FOREST, RANGELAND, AND FIRE SCIENCES (M.S.)

Candidates must fulfill the requirements of the College of Graduate Studies and of the College of Natural Resources. Graduate programs are offered in many forest and rangeland specialization areas including Ecology and Biogeosciences of Forest and Rangeland Ecosystems: ecosystem processes/modeling, biometrics, biogeochemistry, hydrology and ecohydrology, remote sensing and geospatial ecology, landscape ecology, community ecology, population ecology, ecosystem ecology, disturbance ecology, paleoecology, restoration ecology, ecophysiology, global environmental change, conservation biology/genetics, and molecular plant systematic; Forest Sciences and Management: forest mensuration, forest regeneration, forest ecosystem management, tree physiology, forest pathology, forest policy, forest operations, silviculture, forest ecology, and forest genetics; Fire Sciences and Management: fire effects and recovery, fire behavior, fuels management, biophysical controls of fire and fire regimes, air quality and smoke management, fire history, and fire ecology; Rangeland Sciences and Management: grazing behavior and management, invasive plant management, livestock-wildlife relations, rangeland and habitat management, rangeland riparian management, and rangeland ecology.

Admission to the graduate program is based on: evidence of ability to complete graduate-level work as discerned from undergraduate transcripts, the applicant's statement of career objectives, and letters of recommendation; the compatibility of the student's educational and career objectives with faculty expertise and departmental objectives; and availability of graduate faculty to act as major advisor for an applicant. An undergraduate degree related to our programs is also recommended but an applicant may be accepted with the understanding that certain course deficiencies may be required by the student's advisory committee.

Students can transfer up to 12 approved credits taken as a non-degree seeking student into a MS or PhD program in the College of Natural Resources with permission of the departmental graduate committee. Students who are considering transferring non-degree credits into a CNR graduate program should request early advising from the appropriate department.

Master of Science. Major in Natural Resources.

The M.S. degree is available with a major in natural resources. Thesis and non-thesis options are offered.

1. Thesis option: General M.S. requirements apply. However, the thesis may be comprised of a manuscript(s) in a form acceptable for publication in a refereed journal, while otherwise fulfilling format requirements of the Graduate College.

2. Non-thesis option: General M.S. requirements apply. A written and/or oral examination that covers graduate course work must be taken during the final semester in residence. At least one professional paper is required and will be evaluated by the candidate's supervisory committee.

1. Demonstrate understanding of the scientific method and qualitative/quantitative analysis methods.

2. Critically synthesize existing knowledge in science and their natural resource discipline and describe how their research represents a step forward towards the generation of new knowledge.

3. Critically apply theories, methodologies, and knowledge to address important questions in natural resources.

4. Conduct research of significance in a natural resource discipline or as part of a disciplinary or an interdisciplinary or creative project.

5. Plan and conduct this research or implement this project under the guidance of an advisor and/or committee while developing intellectual independence.

6. Develop potential ability in disseminating oral communication to peers in disciplinary research areas.

7. Develop potential ability in disseminating written communication to peers in disciplinary and/or interdisciplinary research areas.

8. Develop potential ability in disseminating and presenting complex information to non-science groups.

9. Develop potential expertise in a specialized research area in natural resources.

10. Demonstrate self-defined pathway for career following defense.

11. Develop potential ability for leadership in natural resource discipline.

12. Interact productively with people from diverse backgrounds and team members with integrity and professionalism.

13. Develop potential ability, through service, for the value of their discipline to the academy and community at large.

14. Follow the principles of ethics in their field and in academia.