

GRADUATE PROGRAMS SCHOOL OF FOREST RESOURCES

Master of Science Degree (M.S.) Degree in Forest Resources

Graduate Faculty

Professors Kluender (Dean), Sundell, Tappe, Thompson, Weih, and Zeide; Research Professor Patterson; Associate Professors Doruska, Liechty, and Pelkki; Assistant Professors Defee, Ficklin, Kissell, Mehmood, and White.

Mission

The mission of the School of Forest Resources is to educate professional natural resource managers, to enlarge the body of knowledge in renewable forest resources and to disseminate new ideas and technology. Successful accomplishment of this mission will promote and enhance management, conservation and appreciation of public and private forests, thereby providing for continuous production and optimum attainment of a variety of forest resources for the people of Arkansas, the southern U.S. and the Nation. These resource benefits include the production of wood and fiber, wildlife, and clean water; as well as provision for recreation, aesthetic and other important values.

Educational Goals and Objectives of the Graduate Program

The School of Forest Resources is committed to providing post-baccalaureate students with the opportunity to enhance their educational goals through a program of study, teaching, and research in an environment that promotes freedom of expression, intellectual inquiry, and professional integrity. The goal of the School of Forest Resources is to enhance students' understanding of forest resources and their management, and to prepare students for lifelong learning and pursuit of career goals through advanced study.

A student who graduates with a M.S. Degree in Forest Resources should:

1. Have an advanced understanding of biological principles relating to forest resources and ecosystems.
2. Have an advanced understanding of natural resource issues and topics pertinent to an individual's program of study and career goals, and be able to apply this knowledge in the decision making process.
3. Be able to apply the scientific method in designing, implementing, analyzing, interpreting and integrating studies related to forest resource management problems and issues.
4. Be able to communicate effectively using written and oral communication skills in technical and non-technical settings.
5. Have good decision-making and critical thinking skills.

Admission Requirements and Classification

To be admitted for pursuing the degree of M.S. in Forest Resources, a student must first be admitted with graduate status to the University of Arkansas at Monticello. Additionally, the student must submit an application to the School of Forest Resources along with three completed reference forms. Specific additional requirements are listed

below.

It is recommended that applicants have a baccalaureate 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 cognate work. Applicants whose record shows an insufficient background in natural resources will be required to enroll in undergraduate cognate course work (and the prerequisites to those courses) that will not count for credit toward a degree. This course work will be scheduled in consultation with the student's advisory committee.

Applications for admission to the M.S. in Forest Resources degree program must normally be received by August 1 for the fall semester and January 1 for the spring semester. In order to be considered for a Graduate Assistantship, admission applications must normally be received by June 1 for the fall semester and November 1 for the spring semester.

Regular Admission

To obtain regular admission, applicants must have a grade point average (GPA) 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 an accredited institution of higher education. Applicants must have completed the Graduate Record Examinations general test and been accepted for graduate study by the School of Forest Resources Dean and a School of Forest Resources faculty member willing to serve as that student's Major Advisor. 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.

Conditional Admission

Students that do not meet the criteria for regular admission 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 3.0 or better in their initial 9 hours of graduate course work to continue graduate studies in the program. Students are not eligible for a graduate assistantship during conditional status.

International Student Admission

International students must meet all criteria required by the University of Arkansas at Monticello to be admitted with graduate status. A minimum total score of 550 (paper-based) or 213 (computer-based) on the Test of English as a Foreign Language (TOEFL) is required, as is a minimum score of 55 (paper-based) or 21 (computer-based) on each section of the TOEFL. In addition, international students must also have a satisfactory score on the Graduate Record Examinations general test, and acceptance by the School of Forest Resources Dean and a major professor.

Graduate Assistantships

A limited number of part-time graduate assistantships are available through the School of Forest Resources. These are awarded to outstanding students who can make

valuable contributions to the School of Forest Resources teaching, research, and service programs. In order to be considered for a Graduate Assistantship, an application for admission to the M.S. in Forest Resources degree program must normally be received by June 1 for the fall semester or November 1 for the spring semester. When offered, graduate assistantships provide students a stipend, renewable annually, for up to 24month months. Renewal is contingent upon satisfactory fulfillment of obligations and responsibilities. Graduate Assistants are provided further financial assistance through the waiver of tuition and certain fees. This waiver covers only required coursework as outlined on an approved degree plan: it does not include tuition and fees for required cognate courses or courses not listed on the degree plan. Additionally, work/study space is provided for each Graduate Assistant.

Student Advising Major Advisor

Prior to a student enrolling in the School of Forest Resources graduate program, a School of Forest Resources faculty member must agree, with the concurrence of the School of Forest Resources Dean, to serve as that student's Major Advisor. The Major Advisor assists the student in choosing members of an Advisory Committee and developing a program of study, guides the formulation of a thesis proposal and the conduct of the research project, and assists in providing resources for the research project.

Advisory Committee

During the first semester of enrollment, the student and the Major Advisor must select a three- to five- member Advisory Committee and submit their selections for approval to the Director of Graduate Studies and the Dean of the School of Forest Resources by March 15 (spring semester) or October 15 (fall semester). The Advisory Committee serves to guide a student in program development, approves the program of study, makes recommendations on the thesis proposal, approves the thesis proposal, and administers the comprehensive examination. The Committee must consist of the Major Advisor and two other graduate faculty members in the School of Forest Resources and/or Arkansas Forest Resources Center. Additionally, up to two additional Committee members may be selected from the School of Forest Resources; the Arkansas Forest Resources Center; other members of the Graduate Faculty; other institutions within the University of Arkansas System; or from other qualified individuals from cooperating institutions, agencies, or industries, provided they are awarded Graduate Faculty status.

Degree Plan

Each student will be required to develop a degree plan with the advice and approval of his or her Advisory Committee. The degree plan will include an individualized sequence of courses in addition to a required forest resources core curriculum. A total of 30 hours containing at least 24 – 27 hours of course work and 3 – 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. If indicated on an approved degree plan, up to 6 hours of undergraduate courses numbered at the 3000- or 4000-level may be used to satisfy course

requirements.

The student, Major Advisor, and Advisory Committee members must all approve and sign the degree plan. The degree plan must then be submitted for approval to the Director of Graduate Studies and the Dean of the School of Forest Resources during the first semester of enrollment by May 1 (spring semester) or December 1 (fall semester). Once approved, the document will then be forwarded to the Registrar's Office.

Transfer Credit

A maximum of six hours of graduate-level course work completed prior to development of a degree plan may be transferred to the University of Arkansas at Monticello from another university, provided the course subjects are acceptable to the School of Forest Resources faculty as a part of the program of study. Up to 15 hours of course work completed at other Universities in the University of Arkansas System 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 the University of Arkansas – Monticello will not be accepted for transfer credit. Additionally, no courses with grades below a "B" will be accepted for transfer credit.

Academic Status

Graduate students may earn grades of A, B, C, D or F, except for Research and Thesis and required undergraduate cognate course work that does not count for credit toward a degree. Research/Thesis is graded as Pass/Fail, with a grade of Incomplete awarded until a thesis has been approved and a comprehensive examination has been passed. Required undergraduate cognate course work that does not count for credit toward a degree may be graded as Pass/Fail if so recommended by a student's Advisory Committee.

The grades of A, B, C, D and F indicate the following: A – excellent, B – good, C – marginal, D – poor, and F – failing. A cumulative GPA of 3.0 out of 4.0 must be maintained to complete degree requirements and to retain a graduate assistantship. No more than two courses with a grade of "C" may be applied toward degree requirements. A student whose grade record includes three courses with grades of "C" or lower may not maintain graduate status unless the Graduate Council, upon petition from a graduate faculty member, has authorized a plan of study for the student. Three courses with grades of "C" or lower will also result in the loss of a Graduate Assistant stipend. A student may not repeat a course in which a grade of "B" or higher is earned.

Course Loads

The maximum course load must not exceed 12 hours during the fall and spring semesters. The maximum load for each summer term is three hours. Students who hold a graduate assistantship must enroll for a minimum of six hours during the fall and spring semesters and one hour for each summer term.

Course Withdrawal

In order to withdraw from a course, a student must first obtain approval from their Major Advisor and Advisory Committee. For students receiving a graduate assistantship,

approval is also required from the Director of Graduate Studies and the Dean. The intent of the graduate assistantship is to help support a graduate student through their graduate program. One of the ways this is done is by paying for courses designed as “required” on an approved degree plan. Since a dropped course cannot be applied to a graduate program, a student receiving an assistantship will be required to reimburse the School of Forest Resources for the cost of the course(s). The graduate assistant will not be allowed to enroll until the bill is paid. If withdrawing from a course causes a student receiving a graduate assistantship to be enrolled in less than 6 hours during a spring or a fall semester, or no (0) hours during a summer term, the assistantship will be forfeited.

Continuous Enrollment

All degree-seeking graduate students are required to be enrolled for at least one hour each semester (including summer terms) until all requirements for the Master of Science in Forest Resources degree are fulfilled. A student who has not enrolled in graduate course for two semesters and who has not received written permission for a time-limited period of inactivity, will be terminated from the School of Forest Resources graduate program. An approved period of inactivity should not normally exceed one calendar year. Faculty are under no obligation to assist a student with graduate work when the student is not currently enrolled.

Time Limit

To fulfill degree requirements, course credits can be used for a maximum of six years from the time of entry into the School of Forest Resources graduate program.

Thesis Proposal

Each student will be required to develop a thesis proposal with the advice and approval of his or her advisory committee. The thesis proposal consists of a justification, literature review, and plan of action for the thesis project. This proposal serves the purpose of formulating a proper protocol for the research and allows the student’s Advisory Committee to evaluate (i.e., accept, expand, or reduce) and approve the intended work. The student, Major Advisor, and Advisory Committee members must all approve the thesis proposal and sign the cover sheet. The thesis proposal must then be submitted for approval to the Director of Graduate Studies and the Dean of the School of Forest Resources during the second semester of enrollment by May 1 (spring semester) or December 1 (fall semester).

Thesis and Comprehensive Examination

An approved thesis is required for completion of the M.S. in Forest Resources degree. Students are required to define an appropriate problem for investigation; review relevant literature; develop a thesis proposal; collect, analyze, and interpret data; test hypotheses and draw conclusions; and write and defend a thesis.

At the conclusion of the study and research program, a seminar and an oral comprehensive examination, including a thesis defense, is required of all graduate students for completion of the M.S. in Forest Resources degree. Enrollment in at least one hour of Research and Thesis is required during the semester the examination is taken.

Immediately prior to the examination, all students are required to present a

seminar on their thesis work. This seminar is open to the university academic community at-large. Following the seminar, the Advisory Committee and one additional graduate faculty member appointed as a witness by the Dean of the School of Forest Resources administer the examination. The primary role of the witness is to confirm the examination is administered properly and fairly with sufficient academic rigor to ensure that the student has successfully mastered the thesis material. Others may observe the examination upon petition to and 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 School of Forest Resources graduate program.

After successfully completing a thesis defense, any required changes to the thesis should be completed in not more than six months. Failure to complete required changes within this time period will result in withdrawal from the graduate program.

Summary of Graduation Requirements

For graduation, each student must successfully complete 24 – 27 semester hours of course work and 3 – 6 hours of Research and Thesis, as outlined in an approved degree plan. A cumulative grade point average of 3.0 or higher is required with no more than two courses with a grade of “C”. In addition, each student must complete an approved thesis and pass an oral comprehensive examination. The thesis format must be approved, and a completed Intellectual Property Form (and completed Invention Disclosure Form, if necessary) must be on file in the Office of the Vice Chancellor for Academic Affairs. Five unbound copies of the thesis in prescribed form (not including a student copy) must be submitted for binding to the University Library, with the binding fees paid at that time.

Expulsion and/or Withdrawal

Any graduate student whose course or thesis work is unsatisfactory, who fails to make adequate progress, or who violates student conduct or employment rules may be withdrawn from the School of Forest Resources Graduate Program at any time upon the recommendation and agreement of the Major Advisor, the student’s Advisory Committee, and the Dean of the School of Forest Resources.

Forest Resources Graduate Core Curriculum:

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| FRS 5113 | Statistics in Research I | 3 hours |
| FRS 5123 | Statistics in Research II | 3 hours |
| FRS 5223 | Forest Ecosystem Ecology | 3 hours |
| FRS 5691 | Seminar (two required) | 2 hours |
| FRS 5102 | Research Methods | 2 hours |
| FRS 579V | Research and Thesis | 3-6 hours* |

*Based on the scope of individual thesis projects and determined by the Advisory Committee.

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| Electives:..... | 11-14 hours |
| Total Hours:..... | 30 hours |

Forest Resources Graduate Courses:

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| FRS | 502V | Special Topics |
| FRS | 5033 | Advanced Forest Soils |
| FRS | 5043 | Advanced Geographic Information Systems I |
| FRS | 5053 | Advanced Geographic Information Systems II |
| FRS | 5063 | Remote Sensing |
| FRS | 5073 | Spatial Statistics |
| FRS | 5083 | Digital Photogrammetry |
| FRS | 5102 | Research Methods |
| FRS | 5113 | Statistics in Research I |
| FRS | 5123 | Statistics in Research II |
| FRS | 5133 | Wildlife-Habitat Relationships |
| FRS | 5143 | Landscape Ecology |
| FRS | 5153 | Wildlife Population Analysis and Management |
| FRS | 5203 | Human Dimensions in Natural Resources |
| FRS | 5223 | Forest Ecosystem Ecology |
| FRS | 5233 | Natural Resource Policy |
| FRS | 5253 | Advanced Forest Economics |
| FRS | 5283 | Tree Growth and Wood Properties |
| FRS | 5303 | Forest Modeling |
| FRS | 5313 | Digital Remote Sensing |
| FRS | 5433 | Forest Stand Dynamics |
| FRS | 5691 | Seminar |
| FRS | 5723 | Advanced Natural Resource Management |
| FRS | 573V | Forest Enterprise |
| FRS | 579V | Research and Thesis |
| FRS | 589V | Independent Study |