

## **GRADUATE PROGRAMS**

### **Degrees Offered**

The University of Arkansas at Monticello offers two master's degree programs: Master of Education (M.Ed.) in Elementary Education and Secondary Education and Master of Science (M.S.) in Forest Resources.

### **Admission to the University**

Students who hold baccalaureate degrees from regionally accredited institutions and who have achieved minimum grade point averages of at least 2.50 may be admitted to the University with graduate status and enroll in graduate courses. Students must file a completed Application for Admission and must supply official transcripts of all undergraduate and graduate course work to the Office of Admission Records.

Students who do not meet the minimum grade point average may petition to the Graduate Council for probationary admission. Probationary admission will allow a student to enroll in up to 12 hours of course work.

### **Grades and Academic Status**

Graduate students may earn grades of A, B, C, or F. These grades indicate the following:

- A     Excellent graduate work
- B     Good graduate work
- C     Poor
- F     Failing graduate work

A student whose grade record includes two graduate courses with grades of C may not maintain graduate status or degree candidacy status unless the Graduate Council, upon petition, has authorized a plan of study for the student.

### **Course Loads and Course Work**

The maximum course load must not exceed 12 graduate hours during the spring or fall semesters. The maximum load for each summer term is 6 hours. Students who hold a graduate assistantship must enroll for a minimum of six hours during the fall and spring semesters. Graduate assistants in the School of Forest Resources are also required to enroll for at least one hour during each summer term.

All course work on the degree plan must be recent. Courses older than five years must be appealed to the Graduate Council. Under no circumstances will courses older than six years apply to a graduate program of study.

## **Independent Study**

It is sometimes desirable, and in the best interest of the student's academic growth, that he/she be allowed to engage in independent study or research. Independent study or research courses will carry a course number of 579V in each discipline.

Independent study and research courses will require extensive independent study and research, formal written reports, and regular conferences with the instructor. A detailed description of the proposal and its requirements will be submitted for approval to the instructor, Dean, and the Vice Chancellor for Academic Affairs. Students may complete only one independent study/research project each semester. Independent study/research proposals should not duplicate existing courses in the academic catalog.

Only students who have been admitted to degree candidacy will be eligible for independent study. A maximum of six hours of independent study may be applied to a degree program.

## **Undergraduate Students Enrolling in Graduate Courses**

Qualified undergraduate students may be permitted to enroll in graduate courses for either undergraduate or graduate credit within the following guidelines:

1. Student must be within 30 hours of completion of bachelor's degree.
2. Student must have a cumulative GPA of at least 2.70.
3. Student must obtain approval of course instructor, Dean, and Vice Chancellor for Academic Affairs.

Students will normally receive undergraduate credit for taking graduate-level work. Any student wishing to receive graduate credit while still an undergraduate student must receive approval of the program's Dean and the Vice Chancellor for Academic Affairs. However, students enrolling in graduate courses for graduate credit (rather than undergraduate credit) may not apply such credits to undergraduate degree requirements.

## **Review of Graduate Status**

After completion of 12 graduate credit hours, all students not admitted to degree candidacy will be reviewed by the Dean of the respective school and will be reported to the Graduate Council. The Graduate Council will determine whether these students may continue in graduate status and apply specific conditions for continuation when appropriate. Unsatisfactory academic performance may result in loss of graduate status at any time.

## **Appeals**

Appeal rights are open to all students who are denied admission or continuation in graduate programs. Appeals may be initiated with the advisor and may be pursued with the Vice Chancellor for Academic Affairs and the Graduate Council.

## **MASTER OF EDUCATION DEGREE**

### **Advising**

At the time a graduate Education student is admitted to the University, a graduate advisor will be assigned by the Dean of the School of Education. This assignment will be based on the student's background and interests.

### **Degree Plan and Admission to Degree Candidacy**

Students seeking the M.Ed. Degree must obtain full admission to the university, complete a degree plan in the School of Education, and apply for candidacy. During their first semester of enrollment, degree-seeking students will select two graduate faculty members to serve on an Advisory Committee. The Committee, the advisor, and the student will work together in developing a degree plan. The plan will remain solely in the School of Education until the student applies for candidacy.

The application for candidacy must be submitted to the Office of Graduate Studies after the successful completion of 9 hours of graduate course work and before the completion of 18 hours. To be considered for degree candidacy by the Graduate Council, the student must supply a letter of reference and copies of transcripts for all college/university work. The prospective candidate must have a minimum 3.00 grade point average for all graduate work. The student, advisor, and Advisory Committee members must all sign the application for candidacy section of the degree plan. This document will then be forwarded to the Office of Graduate Studies to be included on the agenda of the next Graduate Council meeting. Once approved by the Graduate Council, the document will be filed in the Office of the Registrar and will be used as a checklist for graduation.

### **Students Without Teacher Licensure**

It is expected that most students enrolled in the M.Ed. program will possess a bachelor's degree and teacher licensure. A special program will, however, allow those without teacher licensure to earn a master's degree and licensure to teach simultaneously. Students in this program will complete both graduate and undergraduate courses. Students must be eligible for teacher licensure prior to the completion of the M.Ed. degree. For more information on this program, contact the School of Education at (870) 460-1062.

## Transfer Credit

Acceptance of transfer credit for the M.Ed. Degree is based on the nature, quality, and recency of the credit. Special consideration will be given to transfer students from other public institutions in the state, especially those in the University of Arkansas system. As many as 24 hours, not to include specifically required courses in areas of specialization, will be accepted from the University of Arkansas at Pine Bluff. Ordinarily, not more than nine hours will be accepted from other institutions. Questions regarding transfer of credit should be referred to the Dean of the School of Education at (870) 460-1062.

## Comprehensive Examination

Students must satisfactorily complete a comprehensive examination in the concentration and the core and maintain a cumulative grade point average of 3.00 as conditions for graduation. The comprehensive examination must be taken during the semester in which the student is completing degree requirements. The examination for the M.Ed. Degree will consist of essay questions and will be graded for content and composition. Students who fail the examination will be informed in writing of deficiencies and notified of the time when a second examination will be administered. Failing students may be required to complete additional courses and must petition for more than two attempts.

Dates for the comprehensive examination for the M.Ed. degree will be announced by the School of Education.

## Degree Requirements

ELEMENTARY EDUCATION  
The Master of Education Degree

### **Core Requirements** ..... 12 hours

EDFD5003 History and Philosophy of Education  
EDFD5023 Educational Research Methodology  
EDFD5043 Instructional Technology  
EDFD5063 Psychological Foundations of Teaching and Learning

### **Concentration Requirements** ..... 12 hours

ELED 5043 Teaching Mathematics  
ELED 5063 Children's Literature  
ELED 5203 Developmental and Corrective Reading

One of the following courses:

ELED 5143 Teaching Science  
ELED 5343 Teaching Social Studies

### **Other Requirements 6 hours**

Two of the following courses:

EDFD 5213 Teaching the At-Risk Child  
ELED 5243 Evaluation of Instruction

ELED 5263 Critical Reading in the Content Areas  
EDFD 5273 Teaching the Culturally Different Child  
ELED 5283 Special Topics Workshops

**Electives..... 6 hours**

## SECONDARY EDUCATION

The Master of Education Degree

**Core Requirements..... 12 hours**

EDFD5003 History and Philosophy of Education  
EDFD5023 Educational Research Methodology  
EDFD5043 Instructional Technology  
EDFD5063 Psychological Foundations of Teaching and Learning

**Concentration Requirements ..... 12 hours**

To be developed by the Advisory Committee.

**Other Requirements ..... 12 hours**

A minimum of 12 hours must be chosen from courses not completed under the Concentration Requirements or from Secondary Education or Education Foundation courses. At least one three-hour class must be from a program area outside of education.

## MASTER OF SCIENCE DEGREE IN FOREST RESOURCES

### Student Advising

Upon enrolling at UAM, each graduate student seeking the M.S. in Forest Resources is required to select a major professor with the concurrence of the School of Forest Resources Dean. By mid-term of the first semester of enrollment, the student and the major professor must select a three- to five-member Advisory Committee. The Committee must consist of the major professor and two other graduate faculty members in the School of Forest Resources. Additionally, up to two additional Committee members may be selected from the School of Forest Resources, other members of the Graduate Faculty, other institutions within the UA System, or from other qualified individuals from cooperating institutions, agencies, or industries.

### Degree Plan

Each student is required to develop a degree plan with the advice and approval of his/her Advisory Committee. The degree plan will include an individualized sequence of courses in addition to a thesis proposal. A total of 30 hours, including a maximum of 6 hours of Research and Thesis, will be required. An appropriate level of Research and Thesis hours will be determined by the Advisory Committee based on the scope of individual thesis projects. The degree plan must be submitted for approval to the School of Forest Resources Dean by the end of the first semester of enrollment.

## **Admission to Degree Candidacy**

It is recommended that applicants have a Bachelor of Science Degree in Forestry, the wildlife sciences, or another natural resource management discipline. However, prospective students from other fields are also encouraged to apply. All applicants will have transcripts analyzed by School of Forest Resources faculty to assess the need for leveling work. Applicants whose record shows an insufficient background in forest resources will be required to enroll in undergraduate leveling course work and the pre-requisites to those courses. This course work will be scheduled in consultation with the student's advisory committee.

Applicants for the M.S. Degree in Forest Resources must obtain full admission to the University. They must have a grade point average of 2.70 or better (on a 4.00 scale) on all course work, or a GPA of 3.00 or better on the last 60 hours of course work taken prior to receipt of a baccalaureate degree from a regionally accredited institution of higher education. Applicants must also have a satisfactory score on the Graduate Record Examination (GRE) general test and acceptance by the School of Forest Resources Dean and a major professor. Any other consideration for regular admission must be made by individual petition to the School of Forest Resources Dean and, where pertinent, a recommendation from the appropriate faculty, and will be considered on its own merits, case by case.

Students may be conditionally admitted upon approval of the School of Forest Resources faculty and Dean. Students who are admitted conditionally must earn a GPA of 3.00 or better in their initial 9 hours of graduate course work, or they will not be permitted to continue graduate studies in forest resources. Students are not eligible for a graduate assistantship during their conditional status.

The student, advisor, Advisory Committee members, and the Dean of the School of Forest Resources must all sign the application for candidacy section of the degree plan. The document will then be forwarded to the Office of Graduate Studies to be included on the agenda of the next Graduate Council meeting.

## **Academic Status**

Graduate students in forest resources may earn grades of A, B, C, or F, except for Research and Thesis, which is graded as Pass/Fail. A cumulative GPA of 3.00 out of 4.00 must be maintained to complete degree requirements and to retain a graduate assistantship. No more than two courses in which a grade of "C" was obtained may be applied toward degree requirements. A student may not repeat a course in which a grade of "B" or higher was obtained.

Any forest resources graduate student whose course or thesis work is unsatisfactory may be withdrawn from the University at any time upon the recommendation and agreement of the major professor, the student's Advisory Committee, and the Dean of the School of Forest Resources.

## **Transfer Credit**

A maximum of six hours of graduate-level course work completed prior to development of a degree plan may be transferred to UAM from another university, provided the course subjects are acceptable to the School of Forest Resources faculty as a part of the program of study. An exception is that up to 15 hours of course work completed at other universities in the UA System (with which the Arkansas Forest Resources Center is associated) may be applied toward the graduate degree if so indicated on an approved degree plan. Courses taken more than six years prior to admission to UAM will not be accepted for transfer credit. Additionally, no courses with grades below a “B” will be accepted for transfer credit.

## **Graduation Requirements**

For graduation, each student seeking the M.S. Degree in Forest Resources must successfully complete 24-27 semesters hours of graduate course work and 3-6 hours of Research and Thesis, as outlined in the degree plan, with a cumulative grade point average of 3.00 or better. In addition, each student must complete an approved thesis and pass an oral comprehensive examination.

## **Thesis and Comprehensive Examination**

A thesis topic must be approved by the student’s Advisory Committee. Students will be required to define an appropriate problem for investigation; review relevant literature; develop a study plan; collect, analyze, and interpret data; test hypotheses and draw conclusions; and write and defend a thesis. At the conclusion of the study and research problem, an oral comprehensive examination, including a thesis defense, will be administered by the Advisory Committee and one additional graduate faculty member appointed by the Dean of the School of Forest Resources. Others may observe the examination upon approval by the Dean of the School of Forest Resources. The comprehensive examination will typically cover, but is not limited to, material presented in and related to the thesis, course work, and other appropriate literature and information. Unanimous agreement of the Advisory Committee will be required to pass a student. The student can request a second examination if he or she fails the first. A student who fails a second examination is withdrawn from the Forest Resources graduate program.

## **Forest Resources Graduate Courses**

FOR	5013	Southern Teachers’ Conservation Workshop
FOR	502V	Special Topics
FOR	5101	Research Methods
FOR	5113	Statistics in Research I
FOR	5123	Statistics in Research II
FOR	5223	Forest Ecosystem Ecology
FOR	5233	Advanced Forest Policy
FOR	5253	Advanced Forest Economics
FOR	5303	Modeling in Forest Management

FOR 5313 Digital Remote Sensing  
FOR 5433 Silvicultural Systems  
FOR 5513 Geoinfometrics  
FOR 5691 Seminar  
FOR 5723 Advanced Natural Resource Management  
FOR 579V Research and Thesis

W LF 5113 Wildlife-Habitat Relationships  
W LF 5123 Landscape Ecology

## GRADUATE COURSES

### EDFD Courses

**EDFD 5003 History and Philosophy of Education**  
3 credits: 3 hours lecture  
An analysis of major historical and philosophical developments and their impact on American education.

**EDFD 5023 Educational Research Methodology**  
3 credits: 3 hours lecture  
Emphasizes qualitative and quantitative research design in education. Emphasis is placed on understanding the design of research studies and the development of an initial research study. This course should be taken within the first 15 hours of enrollment.

**EDFD 5043 Instructional Technology**  
3 credits: 3 hours lecture  
Treats media and instructional design with applications of state-of-the-art technology.

**EDFD 5063 Psychological Foundations of Teaching and Learning**  
3 credits: 3 hours lecture  
In-depth, integrated treatment of development and learning with emphasis on cognitive development.

**EDFD 5123 Curriculum Development**  
3 credits: 3 hours lecture  
Consideration of historical, philosophical and societal impact on the school curriculum; emphasis on evaluation and analysis of curriculum development models and the change process.

**EDFD 5153 Child Development and the Family**  
3 credits: 3 hours lecture  
Prerequisite: PSY 3433 or PSY 3443  
3 credits: 3 hours lecture

Critical examination of the research relevant to developmental factors influencing the growth process of the individual from conception to adolescence. Particular emphasis on family functioning, and the family's influence on early child development.

**EDFD 5203 Program for Effective Teaching**  
3 credits: 3 hours lecture  
Systematic instruction based on the PET model, including provisions for demonstration teaching in the public schools and critique.

**EDFD 5213 Teaching the At-Risk Child**  
3 credits: 3 hours lecture  
Explores intervention strategies, relations with parents, counseling, special instructional strategies, and peer relations.  
**EDFD 5223 Supervision of Instruction**  
3 credits: 3 hours lecture  
Methods of supervising instructional personnel, including teachers, aides, volunteers, student teachers, and field experience students.

**EDFD 5243 Techniques of Systematic Instructional Development**  
3 credits: 3 hours lecture  
Emphasizes direct instruction, lesson design, and evaluation.

**EDFD 5253 Behavior Management**  
3 credits: 3 hours lecture  
Emphasis on using the theories and principles of applied behavior analysis for the improvement of student conduct and learning.

**EDFD 5273 Teaching the Culturally Different Child**

**Identification and address of needs manifested by children from diverse backgrounds, with provisions for using resource people.**

**EDFD 5813 Supervision of Student Teaching**  
**3 credits: 3 hours lecture**

Treats organization, planning, and continuous evaluation of a planned sequence of observation and direct teaching experiences.

**EDFD 5823 Independent Research in Education**  
**3 credits: 3 hours research**

Designed to allow an in-depth exploration of an educational topic. The advisory committee must approve the topic and the research methodology employed. The student will make a formal presentation related to the research and will present an approved copy of the final paper to the Office of Graduate Studies. May be repeated for credit. A maximum of six hours may apply to a degree.

**EDFD 590V Distance Education Workshop**  
**Variable Credit**

Designed to provide learning opportunities through the use of compressed interactive video, satellite, and other sources. A maximum of 6 hours may be applied to a degree.

#### **ELED Courses**

**ELED 5043 Teaching Mathematics**  
**3 credits: 3 hours lecture**

Application of theory and research findings to content, procedures and activities for the improvement of children's understanding of mathematics and competence in problem solving.

**ELED 5063 Children's Literature**  
**3 credits: 3 hours lecture**

A study of literature with emphasis on selecting materials reflecting the differing needs of children in a pluralistic society.

**ELED 5143 Teaching Science**  
**3 credits: 3 hours lecture**

Application of theory and research findings to content, procedures and activities for the improvement of children's understanding of science and competence in applying learned information in problem solving situations.

An in-depth study of major writers, periods, movements, and themes in American literature from the beginning to 1850.

**ELED 5203 Developmental and Corrective Reading**

**3 credits: 3 hours lecture**

Application of learning theory and research findings to diagnosis and remediation of reading difficulties.

**ELED 5243 Evaluation of Instruction**

**3 credits: 3 hours lecture**

Treats normative and criterion-referenced approaches to the assessment of children's progress.

**ELED 5263 Critical Reading in the Content Areas**

**3 credits: 3 hours lecture**

Exploration of the problems in developing critical reading ability in subject areas.

**ELED 5283 Special Topics Workshops**

**3 credits: 3 hours lecture**

A series of specially designed workshops which treat major contemporary problems confronting elementary teachers. Limited to 3 hours utilizable for degree credit.

**ELED 5343 Teaching Social Studies**

**3 credits: 3 hours lecture**

Application of theory and research findings to content, procedures and activities for the improvement of children's understanding of social studies and competence in applying learned information in appropriate situations.

**ELED 5606 Science, Mathematics, and Reading: An Interdisciplinary Approach**

**6 credits: 6 hours lecture**

The learning of science, mathematics, and reading as active, integrated, constructive processes involving experimentation, investigation, communication, and problem solving.

**ELED 579V 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. Prior approval necessary for enrollment.

#### **ENGL Courses**

**ENGL 5013 Advanced Studies in American Literature I**

**3 credits: 3 hours lecture**

**ENGL 5023 Advanced Studies in American Literature II**

**3 credits: 3 hours lecture**

An in-depth study of major writers, periods, movements, and themes in American literature from 1850 to the present.

**ENGL 5053 Advanced Studies in British Literature I**

**3 credits: 3 hours lecture**

An in-depth study of major writers, periods, movements, and themes in British literature from the Middle Ages through the 18th century.

**ENGL 5063 Advanced Studies in British Literature II**

**3 credits: 3 hours lecture**

An in-depth study of major writers, periods, movements, and themes in British literature from the Romantic Period to the 1960's.

**ENGL 5093 Studies in Composition**

**3 credits: 3 hours lecture**

Theory of and research in composition, its history and its cognitive and social dimensions. The course emphasizes the effective teaching of writing.

**ENGL 5123 The English Language and the Teacher**

**3 credits: 3 hours lecture**

Current research on the English language, its history, its grammar, dialects and uses, with an emphasis on how language is learned and used in the classroom.

**ENGL 5153 Special Topics in Language and Literature**

**3 credits: 3 hours lecture**

Detailed study of a specific topic in language and/or literature, emphasizing readings and individual research. Topics selected may cover themes, genres, single authors, national literatures or other history or language-related subjects. May be repeated for a total of 6 hours credit when different topics are covered.

**ENGL 579V Independent Study in English Variable Credit**

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

**FOR Courses**

Develops an understanding of basic processes of forest dynamics and an ability to express them as difference equations. Will include designing, coding, calibrating, running, and modifying computer programs to model dynamics of forest stands.

**FOR 502V Special Topics**

**FOR 5101 Research Methods**

**1 credit: 1 hour lecture**

Introduction to the conceptual and technical aspects of research. Topics include the scientific method, applied logic, truth, ethics, literature searching and software packages. A case study in poor science is used to reinforce research principles.

**FOR 5113 Statistics in Research I**

**3 credits: 3 hours lecture**

Develops a basic understanding of using statistics to examine and extract information from data. Students will learn the concepts, methods, and practice of statistical data analysis.

**FOR 5123 Statistics in Research II**

**3 credits: 3 hours lecture**

Develops an understanding of using statistics in experiment construction and in model design. Students will learn the concepts, methods, and practice of statistical development in these areas.

**FOR 5223 Forest Ecosystem Ecology**

**3 credits: 3 hours lecture**

Develops an indepth understanding of forest ecosystem structure and function. Includes application of ecological information in the management of forest ecosystems.

**FOR 5233 Advanced Forest Policy**

**3 credits: 3 hours lecture**

Review of current natural resource policy issues. Discussions regarding the consumers of forest resources, social values and policies, ethical considerations, and policy processes.

**FOR 5253 Advanced Forest Economics**

**3 credits: 3 hours lecture**

Explores the micro and macro setting of the forest products industry and general business climate of forest development. Study of non-commodity forest outputs and special valuation problems associated with them.

**FOR 5303 Modeling in Forest Management**

**3 credits: 3 hours lecture**

**FOR 5313 Digital Remote Sensing**

**3 credits: 3 hours lecture**

Develops an understanding of the application of remote sensing technology to earth monitoring and

management, and improves the understanding of the earth as a system in which we live. Will address the use and applications of airborne and spaceborne digital remote sensing in natural resources.

**FOR 5433 Silvicultural Systems**

**3 credits: 3 hours lecture**

Case studies in silviculture of various forest cover types and non-traditional silviculture, such as old-growth and the selection method, will be emphasized. Student-conducted lectures will be required.

**FOR 5513 Geoinformatics**

**3 credits: 2 hours lecture, 3 hours lab**

Develops an understanding of the application of spatial modeling to solve natural resource problems now and in the future. Will address the use and application of GIS, spatial modeling, and spatial statistics to model forest ecosystems.

**FOR 5691 Seminar**

**1 credit: 1 hour seminar**

**FOR 5723 Advanced Natural Resource Management**

**3 credits: 3 hours lecture**

Quantitative techniques and models useful to forest resource managers for decision making. Integrates business and social aspects with technological aspects of forestry in making forest management decisions.

**FOR 579V Research and Thesis**

**GEOG Courses**

**GEOG 5113 World Geography**

**3 credits: 3 hours lecture**

Focus on selected regions of the world to be chosen from among Europe, Africa, West Asia, North America, and Latin America. Emphasis on physical, political, cultural, and economic characteristics of the selected regions.

**GSCI Courses**

**GSCI 5013 Advanced Biology**

**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisite: 12 hours of biology

**GSCI 5243 Advanced Environmental Science 3**

**credits: 2 hours lecture, 3 hours**

**laboratory** Prerequisites: 12 hours of course work in chemistry and/or biology

Basic concepts and principles of the study of life, including biochemistry, cell structure and function, respiration and photosynthesis, transmission genetics, molecular genetics, evolution, and ecology.

**GSCI 5043 Advanced Geology**

**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisite: 12 hours of physical sciences

Materials of the earth's crust and the processes and agents which affect them; earth history interpreted from rocks and fossils.

**GSCI 5063 Advanced Chemistry**

**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisites: 12 hours of chemistry or 8 hours of chemistry and at least 2 years experience teaching chemistry at the secondary level

Composition, occurrence, preparation, properties and uses of matter, the changes it undergoes, its energy relations, and the laws governing its behavior.

**GSCI 5083 Advanced Physics**

**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisites: 12 hours of physics or 8 hours of physics and at least 2 years experience teaching physics at the secondary level

Forms of energy and properties of matter - mechanics, heat, magnetism, electricity, sound, and light.

**GSCI 5203 Molecular Genetics**

**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisites: 8 hours of biology and 8 hours of chemistry

DNA biology; recombinant DNA techniques and applications; laboratory methods.

**GSCI 5303 Higher Order Thinking in Science**

**3 credits: 3 hours lecture**

This course stresses the learning of science as an active, integrated, constructive process involving experimentation, investigation, communication, reasoning, and problem solving.

Natural environments and ecosystems, and their degradation by pollution, habitat destruction and loss of biodiversity.

**GSCI 5263 Advanced Field Biology**

**3 credits: 2 hours lecture, 3 hours laboratory**

Prerequisites: 12 hours of  
biology

Survey of the plant and animal kingdoms  
emphasizing recognition and natural history of local  
flora and fauna.

### **GSCI 528V Special Topics in Advanced Science Teaching**

**Variable credit**

Selected topics in contemporary science appropriate  
for high school teachers.

## **HIST Courses**

### **HIST 5013 American History**

**3 credits: 3 hours lecture**

A thematic view of American history, with a  
historiographical emphasis. Possible topics include  
reform movements, social trends, and wars.

### **HIST 5023 World History**

**3 credits: 3 hours lecture**

Major themes in the intellectual, social, political, and  
economic developments which have shaped our world  
from earliest times to the present. Included will be  
Asian, African, American, and Western civilizations.

### **HIST 5033 Historiography and Research**

**3 credits: 3 hours lecture**

An introduction to research and historical writing,  
including a review of major historians and trends in  
the writing of history.

### **HIST 5123 Arkansas History**

**3 credits: 3 hours lecture**

An overview of Arkansas history from the earliest  
times to the present, with emphasis on the State's  
political, social, and economic development.  
Designed especially for those preparing to teach  
Arkansas history.

### **HIST 5133 Africa in Global Perspective**

**3 credits: 3 hours lecture**

Major themes in African history from earliest times to  
the present; emphasis on the continuity of African  
civilization through the centuries and the interplay of  
African culture with Islamic and Western influences.

The mathematical theory of probability and its  
application to statistical inference.

### **MAED 5043 Intermediate Analysis**

**3 credits: 3 hours lecture**

Prerequisite: Completion of the calculus sequence

### **HIST 5143 Colonial America**

**3 credits: 3 hours lecture**

An intensive survey of European settlement in North  
America from the Columbian voyages to 1789.  
Emphasis on the emergence of Anglo-American  
cultural and political institutions culminating in the  
War of Independence.

### **HIST 5153 America in Peace and War**

**3 credits: 3 hours lecture**

An in-depth view of America between 1919 and  
1945, with emphasis on cultural conflict in the 1920's  
and the impact of the Depression, the New Deal, and  
World War II on the American people.

### **HIST 5163 America since 1945**

**3 credits: 3 hours lecture**

An in-depth view of America in the past half-century,  
with emphasis on political, social, and economic  
change.

### **HIST 5603 Selected Readings in History**

**3 credits: 3 hours lecture**

Advanced readings in an area of history. To be  
selected in consultation with the course instructor.

### **HIST 581V Field Study**

**Variable credit**

Classroom and/or field studies of historically  
significant sites.

## **MAED Courses**

### **MAED 5013 Geometry**

**3 credits: 3 hours lecture**

Prerequisite: MATH 3423

A study of formal and informal geometries, geometric  
constructions, applications, and learning theory.

### **MAED 5023 Linear Algebra**

**3 credits: 3 hours lecture**

Prerequisite: Completion of the calculus sequence

A study of linear algebra with an emphasis on topics  
relevant to the secondary school curriculum.

### **MAED 5033 Probability and Statistics**

**3 credits: 3 hours lecture**

Prerequisite: Completion of the calculus sequence

Topics from calculus designed to prepare teachers of  
calculus.

### **MAED 5203 History of Mathematics**

**3 credits: 3 hours lecture**

Prerequisite: MATH 2254

A study of selected topics in the history of mathematics with emphasis on the biographies of important mathematicians and the development of significant mathematical ideas.

**MAED 5243 Modern Algebra**  
**3 credits; 3 hours lecture**

Prerequisite: Completion of the calculus sequence.  
A study of abstract algebraic structures including groups, rings, and fields. Also a survey of number theory to include equivalence relations, divisibility, congruences, and prime distribution.

**MAED 5263 Higher Order Thinking in Mathematics**  
**3 credits: 3 hours lecture**

This course provides mathematics teachers in grades five through college with examples of lessons incorporating methods appropriate for students with different learning styles. These lessons emphasize the use of manipulatives, hands-on materials, cooperative learning techniques, portfolio assessment strategies, and technology.

**MAED 5273 Discrete Mathematics**  
**3 credits: 3 hours lecture**

Prerequisite: Completion of the calculus sequence  
A survey of discrete mathematical systems, including graph theory, combinatorics, and Boolean algebras.

**MAED 5293 Topics in Mathematics**  
**3 credits: 3 hours lecture**

Prerequisite: Permission of instructor  
Selected topics in contemporary mathematics appropriate for high school teachers.

**P E Courses**

**P E 5003 Applied Evaluation in Physical Education**

**3 credits: 3 hours lecture**

Advanced methods of assessment for the components of physical and motor fitness. Latest evaluation procedures in physical education, including review of current literature.

**P E 5253 Psychology of Sports in Physical Education**

**3 credits: 3 hours lecture**

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

**P E 5033 Research Methods Application in Physical Education**

**3 credits: 3 hours lecture**

Study of significant research, research methods, and the application of modern research principles to physical education and related areas.

**P E 5103 Advanced Exercise Physiology**  
**3 credits: 3 hours laboratory**

Exercise physiology and its application to fitness and training with emphasis on recent research, energy metabolism, cardiovascular respiratory function, ergometry, body composition, work capacity, ergogenic aids, aging, health risk factors, and environmental stress.

**P E 5133 Problems and Trends in Physical Education**

**3 credits: 3 hours lecture**

The analysis of current literature and research in the field of physical education with emphasis on the isolation of current problems and possible solutions to special problems.

**P E 5213 School and Community Activity Planning**

**3 credits: 3 hours lecture**

Organization and administration of recreational programs and activities. Finance, promotion, joint use of areas and facilities, group and individual activities, yearly programs, and future trends.

**P E 5233 Adapted Individually Prescribed Program Practicum**

**3 credits: 3 hours lecture**

Diagnostic and prescriptive evaluation in adapted physical education with hands-on testing exposure in areas of low motor ability and fitness. The Adapted Physical Education Individualized Program and its relation to the Special Education Individualized Education Program (IEP) will be stressed.

**P E 5243 Kinesiology**

**3 credits: 3 hours laboratory**

Human movement and related anatomical and mechanical principles. Biomechanical analysis of joint movement, stability and range of movement, neuro-muscular physiology, and electromyography. Topics dealing with competition, cooperation, the audience, leadership, group interaction and maturation will be considered along with analysis of the cultural significance of sports in contemporary society.

**P E 5313 Applied Nutrition in Wellness and Sports**

**3 credits: 3 hours laboratory**

The practical application of modern principles to develop nutritional plans for students, sports participants, and later life fitness. Modern computerized nutritional programs utilized and hands-on experience with modern instrumentation and case studies provided for basal metabolism, lean weight, fat weight, caloric expenditure, and the use of proper exercise with various nutritional plans.

**PSCI Courses**

**PSCI 5013 American Political System**

**3 credits: 3 hours lecture**

Major approaches to the study of American government. Emphasis on approaches to the study of the Presidency, Congress, the Judiciary, political parties, and interest groups.

**PSCI 5103 The Middle East in Global Perspective**

**3 credits: 3 hours lecture**

Major elements of Middle Eastern politics. Emphasis on interaction of cultural, social, political, and economic factors which determine political behavior in the Middle East.

**PSCI 5123 Global Studies**

**3 credits: 3 hours lecture**

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

**PSCI 5133 Selected Readings in Political Science**

**3 credits: 3 hours lecture**

Advanced readings in an area of political science. To be selected in consultation with the course instructor.

**S ED Courses**

**S ED 5523 The Middle School**

**3 credits: 3 hours lecture**

Treats the unique psychological and physiological needs of middle school children; emphasizes articulation between elementary and high school and considers appropriate curriculum and proper co-curricular activities.

**S ED 5543 Special Topics Workshops**

**3 credits: 3 hours lecture**

A series of specially designed workshops which treat major contemporary issues confronting secondary teachers. Limited to 3 hours applicable to degree requirements.

**W LF Courses**

**W LF 5113 Wildlife-Habitat Relationships**

**3 credits: 3 hours lecture**

Develops an indepth understanding of the concepts associated with wildlife-habitat relationships. Will combine ecological theory, natural history, and quantitative tools to develop concepts and address applications.

**W LF 5123 Landscape Ecology**

**3 credits: 3 hours lecture**

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