

Department of Forestry

Forestry Major

Major Advisor: Dr. Stephen C. Grado

Office: 357 Thompson Hall

The Objective. The objective of the Forestry Major is to prepare its graduates for professional, science-based careers in the management and use of forested ecosystems. By combining courses offering a broad general education with specialized professional courses, the curriculum of the Forestry Major is designed to produce professionally competent graduates who have appropriate development in interpersonal relations, written and oral communications, cultural understanding, environmental awareness, and professional ethics.

Accreditation. Educational programs in the Forest Management, Wildlife Management, Urban Forestry, Environmental Conservation, and Forest Products concentrations lead to a professional degree in Forestry at Mississippi State University and are accredited by the Society of American Foresters (SAF), the specialized accrediting body recognized by the Commission of Recognition of Post-secondary Accreditation and the U.S. Department of Education as the accrediting agency for forestry education in the United States. The Forest Products concentration is also accredited by the Society of Wood Science and Technology (SWST).

The Major. The core curriculum of the Forestry Major is comprised of specifically selected and intentionally designed courses which must be completed satisfactorily by each student who intends to graduate in this major. In addition to completing the core curriculum of the Forestry Major, each student must complete one of the five academic concentrations for specialized study offered by the Forestry Major. The five academic concentrations are Forest Management, Wildlife Management, Urban Forestry, Environmental Conservation, and Forest Products. Each concentration is an integral part of the Forestry Major and accredited by the SAF. The Forest Products concentration is also accredited by SWST. Graduates of the major are qualified to become a Registered Forester in Mississippi after completing an examination for this purpose from the Board of Registration for Foresters in Mississippi.

The Forestry Major is designed for completion in four academic years which includes a nine-week Summer Field Program between the sophomore and junior years. Completion of the Summer Field Program is prerequisite to enrollment in junior/senior level professional courses in the Forestry Major and students should plan their schedules accordingly. Correspondence courses are not accepted toward the forestry degree.

Transfer Students. Transfer students are encouraged to enter the Forestry Major at MSU in the Spring semester of their sophomore year to complete their academic programs in the normal four-year period of study. Transfer students should be aware that course work taken elsewhere may not be accepted toward a degree in forestry. Only course work that is determined by the Forestry Department to be equivalent to required course work will be accepted. In addition, no course work will be considered for acceptance unless a grade of C or better has been earned.

Degree Requirements: In addition to General Education and College requirements students must attain a minimum grade of C on the Forestry Major core courses taught within the College of Forest Resources.

Forestry

General Education Requirements

English Composition

EN 1103	English Composition I	3
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	3
or EN 1173	Accelerated Composition II	

Mathematics

See concentration for requirements		3
ST 2113	Introduction to Statistics	3
or BQA 2113	Business Statistical Methods I	

Natural Science

CH 1043	Survey of Chemistry I	3
BIO 1134	Biology I	4

Humanities

See General Education courses		6
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Fine Arts

See General Education courses		3
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Social/Behavioral Sciences

FO 4113	Forest Resource Economics	3
Choose one of the following:		3
AEC 2713	Introduction to Food and Resource Economics	
EC 2113	Principles of Macroeconomics	
EC 2123	Principles of Microeconomics	

Major Core ¹

BIO 1144	Biology II	4
EPP 3124	Forest Pest Management	4
FO 1101	Forest Resources Survey	1
FO 2113	Dendrology	3
FO 2213	Forest Measurements	3
FO 3012	Introduction to Forest Communities	2
FO 3015	Forest Description and Analysis	5
FO 4123	Forest Ecology	3
FO 4213	Forest Biometrics	3
FO 4221	Practice of Silviculture Laboratory	1
FO 4223	Practice of Silviculture	3
FO 4231	Introduction to Wood Supply Systems	1
FO 4233	Forest Operations and Harvesting	3
FO 4313	Spatial Technologies in Natural Resources Management	3
FO 4323	Forest Resource Management	3
FO 4413	Natural Resources Policy	3
FO 4423	Professional Practice	3
PSS 3303	Soils	3
WFA 3031	Introductory Wildlife/Fisheries Practices	1
WFA 4153	Principles of Wildlife Conservation and Management	3

Oral Communication Requirement

CO 1003	Fundamentals of Public Speaking	3
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Computer Literacy Requirement

FO 3103	Computer Application in Forest Resources	3
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Writing Requirement

Choose one of the following: 3

AIS 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences
MGT 3213	Organizational Communications
BIO 3013	Professional Writing for Biologists

¹ Note: Prerequisites and co-requisites are strictly enforced in the College of Forest Resources. It is the student's responsibility to be aware of prerequisites and co-requisites for all courses required in his or her program; prerequisites and co-requisites are identified in the Course Description section of this Bulletin.

Choose one of the following concentrations:

Academic concentrations within the Forestry Major are offered to encourage the student to design a program with the assistance of a faculty advisor that will fit his or her interests and aptitudes. Each concentration has been constructed by substituting restricted, or in some cases directed, electives for what otherwise would appear as Business, Science, Free, or Professional electives in the major. Concentrations are intended to provide opportunities for the student to focus beyond the fundamental education provided by the core curriculum of the Forestry Major.

Forest Management Concentration (FOMG)**Advisor: Dr. Ian A. Munn**

349 Thompson Hall

This concentration provides the basic education necessary to enter the profession of forestry with the Bachelor of Science degree, yet permits a wide choice of electives. The student may elect courses in almost any subject of interest, if prerequisites are met; however, credit toward the degree will not be allowed for remedial courses, nor for courses covering substantially the same material as courses already passed, or covering only part of the subject matter of required courses.

Faculty advisors are assigned to assist students in selecting electives to meet their personal objectives. A program of study leading to a degree in forestry and a business minor is available.

Courses to be taken in addition to those in the core curriculum of the Forestry Major are as follows:

MA 1313	College Algebra	3
PH 1113	General Physics I	3
or PH 2213	Physics I	
FP 1103	Wood Technology and Products	3
FO 3113	Forest Recreation Management	3
Business/Science Electives ¹		9
Professional Electives ¹		9
Free Elective		3
Total Hours		128

¹ Professional electives and Business/Science electives are chosen from a list approved by the Department of Forestry.

Wildlife Management Concentration (WFMG)**Advisor: Dr. Emily B. Schultz**

315 Thompson Hall

Undergraduate students who wish to prepare for careers in wildlife management may do so by completing the Wildlife Management Concentration of the Forestry Major. This concentration is designed for forestry students who intend to pursue careers that emphasize wildlife management within the context of multiple-use management of forest land. In addition, the Wildlife Management concentration prepares the student for a number of wildlife management positions and fulfills the course requirements for certification as a Professional Wildlife Biologist by The Wildlife Society. Graduates of this concentration may undertake graduate studies in forestry or wildlife ecology and related areas.

Courses to be taken in addition to those in the core curriculum of the Major are as follows:

MA 1313	College Algebra	3
BIO 3524	Biology of Vertebrates	4
BIO 4203	Taxonomy of Spermatophytes	3
FO 4353	Natural Resource Law	3
WFA 3133	Applied Aquatic and Terrestrial Ecology	3
WFA 4243	Wildlife Techniques	3
WFA 4433	Mammalogy	3
WFA 4443	Ornithology	3
Professional Elective ¹		3
Physical Science Elective		3
Total Hours		126

¹ Professional electives are chosen from a list approved by the Department of Forestry.

Environmental Conservation Concentration (ENCO)**Advisor: Dr. Scott D. Roberts**

351 Thompson Hall

Students interested in careers dealing with complex environmental issues in the realm of forest resource management may prepare themselves through this concentration. All students within this concentration are required to take the following seven courses:

MA 1313	College Algebra	3
PH 1113	General Physics I	3
or PH 2213	Physics I	
WFA 3133	Applied Aquatic and Terrestrial Ecology	3
FO 3113	Forest Recreation Management	3
FO 4463	Forest Hydrology and Watershed Management	3
Choose one of the following:		3
FO 4472	GIS for Natural Resource Management	
& FO 4471	and GIS for Natural Resource Management	
FO 4452	Remote Sensing Applications	
& FO 4451	and Remote Sensing Applications Laboratory	
Emphasis Electives ¹		14
Total Hours		127

¹ See Department Advisor for list of currently approved emphasis electives.

Urban Forestry Concentration (URBN)

Advisor: Dr. Stephen C. Grado

357 Thompson Hall

This concentration addresses an emerging need for the management of trees in towns and cities. Urban foresters manage trees along city streets, in municipal parks, private wood lots, and utility right-of-ways. Employers include federal, state, and municipal governments, private consultants, and industry.

Courses to be taken in addition to those in the core curriculum of the major are as follows:

MA 1313	College Algebra (or equivalent)	3
FO 3113	Forest Recreation Management	3
FO 4353	Natural Resource Law	3
Choose one of the following:		3
FO 4471 & FO 4472	GIS for Natural Resource Management and GIS for Natural Resource Management	
FO 4452 & FO 4451	Remote Sensing Applications and Remote Sensing Applications Laboratory	
LA 3623	Urban Planning Theory	3
PS 1113	American Government	3
PSS 2423	Plant Materials I	3
PSS 4353	Arboriculture and Landscape Maintenance	3
REF 3333	Principles of Real Estate	3
REF 3433	Real Property Evaluation	3
Total Hours		128

Forest Products Concentration (FP)

Advisor: Dr. Laura A. Grace

309 Thompson Hall

This concentration is designed for students interested in the forest products industry. The program of study consists of the core courses for the university and the forestry major, plus courses specific to the concentration.

MA 1613 or MA 1713	Calculus for Business and Life Sciences I Calculus I	3
CH 1053	Survey of Chemistry II	3
PH 1113	General Physics I	3
FP 1103	Wood Technology and Products	3
FP 4013	Wood Anatomy	3
FP 4323	Physical Properties of Wood	3
FP Processing Elective ¹		3
FP Electives ¹		12
Total Hours		128

¹ See Departmental Advisor for list of current approved electives.

Forest-Based Entrepreneurship Certificate

The current trend in forestry and forest-based employment is downsizing and outsourcing. The shift has been especially abrupt in the forest industry sector, but similar moves are afoot in the public sector. As a

consequence, two major markets for our graduates—corporations and agencies—are decreasing while employment with entrepreneurial scale firms is on the increase. Entrepreneurial scale firms are businesses with one to 50 employees, organized as a sole proprietorship, partnership, limited liability company, S corporation, or C corporation that provide a specialized set of services or produce specialized products supporting and supported by forests and forest resources or forest products. They may be forestry, wildlife, or wood products consultants, logging firms, small manufacturing firms, security or environmental auditors, operators of recreational facilities, tree service firms, or operators of wholesale and retail sales facilities serving customers in forest-based or affiliated businesses. Basic professional skills required are much the same as for traditional employment, but the business skills, acumen, and demands are quite different. The certificate program is directed at preparing our students to compete more effectively in this growing market.

Admission to the Program and Requirements for Certificate

The program is open to students in good standing in the department. Each applicant must have the support of a faculty mentor. The certificate candidate must complete the following classes with a minimum QCA of 2.5, and will be encouraged to use electives to strengthen his/her background in the area.

ACC 2013	Principles of Financial Accounting	3
BL 2413	The Legal Environment of Business	3
FO /FP /WFA 7000	Directed Individual Study in Forestry	3
MGT 3323	Entrepreneurship	3
PHI 3013	Business Ethics	3

Courses for which the student receives a grade of D cannot be applied. Only two required courses can be transferred from another institution. In addition, each candidate must, during their senior year, prepare, submit, and defend a business plan for a forest-based enterprise. Reports will be approved by the mentor, submitted to an oversight committee for review.

Issuance of Certificates: The Associate Dean will, upon approval of the report by the oversight committee, review the student's records to assure that grade requirements for the certificate have been maintained. If all requirements have been met, the Associate Dean will submit the candidate to the Dean of the CFR for certificate issuance and notify the registrar to have a statement placed on the candidate's transcript. Certificates will be issued with the B.S. degree.