3 hours lecture

Prerequisite: CHEM 1103, 1121

Corequisite: CHEM 1131

The study of kinetics, equilibrium, thermodynamics, electrochemistry, oxidation-reduction, acid-base chemistry, nuclear chemistry, and selected descriptive chemistry. An ACS standardized exam will be given as the final exam.

CHEM 1121 General Chemistry I Laboratory

1 credit: 3 hours laboratory

Corequisite: CHEM 1103

Experimentation and theory in the areas of measurement systems, chemical analysis, chemical reactions, stoichiometry, thermochemistry, and molecular structure.

CHEM 1131 General Chemistry II Laboratory

1 credit: 3 hours laboratory

Corequisite: CHEM 1113

Experimentation and theory in the areas of qualitative analysis, oxidation-reduction, equilibrium, acid-base chemistry, and thermodynamics.

CHEM 2203 Introductory Organic and Biochemistry

3 credits: 3 hours lecture

Prerequisite: CHEM 1023 or CHEM 1103

Chemical substances from which life is formed. Designed for those who desire a general overview of organic and biochemistry.

CHEM 3314 Quantitative Analysis

4 credits: 2 hours lecture, 6 hours laboratory

Prerequisites: CHEM 1113, 1131, MATH 1043 or 1175

Analytical chemistry with emphasis on the principles and theories of gravimetric and volumetric analysis. Annual Fall offering.

CHEM 3404 Organic Chemistry I**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisites: CHEM 1113, CHEM 1131

A study of carbon compounds, including an introduction to organic nomenclature, reactions, reaction mechanisms, organic synthesis, and structural and stereochemical problems. Annual Fall offering.

CHEM 3414 Organic Chemistry II**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisite: CHEM 3404

A continuation of Organic Chemistry I (3404). A study of organic nomenclature, reactions, reaction mechanisms, organic spectroscopy, and greater emphasis on organic synthesis. An ACS standardized exam will be given as the final exam. Annual Spring offering.

CHEM 3444 Instrumental Analysis**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisites: CHEM 3314, PHYS 2203 or 2213

Theoretical and practical application of instrumental methods to chemical analysis. Spring offering in odd-numbered years.

CHEM 3454 Organic Analysis**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisites: CHEM 3414

Systematic separation and identification of organic compounds with emphasis on molecular structure. Use and theory of spectrometric methods and other physical techniques. Fall offering in odd-numbered years.

CHEM 4603 Structure and Mechanism**3 credits: 3 hours lecture**

Prerequisite: CHEM 3404

Structural considerations of organic chemistry including stereochemistry, electronic theory, and mechanisms.

CHEM 4611 Chemistry Seminar**1 credit: 1 hour lecture**

Open for credit to junior and senior chemistry, biology and physics majors and minors. Students give oral presentations on different topics each semester based on laboratory and/or library research. The course may be repeated for a maximum of 2 credit hours.

CHEM 4624 Advanced Inorganic Chemistry**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisite: 12 hours of chemistry

Molecular symmetry, theories of chemical bonding, acid-base definitions, coordination compounds, and selected descriptive chemistry. Fall offering in even-numbered years.

CHEM 4634 Biochemistry I**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisite: CHEM 3414

Introduction to the chemical aspects of living systems: organization and production of cellular macromolecules, production and utilization of energy by the cell, major metabolic pathways and biochemical control mechanisms. Fall offering in odd-numbered years.

CHEM 4643 Biochemistry II**3 credits: 3 hours lecture**

Prerequisite: CHEM 4634

Continuation of studies of chemical aspects of living systems: organization and production of cellular macromolecules, production and utilization of energy by the cell, major metabolic pathways and biochemical control

mechanisms. Spring offering in even-numbered years.

CHEM 469V Senior Research

Variable credit

Prerequisites: Junior or Senior standing and approval of a project proposal by the division chair.

NOTE: Open only to chemistry majors. May be repeated for a maximum of 6 hours of credits.

Literature search and laboratory work on individual research problems.

CHEM 4704 Physical Chemistry: Thermodynamics

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: MATH 2264; PHYS 2323 and 2241; and 12 hours of chemistry

Corequisite: MATH 2274

Principles of theoretical chemistry and their mathematical interpretations, emphasizing thermodynamics. Spring offering in odd-numbered years.

CHEM 4714 Physical Chemistry : Kinetic & Quantum Mechanics

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: MATH 2264; PHYS 2323 and 2241; and 12 hours of chemistry

Corequisite: MATH 2274

NOTE: May be taken prior to CHEM 4704.

Principles of theoretical chemistry and their mathematical interpretations, emphasizing kinetics and quantum chemistry. Spring offering in even-numbered years.

CHEM 4721 Seminar in Classroom Teaching

1 credit: 1 hour arranged conference

Prerequisites: 16 hours of chemistry and enrollment in S ED 3363

Evaluation and critique of classroom teaching including topic selection, instructional materials, and test design and evaluation.

CHEM 479V Independent Study in Chemistry

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**CIS Courses
(Computer Information Systems)**

CIS 1013 Introduction to Computer-Based Systems

3 credits: 3 hours lecture

An introduction to computers in business and scientific data processing. Overview of computer systems, computer languages, and data representation.

CIS 2203 Programming Microcomputer Systems

3 credits: 3 hours lecture

Introduction to operating systems and logical information flow using the BASIC language. Emphasis on student programming to solve problems in several disciplines.

CIS 2223 Microcomputer Applications

3 credits: 3 hours lecture

Prerequisite: Keyboarding ability recommended.

The study and use of microcomputer-based applications software to increase business and personal productivity. Realistic computing problems will be solved using sophisticated software packages including word processing, spreadsheets, database management systems, and graphics.

CIS 3103 Advanced Microcomputer Applications

3 credits: 3 hours lecture

Prerequisite: CIS 2223

The advanced study, use, and integration of microcomputer-based applications software to increase business and personal productivity.

CIS 3423 COBOL

3 credits: 3 hours lecture

Prerequisites: CIS 1013, 2203, General Education Mathematics

Techniques essential to problem-solving with the COBOL programming language. Practical application with emphasis on structured approach.

CIS 3443 Object-Oriented Programming Languages

3 credits: 3 hours lecture

Prerequisite: CIS 2203

Provides the student with theory and application of information systems development utilizing object-oriented (OO) technology. Topics include: analysis, design, data modeling, database management systems, and programming.

CIS 3523 Structured System Analysis and Design

3 credits: 3 hours lecture

Prerequisites: CIS 3423.

Application of skills and concepts developed in basic data processing course work to more advanced topics involving design, implementation, evaluation, and documentation of management information systems.

CIS 3553 Advanced COBOL

3 credits: 3 hours lecture

Prerequisite: Completion of CIS 3423 with a "C" or above

Emphasis on structured methodology of program design, development, testing, implementation, and documentation of business-oriented applications. Includes coverage of sequential and random access files and processing techniques, and development of programs and systems of programs for batch and interactive environments using COBOL programming language.

CIS 4503 Business Data Communications

3 credits: 3 hours lecture

Prerequisite: CIS 3553

To provide a strong introduction to both communications and networking for the computer literate student, focusing on system software.

CIS 4623 Database Management Systems

3 credits: 3 hours lecture

Prerequisite: CIS 3553

Emphasis on file organization methods, file access methods, data structures for database processing and the process for database design and implementation. The study and use of Structured Query Language to develop database programs.

CIS 4633 Application Software Development Project

3 credits: 3 hours seminar

Prerequisites: CIS 3553 or equivalent, CIS 3523.

System simulation techniques; their application to business systems using an appropriate simulation language; systems design and development; extensive use of computers.

CIS 479V Independent Study in Computer Information Systems

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**C J Courses
(Criminal Justice)**

C J 1013 Introduction to Criminal Justice

3 credits: 3 hours lecture

A survey of the various components of the criminal justice system.

C J 2113 Community Policing

3 credits: 3 hours lecture

Prerequisite: CJ 1013

Roles of police with an emphasis on community relations.

C J 2123 Corrections

3 credits: 3 hours lecture

Prerequisite: CJ 1013

Analysis of the roles and functions of corrections including institutions as well as community corrections.

C J 3233 Criminal Law

3 credits: 3 hours lecture

Prerequisite: CJ 1013

Basic principles of substantive criminal law including defenses, elements of various crimes, and consideration of the Arkansas criminal code.

C J 3243 Constitutional Criminal Procedure (same as PSCI 3413)

3 credits: 3 hours lecture

Prerequisite: PSCI 2213, CJ 1013

Analysis of procedural limitations on law enforcement and in the prosecution of crimes; emphasizes cases dealing with the fourth, fifth, sixth, and eighth amendments.

C J 3253 Juvenile Justice

3 credits: 3 hours lecture

Prerequisite: CJ 1013

Structure and processes of the juvenile justice system.

C J 3483 Judicial Process (same as PSCI 3483)

3 credits: 3 hours lecture

Prerequisite: PSCI 2213, CJ 1013

Courts, law, and the legal system; law and politics; judicial philosophy and biography.

C J 3613 Criminal Investigation and Evidence

3 credits: 3 hours lecture

Prerequisite: CJ 1013

Analysis of criminal investigation procedures; rules pertaining to collection and presentation of evidence.

C J 4373 Criminology (same as SOC 4613)

3 credits: 3 hours lecture

Prerequisite: SOC 2213, CJ 1013

Theories of the nature and causes of crime, and analyses of various kinds of crimes.

C J 4383 Principles of Administration (same as PSCI 4313)

3 credits: 3 hours lecture

Prerequisite: PSCI 2213, CJ 1013

Nature of bureaucratic organization and changing themes in organizational theory; fiscal and personnel policy; public unions and collective bargaining; leadership, communication, and motivation.

C J 489V Internship

Variable credit

Prerequisites: CJ 1013, Junior standing or permission of the instructor

Supervised learning experience in a criminal justice agency. May be repeated for a maximum of 6 hours of credit.

Course Descriptions

Course Listing Guide

The Course Listings section of the catalog provides descriptions of all courses approved by the faculty. Any of these courses may be scheduled during the University's academic terms. The listings follow a uniform pattern. The listing for CHEM 3404 can serve to explain the course listings of this section.

CHEM 3404 Organic Chemistry I

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: CHEM 1113, CHEM 1131

A study of carbon compounds, including an introduction to organic nomenclature, reactions, reaction mechanisms, organic synthesis, and structural and stereochemical problems.

The first line of the listings entry consists of:

Prefix: in this case CHEM, prefixes always consist of four upper case letters or spaces; prefixes used by particular divisions of the University are listed below;

Number: in this case 3404, numbers always consist of four digits (or the letter V): the first number indicates the level of the course (1 for freshman level, 2 for sophomore level, 3 for junior level, 4 for senior level, 5 for graduate level), the last digit indicates the number of credits earned in the course (V means that credit may vary or that credits in the course exceed 9);

Title: The course's full title which may be abbreviated in some course listings and schedules;

The second line of the listing states the number of credits a student may earn in the course and indicates the number of weekly hours the course requires in classroom lectures or laboratories.

The third line lists course prerequisites (courses which must be passed before registering for the course) and corequisites (courses which the student must either have passed previously or be enrolled in concurrently).

The course description follows:

Prefixes Used By University

Divisions

Agriculture prefixes include: AGECE, AGEN, AGRI, AGRO, ANSC, ENTO, HORT, VTSC;

Business prefixes include: ACCT, CIS, ECON, G B, MGMT, MKT;

Arts and Humanities prefixes include: ART, CART, ENGL, FREN, JOUR, PHIL, SPAN, SPCH;

Education prefixes include: EDFD, ELED, P E, RDNG, SED, SCED, SPED;

Forestry prefixes include: FOR, FRS, WLF;

Mathematical and Natural Sciences prefixes include: ASTR, BIOL, C S, CHEM, ENGR, ESCI, GSCI, MATH, PHSC, PHYS;

Music prefixes include: MUS, PMUS;

Social and Behavioral Sciences prefixes include: ANTH, C J, GEOG, HIST, PSCI, PSY, SOC, SOSC, SWK.

All *Nursing* courses have the Prefix NURS, the College Skills Course has the prefix DEV, while the Honors Colloquia are designated with HONR prefixes. A prefix of U ST may designate a course taught by faculty in any subdivision of the University which is done experimentally or for a short period of time.

Index To Course Descriptions

ACCT Courses (Accounting)

AGECE Courses (Agricultural Economics)

AGEN Courses (Agricultural Engineering)

AGRI Courses (Agriculture)

AGRO Courses (Agronomy)

ANSC Courses (Animal Science)

ANTH Courses (Anthropology)

ART Courses (ART)

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HIST Courses (History)
HONR Courses (Honors Colloquia)
HORT Courses (Horticulture)
JOUR Courses (Journalism)
MAED Courses (Mathematics Education)
MATH Courses (Mathematics)
MGMT Courses (Management)
MKT Courses (Marketing)
MUS Courses (Music)
NURS Courses (Nursing)
P E Courses (Physical Education)
PHIL Courses (Philosophy)
PHSC Courses (Physical Science)
PHYS Courses (Physics)
PMUS Courses (Private Music Instruction)
PSCI Courses (Political Science)
PSY Courses (Psychology)
RDNG Courses (Reading)
SCED Courses (Science Education)
S ED Courses (Secondary Education)
SOC Courses (Sociology)
SOSC Courses (Social Science)
SPAN Courses (Spanish)
SPCH Courses (Speech)
SPED Courses (Special Education)
SWK Courses (Social Work)
U ST Courses (University Studies)
VTSC Courses (Veterinary Science)
WL F Courses (Wildlife)

**C S Courses
(Computer Science)**

C S 2213 Pascal Programming

3 credits: 3 hours lecture

Corequisite: MATH 1043 or 1175

Pascal computer programming language. Emphasis on problem-solving with examples from science, business, and mathematics.

C S 2253 FORTRAN Programming

3 credits: 3 hours lecture

Corequisite: MATH 1043 or 1175

FORTRAN computer programming language. Emphasis on practical application and use of computer. Examples in business, mathematics, and science.

**DEV Courses
(Developmental)**

DEV 0101 College Skills Development

1 credit: 1 hour lecture

Primary focus is designed to enhance personal skills growth, academic skills improvement, career exploration, and orientation to the University. Required of all students who are concurrently enrolled in two or more Developmental courses (courses with numbers beginning with 0.) Students must complete the course with a grade of "C" or higher or the student will be required to enroll in the course until a satisfactory grade has been achieved.

**ECON Courses
(Economics)**

ECON 2203 Principles of Macroeconomics

3 credits: 3 hours lecture

Principles and theory of economic activity. Survey of macroeconomics.

ECON 2213 Principles of Microeconomics

3 credits: 3 hours lecture

Principles and theory of economic activity. Survey of microeconomics; special emphasis on theory of the firm.

ECON 3403 Intermediate Microeconomics

3 credits: 3 hours lecture

Prerequisites: ECON 2203, 2213, G B 1053, G B 2213.

Analysis of price theory, production, income distribution, and employment under conditions of "pure" competition, imperfect competition, and monopoly.

ECON 3453 Money, Banking, and Credit

3 credits: 3 hours lecture

Prerequisites: ECON 2203, 2213.

Money systems and banking structure, negotiable and credit instruments, Federal Reserve System, monetary policy.

ECON 4633 Managerial Economics

3 credits: 3 hours lecture

Prerequisites: ECON 2203, 2213, G B 2213.

Stresses the use of the tools of economic analysis in clarifying problems, in organizing and evaluating information, and in comparing alternative courses of action.

ECON 479V Independent Study in Economics

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

EDFD Courses (Education)

EDFD 1121 Introduction to Education I

1 Credit: 1 hour lecture; 1 hour lab

The beginning course in the professional teacher education curriculum. This course is designed to provide students with a basic introduction to public education. The use of word processing and e-mail applications will be introduced.

EDFD 1142 Introduction to Education II

2 Credits: 2 hours lecture; 1 hour lab

Prerequisite: EDFD 1121

Designed to provide students with a basic introduction to the history and legal concerns of public education. Students will participate in clinical experiences on the campus. The use of computer graphic applications will be introduced.

EDFD 2212 Introduction to Education III

2 credits: 2 hours lecture; 1 hour lab

Prerequisite: EDFD 1121 and 1422; admission to level II of the professional teacher education program

Designed to provide a basic introduction to educational philosophy, an understanding of other human service agencies, and the role of schools in society. Students will participate in field based experiences in the public schools. The use of desk-top publishing applications will be introduced.

EDFD 2253 Introduction to Education IV

3 Credits: 3 hours lecture; 1 hour lab

Prerequisite: EDFD 2212

Designed to provide students with a basic introduction to special education and classroom management. A continuation of the history of American education. Students will participate in field based experiences in the public schools. The use of optical disk technology applications will be introduced.

EDFD 3593 Behavior Management

3 credits: 3 hours lecture

Treats behavior management and shaping theory.

EDFD 4683 Psychology of Teaching Adults

3 credits: 3 hours lecture

Prerequisite: Senior standing

Examines characteristics and learning styles of adults at all ages and treats programs designed to serve adult learners.

EDFD 474V Special Topics in Education

Variable Credit

Prerequisites: Admission to Teacher Education, permission of Dean and Instructor

Selected topics not covered in other courses or a more intensive study of topics in education. Type of instruction depends on subject. Topics will vary. Field and/or clinical experiences may be required.

EDFD 479V Independent Study in Education

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**ELED Courses
(Elementary Education)**

ELED 3546: Advanced Professional Education I

6 Credits: 6 hours lecture; 2 hours lab

Prerequisite: Admission to Level III of the professional teacher education sequence

Designed to provide instruction and experiences in learning theories; methods for teaching reading, mathematics, language arts; assessment practices; and educational technology. Extensive opportunities exist to use knowledges and skills through participation in authentic public school experiences program.

ELED 3566: Advanced Professional Education II (Elementary)

6 Credits: 6 hours lecture; 2 hours lab

Prerequisite: ELED 3546

Continuation of ELED 3546. Specific skills related to classroom management and discipline. Methods for teaching social studies, science, and reading included. Extensive participation in the public schools.

ELED 3483 ECE Rationale and Curriculum

3 credits: 3 hours lecture

Prerequisite: Junior standing as an elementary education major

Bases of curriculum for an early childhood program, with emphasis upon scope, content, sequence, materials, methods, and procedures.

ELED 3493 ECE Methods and Materials

3 credits: 3 hours lecture

Prerequisite: Junior standing as an elementary education major

Continuation of ELED 3483 with major emphasis upon basic concepts and methods, materials, activities, and strategies for teaching young children.

ELED 460V: Elementary Education Internship I

15 Credits: Internship

Prerequisite: Admission to Internship

Current methods and materials in reading, language arts, social studies, mathematics and science; emphasis on thematic units, process skills, assessment, educational technology; methods to address individual learning needs and exceptionalities. Internship objectives will be met through site-based experiences and content-based seminars.

ELED 463V: Elementary Education Internship II

15 Credits: Internship

Prerequisite: Admission to Internship

A continuation of ELED 460V: Elementary Internship I.

ELED 4663 Early Childhood Practicum

3 credits: 3 hours lecture

NOTE: Open to in-service teachers only.

A coordinated program of campus and public school kindergarten experiences including supervised teaching.

ELED 479V Independent Study in Elementary Education

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

ENGL Courses (English)

ENGL 0133 Fundamentals of English

3 credits: 3 hours lecture

Fundamentals of basic grammar usage and writing skills stressing reading skills as a basic for effective writing.

NOTE: This course may not be counted toward a major or minor in English or toward the general education program or be taken for credit after achieving a "C" or better in any other English course.

ENGL 1013 Freshman Composition I

3 credits: 3 hours lecture

Prerequisite: Grade of "C" or better in ENGL 0133, satisfactory ACT score, or Dean's permission.

Writing course stressing reading skills as a basis for effective writing.

ENGL 1023 Freshman Composition II

3 credits: 3 hours lecture

Prerequisite: Grade of "C" or better in ENGL 1013 or Dean's permission.

Writing course emphasizing reading skills as a basis for effective writing. Documented term paper is required.

ENGL 1033 Honors Composition I

3 credits: 3 hours lecture

Prerequisite: Minimum ACT composite score of 24 or Dean's permission.

Writing course emphasizing reading and writing on a more sophisticated level than ENGL 1013. NOTE: Fulfills the General Education requirement for ENGL 1013. May not be taken for credit by students who have taken Freshman Composition I.

ENGL 1043 Honors Composition II

3 credits: 3 hours lecture

Prerequisite: ENGL 1033 or Dean's permission.

Writing course emphasizing reading and writing on a more sophisticated level than ENGL 1023. NOTE: Fulfills the General Education requirement for ENGL 1023. May not be taken for credit by students who have taken Freshman Composition II.

ENGL 2263 Vocabulary Building

3 credits: 3 hours lecture

Origins and growth of the English vocabulary, word-formation, semantics, meaning shifts, regional vocabulary, nomenclature, testing for verbal proficiency.

ENGL 2273 Advanced Composition

3 credits: 3 hours lecture

Prerequisite: ENGL 1023

Writing course analyzing the elements of effective writing.

ENGL 2283 Survey of World Literature I

3 credits: 3 hours lecture

Prerequisite: ENGL 1013

Major periods and writers from the Classical Age to the Renaissance.

ENGL 2293 Survey of World Literature II

3 credits: 3 hours lecture

Prerequisite: ENGL 1013

Major periods and writers from the Renaissance to the present.

ENGL 3253 Technical Writing

3 credits: 3 hours lecture

Prerequisite: ENGL 1023

Practice in preparing reports, letters, articles, and other forms of writing used in such professions as forestry, engineering, and management.

ENGL 3343 The Bible as Literature

3 credits: 3 hours lecture

The books of the Old Testament and the Apocrypha as illustrating literary development and thought. The Bible as a source for drama, philosophical poetry, lyric poetry, essay, and story.

ENGL 3403 American Literature I

3 credits: 3 hours lecture

A survey of American literature from its beginnings to the 1860's.

ENGL 3413 American Literature II

3 credits: 3 hours lecture

A survey of American literature from the 1860's to 1960.

ENGL 3423 British Literature I

3 credits: 3 hours lecture

A survey of British literature from its beginnings to 1800.

ENGL 3433 British Literature II

3 credits: 3 hours lecture

A survey of British literature from 1800 to 1960.

ENGL 3453 The Short Story

3 credits: 3 hours lecture

Historical and thematic study of the short story.

ENGL 3463 Advanced Grammar

3 credits: 3 hours lecture

Modern grammatical systems (traditional, structural, generative-transformational).

ENGL 3533 Introduction to Language Study

3 credits: 3 hours lecture

Introduction to the study of the English language, including reading and discussion of its history, structure, regional and social variations, and its use in the modern world.

ENGL 3543 Creative Writing

3 credits: 3 hours lecture

Prerequisite: ENGL 1023

Laboratory/reading course in which students submit manuscripts for analysis and criticism.

ENGL 3573 Literature for Adolescents

3 credits: 3 hours lecture/seminar

A seminar focusing on the teaching of literature for adolescents in the upper elementary, middle, and high schools. This course is required for students pursuing a major in secondary English education with a teaching minor, but may not be used to satisfy General Education requirements or for credit toward an English major or minor.

ENGL 3583 Critical Theory and Approaches to Literature

3 credits: 3 hours lecture

An introduction to major literary and critical schools of thought, including their historical developments and their practical applications.

ENGL 4613 The British Novel

3 credits: 3 hours lecture

The British novel from its beginning to World War II.

ENGL 4623 Shakespeare

3 credits: 3 hours lecture

Introduction to Shakespeare.

ENGL 4633 The American Novel

3 credits: 3 hours lecture

The American novel from its beginnings to World War II.

ENGL 4663 Modern Poetry

3 credits: 3 hours lecture

Reading and interpretation of British and American poetry since 1900.

ENGL 4683 Seminar in Writing: Special Topics

3 credits: 3 hours lecture

An in-depth study of one of the major areas of writing such as fiction, nonfiction, poetry, autobiographical writing, business and professional writing, and advanced expository writing. May be repeated for a total of 6 credit hours with varying topics.

ENGL 4703 Contemporary Literature

3 credits: 3 hours lecture

Fiction, drama, and poetry from 1960 to the present.

ENGL 4713 Literature of the South

3 credits: 3 hours lecture

Novels, short stories, poems, and essays about the South from the Colonial Period to the present, including Southern folklore and black writers.

ENGL 4723 Seminar in English

3 credits: 3 hours lecture

Detailed study of one of the major areas of English, emphasizing assigned readings and individual research. May be repeated for a total of 12 credit hours with approval of the division chair.

ENGL 479V Independent Study in English

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**ENGR Courses
(Engineering)**

ENGR 1001 Introduction to Engineering

1 credit: 1 hour lecture

The profession of engineering, including the history of engineering and an explanation of selected branches of engineering. Assistance will be provided in preparing individual curricula and in executing the transfer to a degree-granting institution. Required of all freshman pre-engineers.

**ENTO Courses
(Entomology)**

ENTO 2283 Applied Entomology

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisite BIOL 1143 and BIOL 1171; or BIOL 1153 and BIOL 1161; or BIOL 1063 and BIOL 1071

Destructive and beneficial species of insects and their effect upon agricultural enterprises.

**ESCI Courses
(Earth Science)**

ESCI 1051 Earth Science Laboratory

1 credit: 2 hours laboratory

Corequisite: ESCI 1063

Identification of minerals and rocks, introduction to maps, methodology of collecting weather data.

ESCI 1063 Introductory Earth Science

3 credits: 3 hours lecture

Corequisite: ENGL 1013

Materials of the Earth's crust and the processes and agents which affect them; survey of the nature of the Earth's atmosphere in terms of composition, origin, and physical processes.

ESCI 222V Field Geology

Variable credit

NOTE: May be repeated for a maximum of 3 hours credit.

Introduction to the methods of field investigation and interpretation of geological features. The purpose and scope of the course will vary from trip to trip.

ESCI 3473 Earth Resources

3 credits: 3 hours lecture

Prerequisite: ESCI 1063

Origin, classification, and distribution of the Earth's economic minerals, rocks, water, and fossil fuels.

ESCI 3493 Environmental Science

3 credits: 3 hours lecture

Prerequisite: 3 hours of biology or earth science

NOTE: Same as BIOL 3493

A survey of the environment to provide an understanding of and respect for the ecosystems upon which the human species is dependent. Fall offering in even-numbered years.

ESCI 358V Natural History

Variable credit

Prerequisite: 3 hours biology or earth science

NOTE: May be taken for a maximum of 3 hours credit. Same as BIOL 358V, FOR 358V, and WLF 358V.

A field course in geology and biology of natural ecosystems, consisting of travel, study, and/or research in unique natural areas of North America.

FIN Courses (Finance)

FIN 3413 General Insurance

3 credits: 3 hours lecture

Fundamentals of insurance and their relationship to sound business administration.

FIN 3473 Principles of Finance

3 credits: 3 hours lecture

Prerequisite: ACCT 2223, G B 2213

Introduction to capital formation and management; the finance function and the financial environment; techniques of financial management; techniques of financial analysis, planning, and control; management of working capital, capital budgeting and cost of capital; analysis of money and capital markets.

FIN 3483 Real Estate Principles

3 credits: 3 hours lecture

Prerequisite: ECON 2203, ECON 2213 or AGE 2273

Real estate values economics, financing; home ownership, rights in real property and their transfer; problems of investment and management; regulations of real property and brokerage.

FIN 4683 Real Estate Finance

3 credits: 3 hours lecture

Real estate brokerage title closing, marketing, advertising, financing, and appraisal. Market analysis, property management, and real estate trends and outlook.

FIN 4603 Financial Policy and Planning

3 credits: 3 hours lecture

Prerequisite: FIN 3473

Analysis of financial theories and practices, within a risk-return framework, as they relate to the financial decision-making process. Topics covered include working capital policy, capital structure, capital budgeting techniques.

FIN 4613 Investments

3 credits: 3 hours lecture

Prerequisite: FIN 3473

Principles and theories of security evaluations and analysis for professional and personal portfolio formation, including the risk-return trade-off, types of securities, market efficiency, interest rates, and speculative investments.

FOR Courses (Forestry)

FOR 1061 Orientation to Forest and Wildlife Management

1 credit: 1 hour lecture

NOTE: Same as WL F 1061

An overview of the forestry and wildlife disciplines and their professional curricula.

FOR 1083 Humans and Forest Resources

3 credits: 3 hours lecture

Introduction to the history, policies, founders, controversies, uses, and management of forest resources.

FOR 2223 Honors Environment and Society

3 credits: 3 hours lecture

Prerequisite: Honors program, or overall GPA of 3.00, or composite ACT of 24 or higher.

Course focuses on understanding human-environment relationships. Study will include: population and consumption, environmental degradation, development (domestic and international), and the environmental movements.

FOR 2231 Dendrology Laboratory I

1 credit: 3 hours laboratory

Field practice in the identification, nomenclature, classification, and ecology of local flora in the summer and fall condition. Emphasis on leaf and bark characters.

FOR 2264 Forest Soils

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: CHEM 1023 and CHEM 1031, or CHEM 1103 and CHEM 1121

Fundamentals of soil science with application to forestry. Origin, development, and properties of soils. Identification and classification of soils with emphasis on productivity.

FOR 2274 Forest Mensuration

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisite: MATH 1033 or MATH 1175

Measurement of standing trees, forest growth, and products; preparation of yield and volume tables; log rules and scaling practices; forest surveys; and statistical procedures.

FOR 2281 Silvics

1 credit: 1 hour lecture

Prerequisites: BIOL 1143 and 1171, FOR 2231

Classification, identification, nomenclature and silvics of principal trees of the United States.

FOR 2291 Dendrology Laboratory II

1 credit: 3 hours laboratory

Prerequisite: FOR 2231

Note: A one- or two-day field trip is required.

Species native to Arkansas and southern forests with emphasis on twig, fruit and winter/spring identification.

Limited exposure to exotic species of national interest and occurring in Monticello. Special field trips to view some of Arkansas' threatened and endangered plant species.

FOR 2304 Forest Inventory

4 credits: 4 weeks during Forestry Summer Camp

Prerequisites: FOR 2274, FOR 2291

Application and field practice of forest inventory techniques. Estimation of timber volumes through prevailing inventory methods and application of sampling statistics in volume determination.

FOR 2312 Photogrammetry and Remote Sensing**2 credits: 1 hour lecture, 3 hours laboratory**

Prerequisites: FOR 2274, MATH 1033 or MATH1175

Elements of photogrammetry; principles of photo-interpretation; introduction to remote sensing and its application to natural resource management and environmental sciences. Skills to be mastered include using aerial photography as a tool, understanding films and filters, obtaining aerial photos and integrating them into inventories, and the application of digital remote sensing in natural resource management.

FOR 2362 Wood Structure and Forest Products**2 credits: 1 hour lecture, 3 hours laboratory**

Prerequisite: FOR 2281

Structure and properties (physical and mechanical) of wood; identification and uses of different species; forest products from wood, primary and secondary processing as well as residue utilization.

FOR 3334 Contemporary Forest Resource Issues**4 credits: 4 weeks during Forestry Summer Camp**

Corequisite: FOR 2304

Introduction to major resource issues, emphasizing field presentations of timber and nontimber forest resource management themes in both pine and hardwood ecosystems.

FOR 3434 Silviculture**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisites: FOR 2274, FOR 2281; FOR 3513 or BIOL 3484

Application of ecological principles in controlling forest establishment, composition, and growth. Detailed study of individual cultural treatments that maintain and enhance productivity of forest stands, and of regeneration methods whereby forest stands are harvested and renewed.

FOR 3472 Forestry Organizations**2 credits: 2 hours lecture**

Prerequisite: PSY 1013 or SOC 2213

Study of organizational behavior within the context of forestry and natural resource management; private, public and not-for-profit natural resource organizations; organizational structure; individual and group behavior, motivation; management and supervision; forest-based conflict resolution and public relations; entrepreneurship in forestry and natural resources.

FOR 3513 Forest Ecology**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisites: FOR 2264, FOR 2281

Introduction to the role of ecology and ecological concepts in forest management; emphasizing ecosystems, energy and nutrient cycling, abiotic/biotic influences on ecosystem development, and landscape ecology.

FOR 3523 Tree Ecophysiology and Herbicides**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisite: FOR 2281

Aspects of tree growth, development, and physiological processes as affected by the environment. Herbicide nomenclature, classification, application and degradation, and how they affect plant physiological processes.

FOR 3563 Natural Resource Biometrics**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisites: FOR 2274; MATH 1043 or MATH 1175

NOTE: Same as WL F 3563

Collection and analysis of data, probability, frequency distributions, measures of central tendency and dispersion, estimation of parameters, least square, linear and curvilinear regression, chi-square, analysis of variance and covariance, and correlation. Emphasis on hand and computer statistical computations.

FOR 358V Natural History**Variable credit**

Prerequisite: 3 hours biology or 3 hours earth science

NOTE: May be taken for a maximum of 3 hours credit. Same as BIOL 358V, ESCI 358V, and WL F 358V.

A field course in geology and biology of natural ecosystems, consisting of travel, study, and/or research in unique natural areas of North America.

FOR 3592 Forest Hydrology**2 credits: 1 hour lecture, 3 hours laboratory**

Prerequisite: FOR 2264 or AGRO 2244

NOTE: One weekend field trip is required.

Basic processes and measurements of water distribution and movement in forests with emphasis on forest management effects on water quantity, quality, and water-related resources.

FOR 3804 Forest Operations and Fire**4 credits: 3 hours lecture, 3 hours laboratory**

Prerequisite: MATH 1043 or MATH 1175, and FOR 2274.

Principles of harvesting and other forestry operations. Quantitative approach to production and cost analysis. Role of fire in forest management, fire behavior, prescribed burning and smoke management, and wildfire suppression strategies and methods.

FOR 3813 Introduction to GIS and GPS**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisites: CIS 2223, MATH 1043 or MATH 1175, and Junior standing

NOTE: Same as WL F 3813

Introduction to Geographic Information Systems (GIS) using both raster and vector spatial data models, with hands on experience utilizing computers to aid problem solving. Applications to be mastered include data entry, verification, data base construction, cartographic modeling, and mapping of spatial data. Application of Global Positioning Systems (GPS) in natural resource management are described and utilized.

FOR 4003 Natural Resource Policy and Society**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisite: Senior standing

NOTE: Same as WL F 4003

History and present status of natural resource-related policy in the U.S. Evolution of public and professional attitudes toward natural resources, major laws affecting management of public and private lands, policy-making processes, and professional ethics. Study of major social issues affecting renewable natural resources and procedures for responding to those issues in management decision-making. Topics include individual and group involvement in natural resource planning, environmental issues, and regulation of forestry practices.

FOR 4092 Forest Recreation**2 credits: 2 hours lecture**

Prerequisite: Junior standing or permission of instructor

NOTE: Two weekend field trips required.

Theoretical foundations of recreation and leisure, including history, current patterns, and future trends; fundamentals of recreation planning and programming; recreation-based education programs and impacts of recreational uses on forest ecosystems.

FOR 4113 Regional Silviculture**3 credits: 3 hours lecture**

Prerequisite: FOR 3434

Ecology and silviculture of various forest cover types throughout the United States.

FOR 4673 Forest Resource Economics**3 credits: 3 hours lecture**

Prerequisites: MATH 1073, ECON 2213 or AGECE 2273, FOR 3563

Corequisites: FOR 4711, FOR 4723

Applications of economic principles to the special characteristics of forest products, an economic analysis of forest resources and forest industry, economics of timber and non-timber resources, application of marginal analysis, basic principles of valuation and interest, effects of taxation, and capital theory. Social and opportunity costs of alternative forest uses are discussed.

FOR 4691 Seminar

1 credit: 1 hour lecture

Corequisite: FOR 4823

Note: Same as WL F 4691

Oral team presentations to landowners and faculty concerning the land management plan developed in FOR 4823, Integrated Resource Planning and Management. Occasional guest speakers.

FOR 4703 Cooperative Education in Forestry

3 credits

Practical training with a public agency or industrial firm. Written report required for each work experience.

Requirements documented in Cooperative Education Handbook.

FOR 4711 Natural Resource Management Laboratory

1 hour: 3 hours laboratory

Corequisites: FOR 4673 and FOR 4723

Applications of economic and resource management decisions for forested properties considering timber and non-timber resources; forest growth and yield models; economic models; risk assessment and decision analysis; and analytical techniques and computer applications in forest economics.

FOR 4723 Natural Resource Management

3 credits: 3 hours lecture

Prerequisite: FOR 3434

Corequisites: FOR 4673, FOR 4711

Principles of resource management considering timber and non-timber resources; forest growth and yield models; principles of forest regulation; harvest scheduling; risk assessment and decision analysis; investment analysis and capital budgeting; forest and landscape-level management planning; and analytical techniques and computer applications in forest management.

FOR 4733 Forest Pest Management

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisite: FOR 3434

Biology, ecology, and management of disease and insect pests of southern forests. Laboratory work includes adult insect and pest damage collections.

FOR 475V Advanced Topics

Variable credit

Prerequisites: Junior standing, consent of instructor, and approval of School Dean.

Lectures and discussions in selected forestry topics.

FOR 4773 Hardwood Silviculture

3 credits: 2 hours lecture, 3 weekend field trips

Prerequisite: FOR 3434

Theory and practice of integrating silvicultural treatments into functional silvicultural systems for bottomland and upland hardwood forest ecosystems. Emphasis on decision-making to satisfy both consumptive and non-consumptive resource uses.

FOR 479V Independent Study in Forestry

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

FOR 4823 Integrated Resource Planning and Management

3 hours: 9 hours laboratory

Prerequisites: FOR 4003, FOR 4673, FOR 4711, FOR 4723, FOR 4733

Corequisite: FOR 4691

NOTE: Same as WL F 4823

Integrated problem solving to apply biological, ecological, quantitative, economic, social, political, and administrative principles in solving natural resource management problems.

FREN Courses (French)

FREN 1003 Elementary French I

3 credits: 3 hours lecture

Basic language skills — listening, speaking, reading, and writing — with emphasis on grammatical structures and aural-oral practice.

FREN 1013 Elementary French II

3 credits: 3 hours lecture

Prerequisite: FREN 1003

Continued study of basic language skills — listening, speaking, reading, and writing — with emphasis on grammatical structures and aural-oral practice.

FREN 2203 Intermediate French I

3 credits: 3 hours lecture

Grammar, vocabulary, and basic idiomatic expressions.

FREN 2213 Intermediate French II

3 credits: 3 hours lecture

Prerequisite: FREN 2203.

Continued study of grammar, vocabulary, and basic idiomatic expressions.

FREN 2223 Intermediate Reading

3 credits: 3 hours lecture

Prerequisite: FREN 1003

Course in detailed reading of short stories with an emphasis on acquiring new vocabulary and idioms.

FREN 3403 Intermediate Conversation

3 credits: 3 hours lecture

Prerequisite: FREN 2203

Functional review and practice combined with intensive and extensive reading in literature and cultural texts

FREN 3413 French Civilization and Culture

3 credits: 3 hours lecture

Prerequisite: FREN 2203

French history, civilization, and culture from earliest periods to the present.

FREN 3423 Intermediate Grammar and Composition

3 credits: 3 hours lecture

Prerequisite: FREN 2213

Writing course for greater fluency and accuracy in the use of literate, idiomatic French.

FREN 3433 Survey of French Literature I

3 credits: 3 hours lecture

Prerequisite: FREN 2203, FREN 2213

Literature by periods from its beginnings to the end of the 18th century.

FREN 4613 Advanced Composition

3 credits: 3 hours lecture

Advanced French translation and free composition. Emphasis on literary style and building new vocabulary.

FREN 4653 Seminar in French Literature

3 credits: 3 hours lecture

Prerequisite: FREN 3433 or 3443, or instructor's permission.

Emphasis on literary analysis and interpretation of major authors of a given century and work characteristics of various movements of that century.

FREN 479V Independent Study in French

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**G B Courses
(General Business)**

G B 1023 Introduction to Business

3 credits: 3 hours lecture

Business activities, business position in general economic framework; survey of courses in production, personnel, marketing, finance, managerial control, and government relations.

G B 1033 Elementary Computer Keyboarding

3 credits: 3 hours lecture

Knowledge and operation of computer keyboards. Preparation of simple business documents; development of a competent rate of speed.

G B 2103 Administrative Support Procedures

3 credits: 3 hours lecture

Development of a professional image and goals; development of a knowledge of computerized administrative tasks performed by office support personnel in the electronic office; specific training in areas such as travel, communications, and report preparation. Some hands-on computer procedures such as how to maintain a calendar, update a telephone list, handle electronic mail, complete an expense report, use file transfer, and make domestic and international travel arrangements.

G B 2153 Intermediate Computer Keyboarding

3 credits: 3 hours lecture

Prerequisite: Keyboarding ability

Development of proficiency in preparation of business letters, reports, tabular material, and forms. Development of a competent rate of speed and proofreading ability.

G B 2213 Business Statistics I

3 credits: 3 hours lecture

Prerequisite: MATH 1043

Introduction to statistical methods used in the analysis, interpretation, and presentation of numerical data for business. Includes measures of central tendency and dispersion, probability, hypothesis testing, tests and analysis of variance, chi-square analysis, simple regression analysis, and correlation analysis.

G B 2273 Word Processing

3 credits: 3 hours lecture

Prerequisite: Keyboarding ability

Basic concepts of word processing systems; language arts skills as applicable to the processing of documents; development of skill in preparing and revising business documents using microcomputers equipped with commercial software.

G B 2553 Advanced Computer Keyboarding

3 credits: 3 hours lecture

Prerequisite: G B 2153

An intensive course consisting of a variety of "mini-simulations" designed to build confidence and a productive level of speed in preparing office documents.

G B 3043 Business Communications

3 credits: 3 hours lecture

Prerequisite: Keyboarding ability

Composition and preparation of a variety of effective business letters, including good news, requests, refusals, collections, sales, and employment letters. Correct and concise use of English is stressed.

G B 3203 Desktop Publishing

3 credits: 3 hours lecture

Prerequisite: G B 2273

Advanced concepts of word processing systems; production of high volume, high quality documents; techniques of combining text and graphics to produce publications.

G B 3301 Teaching of Business Subjects

1 credit: 1 hour lecture

Prerequisite: Consent of instructor

Materials and methods of teaching secondary business subjects. Methods course. Does not count toward subject matter area.

G B 3443 Special Topics

3 credits: 3 hours lecture

Prerequisite: Consent of instructor and approval of school dean

Topics vary in accordance with students' demands. Presentation form may vary with each offering. Course may be repeated when different topics are presented.

G B 3533 Legal Environment of Business

3 credits: 3 hours lecture

Note: Cannot be taken concurrently with GB 3543

An introduction to law, its relation and effect upon society, business and the individual. Topics include business ethics, the federal and state judicial systems, administrative law, business crimes, torts, contracts, sales, agency relationships, consumer protection, and environmental and pollution regulations.

G B 3543 Business Law

3 credits: 3 hours lecture

Note: Cannot be taken concurrently with GB 3533

A study of the laws involved in operating businesses. Topics include forms of business organization including real and personal property rights, the Uniform Commercial Code, secured transactions, credit transactions, suretyship, bankruptcy, antitrust, government regulation of business, and employment and labor law.

G B 3703 Business Statistics II

3 credits: 3 hours lecture

Prerequisite: G B 2213, CIS 2223

Intermediate statistical inference for business decision-making. Emphasis on advanced statistical techniques to include chi-square and other nonparametric tests, multiple regression and correlation, residual analysis, forecasting, time series analysis, quality control techniques, and the application of these techniques using business decision analysis software packages.

G B 4001 Methods of Teaching Business Subjects

1 credit: 1 hour lecture

Prerequisite: Admission to teacher education

Corequisite: S ED 3363 or S ED 476V

Special methods unique to the teaching of secondary business subjects. Must be completed prior to Secondary Internship II with at least a "C."

G B 4353 International Business

3 credits: 3 hours lecture

International business is examined from the perspective of three business areas: economics, management, and marketing. The initial third of the course examines the economics of international trade. The remaining two-thirds of the course will focus on management and marketing in the international environment.

G B 4623 CPA Law Review

3 credits: 3 hours lecture

Prerequisites: G B 3533

Study of legal principles relating to accounting and review of business law in preparation for the CPA exam. Includes such areas as contracts, commercial paper, debtor-creditor relationships, and the Uniform Commercial Code.

G B 479V Independent Study in General Business

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**GEOG Courses
(Geography)**

GEOG 2213 General Geography I

3 credits: 3 hours lecture

Introduction to the developed regions of Europe, North America, and Australasia. Includes landforms, climates, economic activities, languages, religion and ethnicity.

GEOG 2223 General Geography II

3 credits: 3 hours lecture

Introduction to the developing regions of Latin America, Africa and Southwest Asia. Includes landforms, climates, economic activities, languages, religion, and ethnicity.

GEOG 354V Field Course

Variable credit

Tour of a designated area in the United States or abroad. Includes observation and interpretation of cultural and physical characteristics of the area. Offered on demand.

GEOG 479V Independent Study in Geography

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

HIST Courses (History)

HIST 1013 Survey of Civilization I

3 credits: 3 hours lecture

Civilization to 1660. European and world development emphasizing cultural, economic, religious, and political changes. Some attention given to non-western civilization.

HIST 1023 Survey of Civilization II

3 credits: 3 hours lecture

European and world development from 1660 to the present, emphasizing cultural, economic, religious, and political changes. Some attention given to non-western civilization.

HIST 2213 American History I

3 credits: 3 hours lecture

The growth of the United States from the discovery of America to 1876.

HIST 2223 American History II

3 credits: 3 hours lecture

The United States from 1876 to the present.

HIST 3403 Emergence of Modern Europe

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023

The evolution of Europe in the 17th and 18th centuries, the French Revolution, Napoleon.

HIST 3423 Britain

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023

British history with emphasis on political, constitutional, and imperial institutions.

HIST 348V Field Course

Variable credit

A field course consisting of travel, observation, and study of selected historic sites.

HIST 349V Seminar in World History

Variable credit

Prerequisites: HIST 1013, HIST 1023

A selected period or topic with extensive readings, acquaintance with source material, and class discussion. Not to exceed 3 credit hours per semester. Can be repeated for up to 12 hours.

HIST 3503 Middle East and North Africa

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023

From the Prophet Muhammad (6th century A.D.) to the present; emphasis on the development of Islamic culture from the 7th to the 13th centuries, the Ottomans, and the last 150 years.

HIST 3513 Historiography and Historical Methods

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023, HIST 2213, HIST 2223

A study of history as a discipline, how historians use primary sources, and major schools of historical interpretation.

HIST 3523 Europe Since Waterloo

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

Major political, social, and economic developments in Europe since 1815.

HIST 3543 American West

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

The westward movement in American history, with emphasis upon the social, economic, and political influence of the frontier in American life.

HIST 3553 Africa

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

The entire continent from earliest times through the present; emphasis on the continuity of African civilization through the first independent period, colonialism, and the second independent period.

HIST 3563 Russia

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023

Kievan and Appanage Russia, the rise of Moscow, the Age of St. Petersburg, the Soviet Age.

HIST 3573 Colonial America

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

European exploration and settlement in the New World, the War of Independence, and the creation of the United States.

HIST 3583 Latin America

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023

Evolution of Latin America from the Pre-Columbian epoch through the contemporary period with an emphasis on political, social, and economic developments.

HIST 3593 Arkansas History

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

Social, political, and economic evolution of Arkansas from the Spanish and French explorations to the present.

HIST 4603 Modern America, 1900-1945

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

The Progressive Movement, World War I, the Roaring Twenties, the Great Depression, the New Deal, and World War II.

HIST 4613 Recent America, 1945-Present

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

The Cold War, Korea and Vietnam, the civil rights movement, the dissenting sixties, and presidential administrations since World War II.

HIST 4623 East Asia

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023

Study of the civilizations of China and Japan with emphasis on the last two hundred years.

HIST 4653 American Civil War and Reconstruction

3 credits: 3 hours lecture

Prerequisites: HIST 2213, HIST 2223

Military history, weapons, tactics, strategy, and key campaigns; Reconstruction and its effects.

HIST 466V Seminar in American History

Variable credit

Prerequisites: HIST 2213, HIST 2223

Selected period or topic with extensive readings, acquaintance with original source material and class discussions. Not to exceed 3 hours credit per semester. Can be repeated for up to 9 hours credit.

HIST 4673 Mexico

3 credits: 3 hours lecture

Prerequisites: HIST 1013, HIST 1023

Political, economic, and social developments in the history of Mexico from early civilizations through the modern era.

HIST 479V Independent Study in History

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

HONR Courses (Honors)

HONR 1013 Honors Colloquium I: Humanities Core I

3 credits: 3 hours lecture

Prerequisite: Acceptance into the Honors Program.

A one-semester literature-based, multi-disciplinary course approached from any area of, but not limited to: philosophy, psychology, foreign languages, art, music literature, theater, rhetorical studies, or Western literature survey. This course is linked with HONR 1023 and the faculty will build a one-year syllabus with related readings, projects, and other activities. This course may satisfy one-half of the Humanities Core General Education requirement.

HONR 1023 - Honors Colloquium II: Humanities Core II

3 credits: 3 hours lecture

Prerequisite: Freshman standing in the Honors Program.

A one-semester history-based, multi-disciplinary course approached from any area of, but not limited to: philosophy, psychology, foreign languages, art, music literature, theater, rhetorical studies, or Western historical survey. This course is linked with HONR 1013 and the faculty will build a one-year syllabus with related readings, projects, and other activities. This course may satisfy one-half of the Humanities Core General Education requirement.

HONR 2113 - Honors Colloquium III: Math/Science Inquiry

3 credits: 3 hours lecture

Prerequisite: Sophomore standing in the Honors Program.

A one-semester humanities-based, multi-disciplinary course approached from any related discipline including: economics, science history, computer science, in addition to the more traditional math and/or science survey courses. This course may satisfy the general education math/science elective requirement.

HONR 2123 - Honors Colloquium IV: Humanities/Social Science Inquiry.

3 credits: 3 hours lecture

Prerequisite: Sophomore standing in the Honors Program.

A one-semester humanities-based, multi-disciplinary course related to the annual Honors "theme" in which a research paper/project is required demonstrating the ability of an Honors student to move into upper-level, research-based curricula. This course may satisfy the general education humanities or social science elective, depending upon the course focus.

HONR 4323 - Oxford Tutorial

3 credit hours: Pass/fail option

Prerequisite: Senior standing in the UAM Honors Program

A one-semester program of directed readings and preliminary research under the direction of a faculty mentor in preparation for a senior thesis/project/performance. With the approval of the program director, the student selects a mentor within their major or related discipline and follows a course of directed study as a prerequisite to the thesis semester.

HONR 4333 - Senior Thesis/Project/Performance

3 credits: Pass/fail option

Prerequisite: HONR 4323

A one-semester program of research, writing, and/or preparation for performance under the direction of a faculty mentor to culminate in the production of a thesis, project, or performance by the conclusion of the semester. The student selects a mentor within the major or related discipline and, with the approval of the Honors Program Director, produces for public appraisal a senior project reflecting the professional standards of the discipline.

HORT Courses (Horticulture)

HORT 2443 Principles of Horticulture

3 credits: 2 hours lecture, 2 hours laboratory

NOTE: Extended field trips required in addition to regular lab hours.

Principles of growth, fruiting habits, propagation, production, handling, and culture of horticulture plants. Fall offering in odd-numbered years.

HORT 4663 Vegetable Crops

3 credits: 2 hours lecture, 2 hours laboratory

Principles underlying methods of vegetable crop production and handling related to yield and quality of the product.

Fall offering in even-numbered years.

HORT 479V Independent Study in Horticulture

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

JOUR Courses (Journalism)

JOUR 2203 Journalism

3 credits: 3 hours lecture

Prerequisite: ENGL 1023

Principles of news gathering and writing for newspapers with applied experiences in design, layout, and writing.

JOUR 2211 Journalism Lab

1 credit: 1 hour laboratory

Corequisite: JOUR 2203

NOTE: This course may be repeated for a maximum of six credit hours.

A performance lab allowing a student to work on any existing student publication approved by the instructor.

JOUR 3013 Newswriting

3 credits: 3 hours lecture

Prerequisite: JOUR 2203

Advanced writing and reporting techniques for the journalist and/or public relations professional including sports writing, editorial writing, news features, and international reporting. NOTE: This course may be used as an elective in the speech communication curriculum.

JOUR 3023 Introduction to Public Relations

3 credits: 3 hours lecture

Prerequisite: JOUR 2203

Introduction to media campaigns, newsletter production, propaganda, public relations theory, and history. NOTE: This course may be used as an elective in the speech communication curriculum.

JOUR 479V Independent Study in Journalism

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**MAED Courses
(Mathematics Education)**

MAED 4663 Methods of Teaching Mathematics

3 credits: 3 hours lecture

Corequisites: MATH 3423

Methods and strategies of mathematics instruction at the secondary level.

MATH Courses (Mathematics)

- Notes:**
- 1. Students whose ACT mathematics scores fall below 19 will be assigned to a developmental mathematics course.**
 - 2. Students must receive a grade of “C” or higher to satisfy the prerequisite for a mathematics course.**
 - 3. Students receiving a grade of “C” or higher in any mathematics course will not be permitted to enroll for credit in any course which is a prerequisite.**

MATH 0143 Introduction to Algebra

3 credits: 3 hours lecture

A review of basic arithmetic operations and algebraic operations. Topics covered include the arithmetic of fractions and decimals, algebraic manipulations of polynomials, linear equations, and factoring. This course cannot be used to satisfy General Education requirements or for credit toward a Mathematics major or minor.

MATH 0183 Intermediate Algebra

3 credits: 3 hours lecture

Prerequisite: Math 0143 or satisfactory performance on a placement test

This course is designed to prepare students to take a college level mathematics course. Topics covered will include factoring, exponents, solution of linear and quadratic equations, arithmetic of rational expressions, basic algebraic applications, and graphing. This course cannot be used to satisfy General Education requirements or for credit toward a Mathematics major or minor.

MATH 1003 Survey of Mathematics

3 credits: 3 hours lecture

Prerequisite: MATH 0183 or satisfactory performance on a placement test

NOTE: This course cannot be used for credit toward a Mathematics major or minor.

Techniques of problem solving, topics from set theory, number theory, logic, consumer mathematics, and probability and statistics.

MATH 1033 Trigonometry

3 credits: 3 hours lecture

Corequisite: MATH 1043

Definition of the trigonometric functions, solution of right and oblique triangles, trigonometric equations, and identities.

MATH 1043 College Algebra

3 credits: 3 hours lecture

Prerequisite: MATH 0183 or satisfactory performance on a placement test

Functions, graphs, quadratic equations, systems of equations, applications of algebra, and matrices.

MATH 1073 Compact Calculus

3 credits: 3 hours lecture

Prerequisite: MATH 1175, or MATH 1043 and MATH 1033

NOTE: For those not planning to take MATH 2254. This course cannot be used for credit toward a Mathematics major or minor.

Limits, continuous functions, the derivative and integral with applications.

MATH 1175 Precalculus

5 credits: 5 hours lecture

Prerequisites: A score of 22 or higher on the Math ACT or MATH 0183 with a grade of “B” or higher.

Provides the necessary background for students planning to take Calculus I or Compact Calculus. Topics include: problem solving; polynomial, rational, exponential, logarithmic, and trigonometric functions; parametric equations;

and, as time permits, linear systems. Preferred prerequisite for students planning to take calculus. Fall offering.

MATH 2243 Fundamental Geometric Concepts

3 credits: 3 hours lecture

Prerequisite: MATH 1003, MATH 1043

NOTE: This course cannot be used to satisfy General Education requirements or for credit toward a Mathematics major or minor.

Topics in plane and solid geometry appropriate for elementary and middle school including measurement, construction, and the use of manipulatives and technology. Annual Spring offering.

MATH 2254 Calculus I

4 credits: 3 hours lecture, 2 hours computer laboratory

Prerequisites: MATH 1175 or MATH 1043 and 1033

Fundamentals of differential and integral calculus including limits, derivatives, applications, and basic techniques and applications of integrals, with computer applications.

MATH 2264 Calculus II

4 credits: 3 hours lecture, 2 hours computer laboratory

Prerequisite: MATH 2254

Integrals, sequences and series, power series, and differential equations, with computer applications.

MATH 2274 Calculus III

4 credits: 3 hours lecture, 2 hours computer laboratory

Prerequisite: MATH 2264

Multi-variable calculus, multiple integrals, partial derivatives, and vector analysis, with computer applications.

MATH 3233 History of Mathematics

3 credits: 3 hours lecture

Co-requisite: MATH 2264

The history of mathematics as concerned with the origins, philosophy, and development of the mathematical sciences. The chronological development of mathematics from its use in primitive cultures to the present day. Spring offering in odd-numbered years.

MATH 3403 Probability and Statistics

3 credits: 3 hours lecture

Prerequisite: MATH 2254

Finite sample spaces, counting techniques, distributions, measures of variability, sampling theory, curve fitting, and regression analysis. Fall offering in odd-numbered years.

MATH 3413 Number Theory

3 credits: 3 hours lecture

Prerequisite: MATH 2254

Basic properties of number system, congruences, divisibility, and prime numbers. Fall offering in even-numbered years.

MATH 3423 College Geometry

3 credits: 3 hours lecture

Prerequisite: MATH 2254

Logic and Euclidean geometry. Required of all prospective secondary mathematics teachers. Fall offering in even-numbered years.

MATH 3453 Abstract Algebra

3 credits: 3 hours lecture

Prerequisite: MATH 2254

An introduction to the study of algebraic structures including groups, rings, and fields. Spring offering in even-numbered years.

MATH 3463 Linear Algebra

3 credits: 3 hours lecture

Prerequisite: MATH 2254

The algebra of finite dimensional vector spaces, linear transformations, eigenvalues, and eigenvectors. Fall offering in odd-numbered years.

MATH 3483 Mathematical Modeling

3 credits: 3 hours lecture

Prerequisites: MATH 2264 and a programming course

A study of selected topics which demonstrate the interaction of mathematics with real-world problems.

MATH 3513 Discrete Mathematics

3 credits: 3 hours lecture

Prerequisites: MATH 2254; CS 2213 or 2253

Algorithms, elements of graph theory, Boolean algebra, and combinatorics.

MATH 3553 Mathematics for Elementary Teachers

3 credits: 3 hours lecture

Prerequisites: MATH 1003, MATH 1043

NOTE: This course may not be used to satisfy General Education requirements or for credit toward a Mathematics major or minor.

Development of mensuration formulas, systems of measurement, and computer applications. Annual fall offering.

MATH 4613 Differential Equations

3 credits: 3 hours lecture

Prerequisite: MATH 2264

Formation and solution of ordinary differential equations. Applications. Spring offering in odd-numbered years.

MATH 465V Mathematics Reading and Research Variable credit

Prerequisites: Junior or senior standing and approval of the Dean of the School of Mathematical and Natural Sciences.

MATH 4673 Numerical Methods

3 credits: 3 hours lecture

Prerequisites: MATH 2264; CS 2213 or 2253

Derivation and generation of numerical methods, error estimates, convergence, and stability of numerical techniques.

MATH 4711, Mathematics Seminar

1 credit: 1 hour lecture

Prerequisite: Junior or senior mathematics major or minor.

Students give oral and written presentations based on laboratory and/or library research. This course may be repeated for a maximum of two credit hours.

MATH 479V Independent Study in Mathematics

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

MGMT Courses (Management)

MGMT 3413 Office Management

3 credits: 3 hours lecture

Survey of current office management concepts with emphasis on managing human resources, administrative services, and administrative systems.

MGMT 3443 Management Science

3 credits: 3 hours lecture

Prerequisites: CIS 2223, GB 2213

Involves the use of mathematical models and analytical tools to solve real problems in the management of public and private organizations. Taught in the computer lab, the course will consist of lecture time plus the use of various computer software packages to aid in making better business decisions.

MGMT 3453 Industrial Relations

3 credits: 3 hours lecture

Analysis of problems of labor; solutions through unionism, management, and government; labor laws.

MGMT 3473 Principles of Management

3 credits: 3 hours lecture

Examines planning, organizing, motivating, and controlling as they apply to managing a business organization. Stresses leadership, problem-solving techniques, and the coordination, communication, and human relations necessary for successful management.

MGMT 4603 Entrepreneurship

3 credits: 3 hours lecture

Prerequisites: ACCT 2223, MGMT 3473, MKT 3403.

NOTE: Student must also have at least a 3.00 GPA overall, or a letter of recommendation from a SOBIS faculty member.

Student familiarization with business firm operation by completing management audit of small business firms.

MGMT 4613 Management Information Systems

Identifying the manager's responsibilities for efficient, effective management of the organization's information systems resources. Developing strategies for the successful discharge of these responsibilities.

MGMT 4633 Human Resource Management

3 credits: 3 hours lecture

Prerequisites: MGMT 3473, PSY 1013

Provides students with an understanding of the principles, policies, and practices related to procurement, development, maintenance, and utilization of human resources.

MGMT 4643 Production/Operations Management 3 credits: 3 hours lecture

Prerequisites: MGMT 3473, G B 3703

Principles and techniques of management in organizing, planning, controlling the operations of the firm (either production and/or service oriented). The topics will be: design decisions relating to capacity planning, product design, layout of facilities, and selecting locations for facilities; operating decisions relating to quality assurance, scheduling, inventory management, and project management. Class will periodically meet in the computer lab. Students will use computer software packages to solve problems.

MGMT 4653 Strategic Management

3 credits: 3 hours lecture

Prerequisite: MKT 3403, FIN 3473, MGMT 3473

Integration of economics, management, marketing, statistics, finance, personnel, accounting, and other interrelated subjects into an overall evaluation of the policies of business.

MGMT 4663 Organizational Behavior

3 credits: 3 hours lecture

Prerequisites: MGMT 3473, PSY 1013

Focuses on the dynamics of human behavior in business organizations, with concentration on problems of motivation and leadership. Emphasis is on the behavior and performance of individuals and groups within organizations.

MGMT 479V Independent Study in Management

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

MKT Courses (Marketing)

MKT 3403 Principles of Marketing

3 credits: 3 hours lecture

Prerequisites: ECON 2213 or AGECE 2273; ACCT 2213

Principles and practices of marketing with emphasis on the composition and planning of a marketing strategy.

MKT 3443 Selling and Sales Administration

3 credits: 3 hours lecture

Prerequisite: MKT 3403

Basic principles of salesmanship, background, and preparation for selling, coupled with an emphasis on hiring, training, compensating, and motivating a sales force.

MKT 3453 Advertising and Promotion

3 credits: 3 hours lecture

Prerequisite: MKT 3403

Promotional efforts available to marketing management. Advertising's role in marketing strategy; advertising as communication; media choice; coordination of total promotional effort; measurement of promotional effectiveness.

MKT 3463 Consumer Behavior

3 credits: 3 hours lecture

Prerequisite: MKT 3403, PSY 1013

Theoretical and applied concepts of the behavior of consumers as they engage in the process of evaluating, acquiring, and consuming goods and services.

MKT 4623 Marketing Research

3 credits: 3 hours lecture

Prerequisites: MKT 3403, GB 3703

Modern marketing research techniques and their application by management toward the determination of a marketing strategy.

MKT 4643 Retail Management

3 credits: 3 hours lecture

Prerequisite: MKT 3403

Factors leading to efficient retail store operations: store location, buying and selling, advertising and display, merchandise planning and control, personnel problems, and retailing policies..

MKT 4663 Marketing Management

3 credits: 3 hours lecture

Prerequisite: 6 hours of Marketing

Marketing from the managerial viewpoint; analysis of the functions of marketing planning, market opportunity assessment, and evaluating and adjusting marketing effort.

MKT 479V Independent Study in Marketing

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

MUS Courses (Music)

MUS 1013 Fundamentals of Music

3 credits: 3 hours lecture

Introduction in the basic elements of music: pitch, rhythm, melody, scales, and introduction to the keyboard.

MUS 1023 Theory I

3 credits: 3 hours lecture

Analysis of notation, scales, modes, intervals, key, tonality, melody, rhythm, texture, non-harmonic tones, harmony, and four-part choral writing.

MUS 1033 Theory II

3 credits: 3 hours lecture

Prerequisite: MUS 1023 with a "C" or above

Introduction of the secondary chords, modulation, binary and ternary forms. Harmonic analysis and part writing.

MUS 1040 Recitals, Concerts, Productions

0 credit: Attendance at recitals, concerts and productions

NOTE: Recitals, Concert, Productions must be taken each semester in residence for a total of eight semesters.

Course will be graded pass/fail.

All music majors are required to attend or participate in divisional recitals plus a minimum of six major recitals, concerts, and productions each semester in residence. May be repeated.

MUS 1051 Piano Repertoire

1 credit: 1 hour lecture

Survey of keyboard literature from the Renaissance through the twentieth century.

MUS 1061 Ear Training and Sight Singing I

1 credit: 2 hours lecture

Corequisite: MUS 1023

Sight Singing and dictation of melody, harmony, and rhythm.

MUS 1072 Music Technology

2 credits: 2 hours lecture

Prerequisite: MUS 1023 or by consent of instructor

A study of the use of synthesizers, sequencers, and computers to compose, arrange, orchestrate, and publish music ranging from jazz to art music.

MUS 1081 Piano Class (non-music major)

1 credit: 2 hours lecture

Beginning piano for non-music majors.

MUS 1091 Ear Training and Sight Singing II

1 credit: 2 hours lecture

Prerequisite: MUS 1061

Corequisite: MUS 1033

Sight Singing and dictation of melody, harmony, and rhythm.

MUS 1113 Music Appreciation

3 credits: 3 hours lecture

Study of the major composers and representative compositions of the musical style periods.

MUS 1121 University Chorus

1 credit: 2 hours laboratory

NOTE: Mixed chorus which performs major choral/orchestral work each year. May be repeated.

MUS 1142 Piano Class I

2 credit: 2 hours laboratory

NOTE: Open to vocal and instrumental music majors who have had no previous piano study. Students must pass this course with a "C" or better to take Piano Class II.

Fundamental skills of playing the piano.

MUS 1342 Piano Class II

2 credits: 2 hours laboratory

Prerequisite: Students must pass MUS 1142 Piano Class I with a "C" or better.

NOTE: Open to vocal and instrumental music majors. Melody harmonization, transposition, scales, major/minor chord drills, sight reading and repertoire.

MUS 2213 Theory III

3 credits: 3 hours lecture

Prerequisite: MUS 1033 with a "C" or above

An examination of Renaissance polyphony and chromatic harmony including borrowed chords, Neapolitan sixth and augmented sixth chords, upper tertian chords and extended part-writing procedures.

MUS 2223 Theory IV

3 credits: 3 hours lecture

Prerequisite: MUS 2213 with a "C" or above

An examination of post-romantic, impressionistic, and twentieth century styles.

MUS 2231 Ear Training and Sight Singing III

1 credit: 2 hours lecture

Prerequisite: MUS 1091

Corequisite: MUS 2213

Advanced sight singing and dictation of melody, harmony, and rhythm.

MUS 2241 Ear Training and Sight Singing IV

1 credit: 2 hours lecture

Prerequisite: MUS 2231

Corequisite: MUS 2223

Advanced sight singing and dictation of melody, harmony, and rhythm.

MUS 228V Music Theater Workshop

Variable credit

Prerequisite: Audition for performing roles

NOTE: May be taken for a maximum of 2 hours per semester. May be repeated.

Course designed to give students experience in the techniques of acting, dancing, singing, set design and construction, lighting, costuming, and make-up while involved in a major music theater production.

MUS 2292 Diction for Singers

2 credits: 2 hours lecture

Prerequisites: MUS 1033 and MUS 1091

Introductory course for the singer dealing with the pronunciation of Italian, French, and German.

MUS 3133 Basic Musicianship

3 credits: 3 hours lecture

Provides the basic components and fundamentals of music to the student with a limited musical background.

MUS 3413 Analysis and Music Literature

3 credits: 3 hours lecture

Prerequisite: MUS 1033

A survey of music literature from the major historical periods including the analysis of harmonic structure and form of representative musical examples, and a discussion of musical elements and vocabulary.

MUS 3431 Instrumental Ensemble

1 credit: 2 hours laboratory

Keyboard, string, or band instruments. Trios, quartets, etc. Study of standard literature. May be repeated.

MUS 3441 Woodwind Class

1 credit: 2 hours lecture

A study of the instruments of the woodwind family. Development of basic techniques for a comprehensive teaching knowledge.

MUS 3481 Brass Class

1 credit: 2 hours lecture

A study of the instruments of the brass family. Development of basic techniques for a comprehensive teaching knowledge.

MUS 3491 Percussion Class

1 credit: 2 hours lecture

A study of the instruments of the percussion family. Development of basic techniques for a comprehensive teaching knowledge.

MUS 3501 String Class

1 credit: 2 hours lecture

A study of the instruments of the string family. Development of basic techniques for a comprehensive teaching knowledge.

MUS 3511 Chamber Choir

1 credit: 3 hours laboratory

Corequisite: Concert Choir

Select ensemble which performs works suitable for a 12- to 20-voice mixed chorus.

MUS 3563 History of Music I

3 credits: 3 hours lecture

Prerequisite: MUS 1033

History of music, for music majors and minors, from the Ancient World to the Baroque.

MUS 3573 History of Music II

3 credits: 3 hours lecture

Prerequisite: MUS 1033

History of music for music majors and minors, from early 18th century to the present.

MUS 3583 Elementary Music Methods

3 credits: 3 hours lecture

Prerequisite: MUS 1033

NOTE: Open to music majors only.

Theory, application, and contemporary materials and methods in general music for K-6 in the public schools.

Emphasizes the professional musician's role as music specialist or music coordinator.

MUS 3591 Jazz Ensemble

1 credit: 3 hours laboratory

NOTE: Membership is by audition or interview. May be repeated.

The study and performance of jazz forms from Dixieland to fusion through the utilization of traditional big band instrumentation.

MUS 4613 Secondary Instrumental Music Methods

3 credits: 3 hours lecture

Prerequisite: MUS 1033

Curriculum, rehearsal procedures, administration, public relations, marching band techniques, junior and senior high school band methods.

MUS 4622 Instrumentation and Band Arranging

2 credits: 2 hours lecture

Prerequisite: MUS 1033

Arranging for band and other instrumental ensembles.

MUS 4632 Piano Pedagogy

2 credits: 2 hours lecture

Prerequisite: MUS 1033

An examination of current methods, techniques, and literature for private piano instruction.

MUS 4671 Marching Band

1 credit: 5 hours laboratory

NOTE: Membership is by audition or interview. Only available during the fall semester. May be repeated.

This instrumental ensemble provides opportunities for development through military and corps-style show design and precision movement. Performances include football games and parades.

MUS 4691 Concert Choir

1 credit: 3 hours laboratory

NOTE: Membership by audition. May be repeated.

Mixed chorus which provides opportunities for development of vocal, technical, and expressive skills through the study and performance of choral literature of varying styles from all historical periods. The Concert Choir tours in addition to the programs presented on campus and in the community.

MUS 4712 Instrumental Conducting

2 credits: 2 hours lecture

Prerequisite: MUS 1033

Specific conducting and rehearsal techniques for instrumental organizations. The course instruction will include techniques of 18th-century performance practice through 20th-century avant-garde style. Also included will be aspects of administration and supervision of public school wind programs.

MUS 4722 Choral Conducting

2 credits: 2 hours lecture

Prerequisite: MUS 1033

Specialized training in the practical aspects of choral conducting. Course includes study of choral rehearsal techniques, techniques of music research, choral literature, and preparation of a conductor's score. Lectures, listening assignments, and conducting instruction make up the basic class format.

MUS 4741 Concert Bands

1 credit: 6 hours laboratory

NOTE: Membership is open to all students by audition or interview. May be repeated.

The university concert bands perform on-campus performances and tour every other year. The instrumentation of the ensembles is variable and is set by the demands of the repertoire. Compositions performed range from full-band masterworks from the 18th and 19th centuries, to the more progressive works from the contemporary era.

MUS 4751 Symphonic Band

1 credit: 4 hours laboratory

Prerequisite: Membership by audition

Note: May be repeated

A select group of 40-45 instrumentalists that perform compositions from the repertoire of the modern symphony band. This ensemble presents on and off campus concerts.

MUS 4783 Secondary Vocal Methods

3 credits: 3 hours lecture

Prerequisite: MUS 4722

Methods for the development of junior and senior high school vocal organizations.

MUS 479V Independent Study in Music

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

NURS Courses (Nursing)

NURS 2003 Introduction to Nursing Concepts and Roles

3 credits: 3 hours lecture

Prerequisites: Completion of lower-division general education and nursing support courses or permission of the Division Chair.

NOTE: This course is offered in Summer only.

Foundations of modern nursing practice. Focuses on nursing history and trends, the nursing process, and nursing roles.

NURS 3065 Healthy Aging

5 credits: 2 hours lecture, 3 hours Practicum

Prerequisites: NURS 3073, NURS 4473, Arkansas RN Licensure.

Designed to explore the normal process of aging and factors influencing the needs of older adults. Emphasis is placed on the role and function of the professional nurse in promoting healthy aging in older clients and supporting families and communities throughout the aging process.

NURS 3073 Role Transition

3 credits: 3 hours lecture

Prerequisites: Completion of general education requirements, nursing support courses, NURS 4473, Arkansas RN licensure.

Designed to increase awareness of professional nursing practice including nursing history, theories, and trends.

Focuses on professional socialization, health care delivery systems, and critical thinking.

NURS 3085 Ambulatory Care

5 credits: 2 hours lecture, 3 hours Practicum

Prerequisites: NURS 4473, NURS 3073, Arkansas RN licensure.

Corequisite: NURS 3333

Designed to explore various ambulatory care settings and the role and function of the professional nurse in promoting, maintaining, and restoring health to individuals and families throughout the lifespan.

NURS 3103 Nursing Skills

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisite: NURS 2003, admission to upper-division nursing

Corequisite: NURS 311V

Development of basic, intermediate, and advanced nursing skills. Campus laboratories are used for student practice and demonstration of skills.

NURS 311V Concepts in Nursing Care I

11 credits: 8 hours lecture, 9 hours laboratory

Prerequisites: NURS 2003, admission to upper-division nursing

Corequisite: NURS 3103

Application of the nursing process to individuals in families and communities. The focus is client adaptation within physiological and interdependence modes.

NURS 332V Concepts in Nursing Care II

11 credits: 7 hours lecture, 12 hours laboratory

Prerequisites: NURS 3103, NURS 311V

Corequisite: NURS 3333

Application of the nursing process to individuals and families in communities. The focus is client adaptation within physiological and self-concept modes.

NURS 3333 Health Assessment

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisites: NURS 3103, NURS 311V

Corequisite: NURS 332V

Comprehensive health assessment of individuals.

NURS 4057 Professional Nursing Leadership

7 credits: 3 hours lecture, 4 hours Practicum

Prerequisites: NURS 3073, NURS 3085, NURS 3065, NURS 4097, Arkansas RN licensure.

Analyzes concepts and theories related to leadership in a rapidly changing health care environment. Emphasis is placed on research findings, professional role responsibilities, and critical thinking in exploring leadership skills.

NURS 4097 Community Health

7 credits: 3 hours lecture, 4 hours Practicum

Prerequisites: NURS 3073, NURS 4473, Arkansas RN licensure.

Focuses on a multi-disciplinary approach to provide care for individuals, families, and communities. An emphasis is placed on the epidemiological process and health promotion.

NURS 4153 Community Health Nursing

3 credits: 3 hours lecture

Prerequisites: NURS 332V, NURS 3333, NURS 4473

Corequisite: NURS 444V

Theoretical basis for community health nursing. The nursing process is used to perform a community assessment based on a conceptual model.

NURS 444V Concepts in Nursing Care III

11 credits: 7 hours lecture, 12 hours laboratory

Prerequisites: NURS 332V, NURS 3333, NURS 4473

Corequisite: NURS 4153

Application of the nursing process to individuals, families, and communities. The focus is client adaptation within physiological and role function modes.

NURS 4473 Nursing Research

3 credits: 3 hours lecture

Prerequisite: NURS 332V

Introduction to the research process and critique of research literature. Discussion includes application of findings to nursing practice and identification of clinical problems for study.

NURS 4504 Leadership and Management in Professional Nursing

4 credits: 3 hours lecture, 45-hour practicum

Prerequisites: NURS 444V, NURS 4153

Corequisite: NURS 452V

Provides an in-depth view of nursing leadership and management in a changing health care environment. Emphasis is placed on development of management skills for the delivery of quality client care within an organization.

NURS 452V Concepts in Nursing Care IV

11 credits: 6 hours lecture, 15 hours laboratory

Prerequisites: NURS 444V, NURS 4153

Corequisite: NURS 4504

Application of the nursing process to individuals, families, and communities. The focus is client adaptation within physiological and self-concept modes.

NURS 479V Independent Study in Nursing

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**P E Courses
(Physical Education)**

P E 1011 Weight Training for Men and Women

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester. Students will develop skills in a variety of weightlifting exercises. Students are taught the types of physical changes the body can undergo during a weight training program and how minor changes in the structure of the program can emphasize one or another of these changes.

P E 1021 Recreational Activities

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester. Table tennis, archery, volleyball, racquetball, and other activities.

P E 1031 Golf and Tennis

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester.

P E 1041 Square Dance

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester.

P E 1051 Swimming

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester.

P E 1061 Special Skills and Sports

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester. Activities, skills, and sports participation not found in the regular curriculum. Dependent upon availability of facilities and instructor expertise; may be repeated for credit if the activity, skill, or sport is different; one section is offered per semester.

P E 1071 Rhythms, Modern Dance

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester.

P E 1081 CVR Fitness Class

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester. For those students who desire to strengthen their heart, blood vessels, and lungs as they lose weight.

P E 1091 Adaptive Swimming

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester. Swimming adapted to individual limitations of certain students.

P E 1103 History and Principles of Health and Physical Education

3 credits: 3 hours lecture

Elementary and secondary school history and principles of health and physical education.

P E 1122 First Aid

2 credits: 2 hours lecture

Standard and Instructors American Red Cross course in emergency care of injuries. ARC Standard and Instructors certificate awarded on successful completion.

P E 1131 Fitness through Aerobic Dance

1 credit: 2 hours laboratory

NOTE: Physical Education activity course. No more than one activity course may be taken in any one semester.

P E 2203 Health and Wellness Promotion

3 credits: 3 hours lecture

Personal, community, and school health and wellness promotion.

P E 2213 Gymnastics K-12

3 credits: 3 hours laboratory

Progressive skills, techniques, and methods of teaching gymnastics K-12.

P E 2263 Officiating

3 credits: 3 hours lecture

Football and basketball rules. Offers opportunity for becoming registered officials.

P E 2272 Cardiopulmonary Resuscitation Certification

2 credits: 2 hours lecture

P E 2281 Basic Movement and Pattern Development

1 credit: 1 hour laboratory

Basic movement and pattern development (K-6). For elementary education and physical education majors.

P E 2291 Rhythmic Activities for Children (K-6)

1 credit: 1 hour laboratory

Basic rhythmic activities, instructional objectives, and competence. For elementary education and physical education majors only.

P E 2313 Care and Prevention of Athletic Injuries

3 credits: 3 hours laboratory

Provides the general knowledge and general application of theory, principles, and skills used in the prevention, care, and rehabilitation of athletic injuries related to participation in games, sports, and athletics.

P E 3393 Coaching of Track

3 credits: 3 hours lecture

History and development of events, conduct of coaching, training methods, strategy, rules, and systems of leading coaches.

P E 3413 Nutrition

3 credits: 3 hours lecture

Nutritive needs of the normal individual with emphasis on family nutrition and fitness. The periods of pregnancy and lactation, infancy, childhood, adolescence, and adulthood are included.

P E 3423 Coaching of Basketball

3 credits: 3 hours lecture

History and development, conduct of coaching, training methods, strategy, rules, and systems of leading coaches.

P E 3433 Organization and Administration of Health and Physical Education

3 credits: 3 hours lecture

Prerequisite: P E 1103

For the preparation of teachers to organize and administer programs in health and physical education at the elementary and secondary school level.

P E 3443 Team Sports

3 credits: 3 hours laboratory

Methods of teaching and developing skills in team sports.

P E 3453 Individual Sports

3 credits: 3 hours laboratory

Methods of teaching and developing skills in individual sports.

P E 3473 Coaching of Football

3 credits: 3 hours lecture

History and development, conduct of coaching, training methods, strategy, rules, and systems of leading coaches.

P E 3483 Elementary School Methods and Materials

3 credits: 3 hours lecture

Designed to prepare elementary school teachers to conduct programs in health and physical education which promote fitness and wellness. Required for all elementary school teachers.

P E 3493 Drivers Education I

3 credits: 3 hours lecture

The highway transportation system, traffic problems, driving task perception, and implementation of the driver education classroom program.

P E 3503 Adaptive Physical Education

3 credits: 3 hours lecture

Methods, techniques, and special program designs for the mildly handicapped child.

P E 3513 Primary Lead-Up Games for Children (K-6)

3 credits: 3 hours laboratory

Classroom experience in organizing and conducting fundamental skill and lead-up games for children. For elementary education and physical education majors.

P E 3523 Exercise Physiology

3 credits: 3 hours laboratory

The physiological basis of physical education and athletics. Lecture and physiology laboratory sessions.

P E 3533 Intramural Sports Internship

3 credits: 3 hours internship

A full semester of practical experience concerning the organization, administration, and daily operation of intramural sports programs.

P E 3543 Physical Education Activity Internship

3 credits: 3 hours internship

A full semester of practical experience concerning the organization, administration, and daily operation of physical education activity programs.

P E 3563 Advanced Athletic Training

3 credits: 3 hours lecture

Prerequisite: P E 2313

Corequisites: P E 3571, P E3581, P E 4811, P E 4851

In-depth study of specific sports injuries and special rehabilitation procedures for therapeutic modalities used for athletic injuries. Current procedures and operational techniques for training equipment and devices will be covered. Medical intervention and surgical reconstruction will be included.

P E 3571 Practicum in Athletic Training: Taping and Wrapping

1 credit: 1 hour laboratory

Provides the student with a supervised laboratory experience in taping and wrapping for male and female athletic teams in high schools and colleges.

P E 3581 Practicum in Athletic Training: Modalities

1 credit 1 hour laboratory

Provides the student with a supervised laboratory experience in modality operations on male and female athletic teams in high schools and colleges.

P E 4503 Psychology of Sports and Physical Education

3 credits: 3 hours lecture

Prerequisites: PSY 1013, PSY 2243

A study of selected materials from the literature in sociology, social psychology, and physical education dealing with the effects and interactions of these areas.

P E 4603 Physical Education Tests and Measurements

3 credits: 3 hours laboratory

Prerequisite: Junior standing

Use of achievement and skill tests in health and physical education. Special attention to mass testing procedures.

P E 4613 CVR Clinic Internship

3 credits: 3 hours internship

A full semester of practical experience concerning the organization, administration, and daily operation of the CVR program.

P E 4633 Community Recreation Internship

3 credits: 3 hours internship

A full semester of practical experience concerning the organization, administration, and daily operation of the community recreation programs.

P E 4643 Anatomical Kinesiology

3 credits: 3 hours laboratory

Prerequisites: BIOL 2223, BIOL 2261, P E 3523

The scientific study of human movement; analysis of motor skills and programs of exercise; evaluation of movement performance.

P E 4663 Secondary Methods and Materials

3 credits: 3 hours lecture

Prerequisites: P E 1103 and P E 3243; and for P E Plan 1 majors, admission to teacher education

The teaching of health and physical education in the high school.

P E 4673 Drivers Education II

3 credits: 3 hours lecture

Advanced course to prepare teachers of driver education in secondary schools. Experience provided in instructing beginning drivers in both the classroom and laboratory.

P E 479V Independent Study in Physical Education

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

P E 4806 Internship - Wellness Facility

6 credits

A 200-clock-hour off-campus working experience in a wellness/health promotion facility approved by the intern supervisor.

P E 4811 Practicum in Athletic Training: Rehabilitation

1 credit: 1 hour laboratory

Provides the student with a supervised laboratory experience in rehabilitation of male and female athletic teams in high schools and colleges.

P E 4851 Practicum in Athletic Training: Evaluation and Assessment

1 credit: 1 hour laboratory

Provides the student with a supervised laboratory experience in evaluation and assessment for male and female athletic teams in high schools and colleges.

P E 4683 Methods and Technology for Wellness Leadership

3 credits: 3 hours lecture

Designed to give prospective wellness leaders competencies in the areas of self-care, consumer awareness, nutrition, and weight control, stress management, risk factor analysis and substance abuse.

**PHIL Courses
(Philosophy)**

PHIL 2223 Introduction to Philosophy

3 credits: 3 hours lecture

Problems of human existence and critical discussion of some solutions proposed by outstanding thinkers.

PHIL 3433 Readings in Philosophy

3 credits: 3 hours lecture

Readings and critical discussion of a philosopher, a basic problem of philosophy, or a movement in philosophy.

PHIL 3523 Logic

3 credits: 3 hours lecture

Development of thinking skills applicable to any field.

PHIL 3623 Ethics

3 credits: 3 hours lecture

A survey of ethical systems with an examination of how such systems can be applied to business, medical, legal, environmental, and personal issues.

PHIL 4603 History of Philosophy

3 credits: 3 hours lecture

Major philosophers and philosophical systems from the beginnings of Western thought to the present.

PHIL 479V Independent Study in Philosophy

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations of this catalog for pre-requisites and description.

**PHSC Courses
(Physical Science)**

PHSC 2203 Physical Science

3 credits: 3 hours lecture

Corequisite: ENGL 1013

Basic concepts of physics, chemistry, and earth science. This course is designed for the General Education program.

PHSC 2251 Physical Science Laboratory

1 credit: 2 hours laboratory

Corequisite: PHSC 2203

Basic studies of chemistry, physics, and earth science, designed to illustrate and complement concepts discussed in PHSC 2203.

PHSC 3433 Science for Elementary Teachers

3 credits: 3 hours lecture

Prerequisite: 8 hours of laboratory science courses

Selected topics in astronomy, earth science, and physical science and their interrelationships. Discovery, demonstrations, and laboratory experiences.

PHYS Courses (Physics)

PHYS 1003 Elements of Physics

3 credits: 3 hours lecture

NOTE: A General Education course for the non-science major.

A survey of the basic concepts of physics including mechanics, light, energy, relativity, and atomic structure.

PHYS 1021 Elements of Physics Laboratory

1 credit: 2 hours laboratory

Corequisite: PHYS 1003

A laboratory course to supplement PHYS 1003.

PHYS 2203 General Physics I

3 credits: 3 hours lecture

Prerequisite: MATH 1033 or 1175

A study of mechanics, heat, sound, energy and momentum relying heavily on the student's understanding of algebra and trigonometry. Annual Fall offering.

PHYS 2213 General Physics II

3 credits: 3 hours lecture

Prerequisites: PHYS 2203

A study of electricity, magnetism, optics and modern physics relying heavily on the student's understanding of the concepts developed in PHYS 2203. Annual Spring offering.

PHYS 2231 General and University Physics Laboratory I

1 credit: 2 hours laboratory

Corequisite: PHYS 2203 or PHYS 2313

A laboratory course which supplements General and University Physics. Experiments are related to those courses.

PHYS 2241 General and University Physics Laboratory II

1 credit: 2 hours laboratory

Corequisite: PHYS 2213 or PHYS 2323

A laboratory course which supplements General and University Physics. Experiments are related to those courses.

PHYS 2313 University Physics I

3 credits: 3 hours lecture

Corequisite: MATH 2254

A study of mechanics, heat, sound, energy and momentum relying heavily on the student's understanding of basic math including algebra, trigonometry and calculus. Annual Spring offering.

PHYS 2323 University Physics II

3 credits: 3 hours lecture

Prerequisite: PHYS 2313

A study of electricity, magnetism, optics and modern physics relying heavily on the student's understanding of basic math including algebra, trigonometry, and calculus. Annual Fall offering.

PHYS 2354 Radiation Physics

4 credits: 3 hours lecture, 3 hours laboratory

Natural radioactivity and fundamental particles. Disintegration, fission, and fusion of nuclei. Theory and use of radiation detection instruments.

PHYS 3404 Modern Physics

4 credits: 3 hours lecture, 2 hours laboratory

Prerequisites: MATH 2264; PHYS 2213 or 2323

The phenomena and theories of atomic, nuclear, and solid state physics. Relativity and the quantum theory.

PHYS 3444 Optics

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: PHYS 2241; PHYS 2213 or 2323

Light, wave motion, dispersion, interference, diffraction, and spectra.

PHYS 4603 Mechanics

3 credits: 3 hours lecture

Prerequisites: MATH 2264; PHYS 2303 or 2313

Applied physics and mathematics using the vector approach. Analysis of problems in statics, kinematics, and dynamics.

PHYS 4681 Seminar in Physics Teaching

1 credit: 1 hour lecture

Seminar in classroom teaching for General Science, Physical Science, and Physics. Covers topic selection, laboratory and demonstration possibilities, instructional materials, test design, and evaluation.

**PMUS Courses
(Private Music Instruction)**

NOTE: ENROLLMENT IN ALL APPLIED MUSIC COURSES IS RESTRICTED TO MUSIC MAJORS OR MINORS OR BY PERMISSION OF INSTRUCTOR.

PMUS 2401 Applied Piano

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2412 Applied Piano

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2441 Applied Voice

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2452 Applied Voice

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2461 Applied Flute

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2472 Applied Flute

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2481 Applied Oboe

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2492 Applied Oboe

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2501 Applied Clarinet

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2512 Applied Clarinet

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2521 Applied Saxophone

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2532 Applied Saxophone

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2541 Applied Bassoon

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2552 Applied Bassoon

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2561 Applied Horn

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2572 Applied Horn

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2581 Applied Trombone

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2592 Applied Trombone

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2601 Applied Euphonium

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2612 Applied Euphonium

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2621 Applied Tuba

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2632 Applied Tuba

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2641 Applied Percussion

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2652 Applied Percussion

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2941 Applied Trumpet

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2952 Applied Trumpet

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2961 Applied Guitar

1 credit: One-half hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 2972 Applied Guitar

2 credits: 1 hour lesson per week

NOTE: Open to freshman and sophomore students.

Study of the fundamental techniques and literature appropriate to the level of development.

NOTE: A Performance Competency Examination is required for music majors. The examination must be completed before enrolling in 3000-4000 level private music instruction. See the Music Student Handbook for specific requirements.

PMUS 3661 Applied Piano

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3672 Applied Piano

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3701 Applied Voice

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3712 Applied Voice

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3721 Applied Flute

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3732 Applied Flute

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3741 Applied Oboe

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3752 Applied Oboe

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3761 Applied Clarinet

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3772 Applied Clarinet

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3781 Applied Saxophone

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3792 Applied Saxophone

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3801 Applied Bassoon

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3812 Applied Bassoon

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3821 Applied Horn

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3832 Applied Horn

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3841 Applied Trombone

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3852 Applied Trombone

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3861 Applied Euphonium

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3872 Applied Euphonium

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3881 Applied Tuba

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3892 Applied Tuba

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3901 Applied Percussion

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3912 Applied Percussion

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3921 Applied Trumpet

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3932 Applied Trumpet

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3981 Applied Guitar

1 credit: One-half hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 3992 Applied Guitar

2 credits: 1 hour lesson per week

NOTE: Open to junior and senior students.

Study of the fundamental techniques and literature appropriate to the level of development.

PMUS 4611 Instrumental Recital

1 credits: 1 hour lesson per week

NOTE: Open to senior students.

The final semester of performance study culminating in a public recital.

PMUS 4621 Voice Recital

1 credits: 1 hour lesson per week

NOTE: Open to senior students.

The final semester of performance study culminating in a public recital.

PMUS 4661 Piano Recital

1 credits: 1 hour lesson per week

NOTE: Open to senior students.

The final semester of performance study culminating in a public recital.

**PSCI Courses
(Political Science)**

PSCI 2213 American National Government

3 credits: 3 hours lecture

Constitutional principles, political parties and public opinion, civil rights, organization and functions of the executive, legislative, and judicial branches.

PSCI 2223 State Government of Arkansas

3 credits: 3 hours lecture

An analysis of state and local government with an emphasis on Arkansas.

PSCI 2233 Comparative Politics

3 credits: 3 hours lecture

Comparative analysis of structures, processes, and problems of selected world powers.

PSCI 3403 American Political Parties

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Development, organization, and changing role of political parties, including nominations, elections, and voting behavior; and the impact of the mass media.

PSCI 3413 Constitutional Criminal Procedure (same as CJ 3243)

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Analysis of procedural limitations on law enforcement and in the prosecution of crimes; emphasizes cases dealing with the fourth, fifth, sixth, and eighth amendments.

PSCI 3423 Legislative Process

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Congress and the committee system, executive-legislative relations, Congress and the federal bureaucracy, and reform proposals.

PSCI 3433 Public Administration

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Trends and organization of public administration; administrative powers and responsibilities; policy making and intergovernmental relations; and the regulatory commissions.

PSCI 3443 Middle East Politics

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Contemporary politics in the Middle East; emphasis on the political cultures, institutions, ideologies, and conflicts in the modern Middle East.

PSCI 3463 International Relations

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Modern diplomacy, alliances and treaties, power politics, and international organizations.

PSCI 3483 Judicial Process (same as CJ 3483)

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Courts, law, and the legal system; law and politics; judicial philosophy and biography.

PSCI 3563 Russian Politics

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Contemporary Russian politics; emphasis on political institutions, political culture, political decision-making, and political change in Russia.

PSCI 4603 American Executive

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Powers and duties of the American Presidency, including domestic, economic, and foreign policy dimensions, growth of presidential power, and presidential personality.

PSCI 4613 Public Management (same as CJ 4383)

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Nature of bureaucratic organization and changing themes in organizational theory; fiscal and personnel policy; public unions and collective bargaining; leadership, communication, and motivation.

PSCI 462V Seminar in Political Science

Variable credit

Prerequisite: PSCI 2213

Selected topics with extensive readings, and class discussions. May be repeated for a total of 12 hours credit.

PSCI 4643 American Foreign Policy

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Decision making in foreign policy with emphasis on case studies.

PSCI 4653 Research Methods in the Social Sciences

3 credits: 3 hours lecture

Prerequisite: Junior or Senior standing

Overview of social science research; methodological, statistical, and computer-related techniques.

PSCI 4663 American Constitutional Law

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Principles, practices, and basic features of constitutional law with emphasis on the role of the Supreme Court, federalism, national powers, and individual rights.

PSCI 4673 Global Studies

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Nature and analysis of contemporary global issues. Emphasis to be placed on frameworks for analyzing global problems and in-depth acquaintance with selected world issues.

PSCI 4683 Western Political Theory

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Major political thinkers and their ideas with emphasis on more recent political theories.

PSCI 4693 Developing Nations

3 credits: 3 hours lecture

Prerequisite: PSCI 2213

Governments and major problems facing nations in the lesser-developed world.

PSCI 478V Internship

Variable credit

Supervised learning experience in a government or private agency. May be repeated for credit up to 6 hours.

PSCI 479V Independent Study in Political Science

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**PSY Courses
(Psychology)**

PSY 1013 Introduction to Psychology

3 credits: 3 hours lecture

Survey of the science of behavior.

PSY 1023 Advanced General Psychology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

In-depth coverage of basic psychological concepts, providing the core of knowledge necessary for understanding the subdisciplines of psychology.

PSY 2203 Statistical Methods

3 credits: 3 hours lecture

Prerequisites: PSY 1013, MATH 0183

Introduction to the use and interpretation of statistics.

PSY 2263 Mental Health

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Survey of the techniques necessary for making a positive adjustment to our environment.

PSY 2273 Experimental Methods in Psychology

3 credits: 3 hours lecture

Introduction to the research methods used by psychologists. Offered every fall.

PSY 2282 Experimental Methods Laboratory

2 credits: 4 hours laboratory.

Prerequisites: PSY 2203, PSY 2273.

Student will design, conduct and analyze psychological research. Offered every spring.

PSY 3243 Social Psychology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Social behavior through group dynamics and mass communication.

PSY 3253 Adolescence

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Physical, mental, and emotional development of children and adolescents, including social adaptation, interests, attitudes, and ideals.

PSY 3413 Psychology of Learning

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Major empirical findings and theoretical positions in the psychology of learning.

PSY 3423 Industrial Psychology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Applications of psychology in industry, including personnel selection, placement, and counseling, engineering and organizational psychology, labor relations, the consumer, and survey research.

PSY 3433 Child Development

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Surveys major research findings and theories concerning development from conception through adolescence.

PSY 3443 Developmental Psychology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Comprehensive study of individual development from conception to death.

PSY 3453 Exceptional Children

3 credits: 3 hours lecture

Prerequisite: PSY 3433

Atypical children; survey of major findings related to the causes and nature of deviations.

PSY 3463 Principles of Guidance and Counseling

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Interviewing skills, counseling techniques, and theories of interpersonal dynamics.

PSY 3473 Human Sexuality

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Physiological, psychological, and sociological aspects of human sexual behavior, with emphasis on healthy adjustment.

PSY 3483 Physiological Psychology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Introduction to the biological bases of behavior including the role of neurology, sensory physiology, and endocrinology in the mediation of behavior.

PSY 3493 Fundamentals of Measurement

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Basic psychometric concepts, methods, and problems in the use of aptitude, interest, personality, and psychodiagnostic tests.

PSY 4603 History and Systems in Psychology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Study of the theoretical issues important in the history of psychology.

PSY 4623 Psychology of Personality

3 credits: 3 hours lecture

Prerequisite: PSY 1013

A study of the dynamics and nature of the normal personality.

PSY 4633 Gerontology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Deals with psychology of aging and methods of working with the aging.

PSY 4643 Applied Human Service Skills

3 credits: 3 hours lecture

Prerequisites: PSY 3463 or PSY 4623.

Advanced training in the areas of counseling, legal issues, professional ethics, and intervention techniques. Students learn a systematic approach to client-centered problem solving.

PSY 465V Practicum in Psychology

Variable credit

Prerequisite: 12 hours in psychology and permission of staff

Supervised field experiences in special areas. May not enroll for more than 6 hours per semester and not more than a total of 9 hours.

PSY 4673 Abnormal Psychology

3 credits: 3 hours lecture

Prerequisite: PSY 1013

Diverse patterns and dynamics of deviant behavior.

PSY 4683 Seminar

3 credits: 3 hours lecture

Prerequisite: Junior standing

Opportunity for in-depth study of selected topics in psychology. Special emphasis upon contemporary research.

PSY 479V Independent Study in Psychology

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**S ED Courses
(Secondary Education)**

S ED 2262: Introduction to Education IV (Secondary)

2 Credits: 2 hours lecture; 1 hour lab

Prerequisite: EDFD 2122

Familiarizes secondary education students with history of American education, discipline, classroom management, optical disk technology, and students with exceptionalities. Students will participate in the public schools.

S ED 3353 Advanced Secondary Professional Education I

3 Credits: 3 hours lecture; 2 hour lab

Prerequisite: Admission to Level III of the professional teacher education program

Familiarize secondary education students with basic assessments/measurements, assessment software, teaching at-risk learners, sociology of education, and school/community relations. Extensive participation in the public schools.

S ED 3363 Advanced Secondary Professional Education II

3 Credits: 3 hours lecture; 2 hour lab

Prerequisite: Advanced Secondary Professional Education I

Familiarize secondary education students with learning theories, motivation, exceptionalities, multicultural/bilingual/compensatory education, classroom management, and video production. Extensive participation in the public schools.

S ED 3573 Middle School Methods

3 credits: 3 hours lecture

Prerequisite: Admission to Teacher Education

Application of the basic principles of teaching and learning to middle-school students. Stresses instructional objectives, strategies, and materials for teaching

S ED 476V: Secondary Internship I

0 - 4 Credits: 0 - 4 Internship

Prerequisite: Admission to Internship

Current methods and materials: emphasis on thematic units, process skills, assessment, educational technology; methods to address individual learning needs and exceptionalities. Internship objectives will be met through site-based experiences and content-based seminars.

S ED 477V: Secondary Internship II

15 Credits: 15 hours Internship

Prerequisites: Admission to Internship

A continuation of S ED 476V: Secondary Internship I.

**SCED Courses
(Science Education)**

SCED 4663 Secondary Science Teaching Methods

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisites: 20 hours of laboratory science and admission to teacher education

Methods and strategies of secondary science instruction in biology, chemistry, and physical science. Development of lesson plans and teaching of laboratory activities will be emphasized. Clinical experience in freshman-level science laboratories will constitute a major part of the course.

**SOC Courses
(Sociology)**

SOC 2213 Introduction to Sociology

3 credits: 3 hours lecture

Introduction to sociological concepts, group interaction, and social institutions.

SOC 2223 Social Problems

3 credits: 3 hours lecture

Contemporary social problems such as mental illness, crime, poverty, drugs and alcohol, sex-based inequality, and ecology.

SOC 3413 The Family

3 credits: 3 hours lecture

Nature, development, and function of the family as a social institution; special factors affecting marital relations and family stability.

SOC 3433 Social Welfare Work

3 credits: 3 hours lecture

Social work, its history, functions, methods, and status in modern society.

SOC 3443 Rural Sociology

3 credits: 3 hours lecture

The transformation of rural life and institutions in contemporary society. Social problems related to rural living.

SOC 3453 Race and Ethnic Relations

3 credits: 3 hours lecture

Social processes in a pluralistic society with emphasis on the cultural contributions of different racial and ethnic groups.

SOC 4603 Sociological Theory

3 credits: 3 hours lecture

Critical examination of modern sociological thought, origins of sociological theories, and applicability of theories in social life.

SOC 4613 Criminology (same as CJ 4373)

3 credits: 3 hours lecture

Prerequisite: SOC 2213

Theories of the nature and causes of crime, and analyses of various kinds of crimes.

SOC 4643 Population Problems

3 credits: 3 hours lecture

Population growth, distribution, composition, and migration in relation to political, social, economic, and ecological implications.

SOC 4663 Seminar in Sociology

3 credits: 3 hours lecture

Selected topics with extensive readings and class discussions. May be repeated for up to 9 hours credit.

SOC 479V Independent Study in Sociology

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**SOSC Courses
(Social Science)**

SOSC 4641 Seminar in Social Science Classroom Teaching

1 credit: 1 hour lecture

Corequisite: SED 3363

Development, evaluation, and critique of micro-classroom teaching unit; teaching applications including test design, instructional materials, and related aspects of teaching the social sciences.

SPAN Courses (Spanish)

SPAN 1003 Elementary Spanish I

3 credits: 3 hours lecture

An introduction to the essentials of the Spanish language. It is designed to develop the four basic language skills: listening, speaking, reading, and writing. It emphasizes standard pronunciation, functional syntactical structures, vocabulary, and idiomatic expressions, as well as an awareness of Hispanic cultures.

SPAN 1013 Elementary Spanish II

3 credits: 3 hours lecture

Prerequisite: SPAN 1003

A continuation of the essentials of the Spanish language in Spanish 1003. It is structured to develop a solid foundation of the four basic language skills with major emphasis on the oral and written communicative skills and an understanding of Hispanic cultures.

SPAN 2203 Intermediate Spanish I

3 credits: 3 hours lecture

Prerequisite: SPAN 1013

Review of the linguistic essentials and expansion of syntax, vocabulary, idiomatic expressions, and concepts of Hispanic cultures studied during the first year. It is designed to continue emphasizing oral and written communicative skills.

SPAN 2213 Intermediate Spanish II

3 credits: 3 hours lecture

Prerequisite: SPAN 2203

An extension of SPAN 2203 including a systematic review of grammatical topics. It introduces selected readings in Spanish to develop reading comprehension for analysis and commentary. It is designed to develop the student's ability to function linguistically within the Hispanic world.

SPAN 3503 Conversational Spanish I

3 credits: 3 hours lecture

Prerequisite: SPAN 2213

Intensive oral practice. It is designed to develop listening comprehension, oral proficiency, and vocabulary through analyses, discussions, and oral and written commentaries on selected readings in Spanish, films, and audio recordings.

SPAN 3513 Conversational Spanish II

3 credits: 3 hours lecture

Prerequisite: SPAN 3503

Continued emphasis on oral and written proficiency in Spanish. Students develop an appreciation of Spanish literature through readings and discussions of magazine articles, short stories, essays, and poetry.

SPAN 3603 Advanced Modern Spanish Grammar and Composition

3 credits: 3 hours lecture

Prerequisite: SPAN 2213

Designed to cover problematic areas of Spanish syntax and usage and to perfect the student's linguistic skills through oral practice and writing of standard Spanish prose. Course highly recommended to students who wish to continue their studies in Spanish, seek teaching certification in Spanish or bilingual education, or desire to use it as their graduate language tool.

SPAN 3613 Cultures and Civilizations of Spain and Spanish America

3 credits: 3 hours lecture

Prerequisite: SPAN 2213

Designed to give a panoramic view of Spanish and Spanish American cultures and civilizations. It emphasizes salient aspects of historical and current social and political perceptions; cultural traditions and contributions; their geographical influence on the rest of the world; their art, letters, and music; and their role in the modern world. The course is interdisciplinary.

SPAN 3623 Survey of Major Hispanic Literatures

3 credits: 3 hours lecture

Prerequisite: SPAN 2213

Designed to offer students the opportunity to examine various forms and themes of major Spanish American literary works. Readings include selections in Spanish from the twelfth century to the present. The course is conducted in Spanish.

SPAN 4633 Seminar in Spanish Studies

3 credits: 3 hours lecture

Prerequisite: SPAN 2213

A detailed study of a special topic area in Spanish. It may be repeated when the topic varies for a total of six semester credit hours with the approval of the unit chairperson.

SPAN 479V Independent Study in Spanish

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for Prerequisites and description.

SPCH Courses (Speech)

SPCH 1013 Voice and Diction

3 credits: 3 hours lecture

Articulation and pronunciation including an introduction to phonetics.

SPCH 1023 Public Speaking

3 credits: 3 hours lecture

Principles of audience analysis, collection of materials, and outlining. Emphasis on careful preparation of speech and delivery. May not be taken for credit by students who have taken SPCH 1043.

SPCH 1043 Honors Speech Communication

3 credits: 3 hours lecture

Prerequisite: Minimum ACT composite score of 24 or Dean's permission.

Performance course emphasizing research and persuasion on a more sophisticated level than that in SPCH 1023.

NOTE: Fulfills General Education requirement for speech. May not be taken for credit by students who have taken SPCH 1023.

SPCH 1103 Introduction to Communication

3 credits: 3 hours lecture

An introduction to the major areas of study in the field of oral communication including general theories of oral communication, interpersonal communication, small group discussion, and performance studies. Students will demonstrate competence in interviewing skills, group processes, and public speaking in a performance-centered course designed for the non-major.

SPCH 2203 Interpersonal Communication

3 credits: 3 hours lecture

Promotes conceptual understanding of relevant theory and research with a combination of theory, skills practice, and competency evaluation.

SPCH 2223 Mass Communication

3 credits: 3 hours lecture

NOTE: May be used for either speech or journalism credit, but not for both.

Survey of historical, economic, and political influences of mass communication on society and individuals.

SPCH 2243 Technical Theater Arts

3 credits: 3 hours lecture

Theory and practice of technical theater (set, stage properties, costumes, light, and make-up). Laboratory hours in addition to regular class meetings assigned by instructor.

SPCH 2273 Argumentation and Debate

3 credits: 3 hours lecture

Pre-requisite: SPCH 1023

Principles of argumentation and place of debate in democratic government, analysis of propositions, proper use of evidence and reasoning, case construction, and persuasive speech.

SPCH 2283 Business and Professional Speech

3 credits: 3 hours lecture

Oral communication needs of professional persons. Practice in the construction and delivery of various types of speeches and participation in group conferences, discussions, and interviews.

SPCH 340V Intercollegiate Debate/Forensics

Variable credit

Pre-requisite: SPCH 2273,

One or two hours credit given to students participating in activities designed to enhance and test skills in competitive speaking and debate. Includes study and activities related to the directing of speech tournaments, festivals, and exhibitions. Students concurrently enrolled in SPCH 2273 may enroll for only 1 hour credit.

SPCH 3453 Persuasion

3 credits: 3 hours lecture

The theory and practice of persuasion in rhetorical and behavioral contexts as a means of motivating human conduct.

SPCH 3483 Communication in Small Groups

3 credits: 3 hours lecture

Practical and theoretical study of communication during decision making, conflict management, and interpersonal interaction in task-oriented work groups.

SPCH 3513 Introduction to Oral Interpretation

3 credits: 3 hours lecture

Study and techniques of interpretative reading.

SPCH 3523 Acting

3 credits: 3 hours lecture

Pre-requisite: SPCH 2243, or consent of instructor.

A detailed study of character analysis, creation, and stage movement.

SPCH 3533 Communication in Organizations

3 credits: 3 hours lecture

Study and practice of using effective communication skills to improve management within the organization.

SPCH 395V Communication Practicum

Variable credit

Prerequisite: Completed 12 hours in Speech or permission of Dean.

Note: May be repeated for a total of 6 hours credit with approval of the Unit Head. Introduction to research methods in communication in the context of assisting with faculty research.

SPCH 4623 Seminar in Speech

3 credits: 3 hours lecture

NOTE: May be repeated for a total of 12 hours credit with Dean's permission.

Detailed study of one of the major areas of speech, emphasizing assigned readings and individual research.

SPCH 4643 Directing

3 credits: 3 hours lecture

Pre-requisite: SPCH 2243

A detailed study of basic interpretation, casting, rehearsal procedures, and director-actor relationships in an analysis and creation of character.

SPCH 4653 Theories of Human Communication

3 credits: 3 hours lecture

Pre-requisite: Senior standing

Origin and development of basic concepts in communication theory. Survey and analysis of communication theories and models used in quantitative and qualitative research.

SPCH 4663 Performance Studies

3 credits: 3 hours lecture

Prerequisite: SPCH 3513

Cutting, arranging, and delivery of all literary forms and development of original character studies. Special emphasis

on program building.

SPCH 468V Communication Internship

Variable credit

Prerequisite: Advanced standing and permission of Dean and instructor.

Practical experience in organizational, interpersonal, and public communication. Students work in a business setting which allows for application of theoretical knowledge and the development of communication skills.

SPCH 479V Independent Study in Speech

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations sections of this catalog for Prerequisites and description.

SPED Courses (Special Education)

SPED 3403 Language Development

3 credits: 3 hours lecture

Prerequisite: Admission to Teacher Education

Study of classification, etiology, abnormalities in growth and development, relationship of speech to handicapping conditions, and therapeutic measures used in development of speech- and language-handicapped children.

SPED 3423 Characteristics of the Mildly Handicapped

3 credits: 3 hours lecture

Prerequisite: Admission to Teacher Education

Includes all general characteristics of mildly handicapped children. Attention to interests, attitudes, motivations, and appreciations of the mildly handicapped.

SPED 4603 Assessment of Exceptional Children

3 credits: 3 hours lecture

Prerequisites: EDFD 3403 and Admission to Teacher Education

Introduction to contemporary information and theories on diagnosis and classification of mildly handicapped children.

SPED 4613 Curriculum for Exceptional Students

3 credits: 3 hours lecture

Prerequisites: SPED 3423, SPED 4603

Bases of curriculum for exceptional students with emphasis upon scope, content, sequence, and materials.

SPED 4633 Methods and Materials for Teaching Mildly Handicapped

3 credits: 3 hours lecture

Prerequisite: EDFD 3403 and Admission to Teacher Education

Incorporates instructional materials, activities, and methods of teaching children with various mildly handicapping conditions.

SPED 479V Independent Study in Special Education

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

SPED 4659: Special Education Internship I

9 credits: internship

Prerequisite: Admission to Internship

Current methods and materials in reading, language arts, mathematics and science for special needs students; emphasis on process skills, assessment, educational technology; methods to address individual learning needs and exceptionalities. Internship objectives will be met through site-based experiences and content-based seminars.

SPED 4669: Special Education Internship II

Variable credit: internship

Prerequisite: Admission to Internship

A continuation of SPED 4659. Special Education majors will enroll in 15 hours. Special Education minors will enroll in 6 hours.

**SWK Courses
(Social Work)**

SWK 2123 INTRODUCTION TO SOCIAL WORK.

3 credits: 3 hours lecture

Generalist social work practice and its application in a variety of social work settings.

SWK 2133 HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT I

3 credits: 3 hours lecture

Prerequisites: PSY 1013, SOC 2213, SWK 2123

Corequisites: BIOL 1063, BIOL 1071, PSY 3443

Theories and knowledge in human biological, psychological and social development of children and young adults using a life span perspective.

SWK 2233 HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT II

3 credits: 3 hours lecture

Prerequisite: SWK 2133

Theories and knowledge in human biological, psychological and social development of adults and the elderly using a life span perspective.

SWK 3113 SOCIAL WORK PRACTICE I

3 credits: 3 hours lecture

Corequisites: SWK 2233, SOC 3453

Foundations of generalist practice knowledge and interpersonal skills. Emphasis is placed on the use of self as a change agent utilizing interviewing, communication and assessment skills. The social work practice sequence is restricted to SWK majors.

SWK 3143 SOCIAL POLICY I

3 credits: 3 hours lecture

Prerequisite: SWK 2123

Corequisites: ECON 2203, PSCI 2213

Provides historical background of social policy, economic and social justice, and administrative issues influenced by social policy.

SWK 3213 SOCIAL WORK PRACTICE II

3 credits: 3 hours lecture

Prerequisite: SWK 3113

Corequisite: PSY 4623

Development of interviewing and assessment skills with emphasis on families and small groups. Increased emphasis is placed on building professional values and ethical standards. The social work practice sequence is restricted to SWK majors.

SWK 3243 RESEARCH METHODS FOR HUMAN SERVICES.

3 credits: 3 hours lecture

Prerequisite: SWK 3113

Corequisite: PSY 3463

A systematic approach that integrates the essential components needed to successfully conduct research in human services.

SWK 3513 CHILD ABUSE AND NEGLECT.

3 credits: 3 hours lecture

Prerequisite: SWK 2123

Major topics in the area of child abuse and neglect including warning signs of abuse and neglect and the use of appropriate community services for abused and neglected children and their families.

SWK 3633 RURAL SOCIAL WORK.

3 credits: 3 hours lecture

Prerequisite: SWK 2123

Special concerns of populations and community systems in rural areas. During this semester students will be encouraged to actively deal with policy issues which affect rural life.

SWK 3653 SPECIAL TOPICS IN SOCIAL WORK

3 credits: 3 hours lecture

Prerequisite: SWK 2123

Topics of special interest to social work and other human services professionals are presented. Topics vary each time offered.

SWK 3663 FAMILY PRESERVATION

3 credits: 3 hours lecture

Prerequisite: SWK 2123

Introduction to the concepts of family preservation with emphasis on intervention strategies and services provided through child welfare agencies and related child welfare issues.

SWK 3813 CHILDREN AND THE LAW

3 credits: 3 hours lecture

Prerequisite: SWK 2123

An analysis of legal principles involving children in our legal system. Includes an in depth look at the Arkansas Juvenile code, child Maltreatment Act and other applicable statutes.

SWK 3913 CRISIS INTERVENTION

3 credits: 3 hours lecture

Prerequisite: SWK 2123

Basic theoretical constructs and concepts of crisis intervention and information regarding applied therapeutic counseling techniques as they relate specifically to crisis intervention practice.

SWK 4252 FIELD PRACTICUM SEMINAR

2 credits: 2 hours lecture

Prerequisite: SWK 4313

Corequisites: SWK 4419, SWK 4262

Companion course for Field Practicum to allow students to process their field experiences and integrate theory and practice.

SWK 4262 SOCIAL POLICY II

2 credits: 2 hours lecture

Prerequisites: SWK 3213, SWK 3143

Corequisites: SWK 4419, SWK 4253

Social policy issues that impact practice and heighten awareness of how social policies impact the lives of clients of social workers.

SWK 4313 SOCIAL WORK PRACTICE III

3 credits: 3 hours lecture

Prerequisite: SWK 3213

Corequisites: PSY 4673, ANTH 2203

Third in a three-practice course sequence. Issues of community and organizations are addressed in the macro practice of social work. This final stage builds on the interpersonal skills of the entry-level generalist professional and use of these skills in a system. Emphasizes supervision and administration of social programs. The social work practice sequence is restricted to SWK majors.

SWK 4419 FIELD PRACTICUM

9 credits: 30 hours field experience

Prerequisite: SWK 4313

Corequisites: SWK 4252, SWK 4262

Field study designed to synthesize knowledge, theory, and practice. Students will be placed in a social work environment. Public or private agencies or institutions may be chosen.

SWK 4523 WORKING WITH CHILDREN AT RISK

3 credits: 3 hours lecture

Prerequisite: SWK 2123 -or- both EDFD 1121 and EDFD 1142

Focuses on working with the at risk child both in the home and school environment with emphasis on the roles of the teacher and the social worker as partners in helping the child achieve both academic success and personal well-being. Education credit also available. Twelve (12) hours of field experience during semester required.

SWK 4543 LEARNING THROUGH COMMUNITY SERVICE

3 credits: 1 hour lecture: 8 hours field experience

Prerequisite: SWK 2123

Service Learning is designed to help students experience and develop skills in working with people in a community social service agency or other community service setting.

**U ST Courses
(University Studies)**

U ST 1013 Contemporary Issues

3 credits: 3 hours lecture

NOTE: General elective credit only. May not be counted toward major, minor, or general education requirements. May not be repeated for credit.

Survey of contemporary issues emphasizing international awareness and understanding.

U ST 221V Field Course

Variable credit

NOTE: Does not count toward major, minor, or general education. No more than 9 hours of field courses in University Studies can be counted toward graduation.

A field experience in the subject indicated designed to enrich the student's background.

U ST 341V Field Course

Variable credit

NOTE: Does not count toward general education. May count toward major or minor requirements as determined by department. No more than 9 hours of field courses in University Studies can be counted toward graduation.

A field experience in the subject indicated designed to enrich the student's background.

**VTSC Courses
(Veterinary Science)**

VTSC 2223 Veterinary Biology

3 credits: 3 hours lecture

Anatomy and physiology of farm animals including structure and life processes.

VTSC 4643 Diseases of Domesticated Animals

3 credits: 2 hours lecture, 2 hours laboratory

Prerequisites: ANSC 1003 and VTSC 2223

Common diseases identification, prevention, and cure including the natural body defense functions. Spring offering odd-numbered years.

VTSC 479V Independent Study in Veterinary Science

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

**WL F Courses
(Wildlife)**

WL F 1061 Orientation to Forest and Wildlife Management

1 credit: 1 hour lecture

NOTE: Same as FOR 1061

An overview of the forestry and wildlife disciplines and their professional curricula.

WL F 3314 Ichthyology/Herpetology

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: BIOL 1153, BIOL 1161

NOTE: Same as BIOL 3314

Taxonomy and natural history of fishes, amphibians, and reptiles, emphasizing the local fauna.

WL F 3324 Ornithology/Mammalogy

4 credits: 3 hours lecture, 3 hours laboratory

Prerequisites: BIOL 1153, BIOL 1161

NOTE: Same as BIOL 3324

Taxonomy and natural history of birds and mammals, emphasizing the local fauna.

WL F 3563 Natural Resource Biometrics

3 credits: 2 hour lecture, 3 hours laboratory

Prerequisites: FOR 2274; MATH 1043 or MATH 1175

NOTE: Same as FOR 3563

Collection and analysis of data, probability, frequency distributions, measures of central tendency and dispersion, estimation of parameters, least square, linear and curvilinear regression, chi-square, analysis of variance and covariance, and correlation. Emphasis on hand and computer statistical computations.

WL F 358V Natural History

Variable credit

Prerequisite: 3 hours biology or 3 hours earth science

NOTE: May be taken for a maximum of three hours credit. Same as BIOL 358V, ESCI 358V, and FOR 358V.

A field course in geology and biology of natural ecosystems, consisting of travel, study, and/or research in unique natural areas of North America.

WL F 3813 Introduction to GIS and GPS

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisites: CIS 2223, MATH 1043 or MATH 1175, and Junior standing

NOTE: Same as FOR 3813

Introduction to Geographic Information Systems (GIS) using both raster and vector spatial data models, with hands on experience utilizing computers to aid problem solving. Applications to be mastered include data entry, verification, data base construction, cartographic modeling, and mapping of spatial data. Application of Global Positioning Systems (GPS) in natural resource management are described and utilized.

WL F 4003 Natural Resource Policy and Society

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisite: Senior standing

NOTE: Same as FOR 4003

History and present status of natural resource-related policy in the U.S. Evolution of public and professional attitudes toward natural resources, major laws affecting management of public and private lands, policy-making processes, professional ethics, and current policy topics. Study of major social issues affecting renewable natural resources and procedures for responding to those issues in management decision-making. Topics include individual and group involvement in natural resource planning, environmental issues, and regulation of forestry practices.

WL F 4613 Wildlife Habitat Management

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisite: Junior standing

Manipulation of habitat for optimum wildlife populations. Emphasis on influence of silvicultural practices on wildlife habitat, and measurement and evaluation of habitat quality.

WL F 4691 Seminar

1 credit: 1 hour lecture

Corequisite: WL F 4823

Note: Same as FOR 4691

Oral team presentations to landowners and faculty concerning the land management plan developed in WL F 4823, Integrated Resource Planning and Management. Occasional guest speakers.

WL F 4703 Wildlife Ecology and Management

3 credits: 2 hours lecture, 3 hours laboratory

Prerequisite: Junior standing

NOTE: Additional field trips may be required.

Historical development, ecological principles, population dynamics, and habitat management as they relate to the manipulation of wildlife populations.

WL F 4753 Cooperative Education in Wildlife Management

3 credits

Practical training with a public agency or industrial firm. Written report required for each work experience. Requirements documented in Cooperative Education Handbook.

WL F 479V Independent Study in Wildlife Management

Variable credit

Consult the Independent Study Courses subheading in the Academic Regulations section of this catalog for prerequisites and description.

WL F 480V Advanced Topics

Variable credit

Prerequisites: Junior standing, consent of instructor, and approval of School Dean
Lectures and discussions in selected wildlife topics.

WL F 4823 Integrated Resource Planning and Management

3 hours: 9 hours laboratory

Prerequisites: WL F 4613, WL F 4703, FOR 4003

Corequisite: WL F 4691

NOTE: Same as FOR 4823

Integrated problem solving to apply biological, ecological, quantitative, economic, social, political, and administrative principles in solving natural resource management problems.