



AUBURN UNIVERSITY

College of Forestry, Wildlife and Environment

Overview

The Forest Soils and Biogeochemistry Lab at Auburn University (AU) is seeking one PhD student and one MS student to perform research associated with soil biogeochemistry and forest health in the Southeast region. The two graduate students will work together and supervise undergraduates in the field and laboratory to

1. Assess soil physicochemical properties and microbial activities under repeated prescribed fires and forest thinning
2. Analyze existing, multi-decadal vegetation and litter data to explore plant-soil-microbe interactions in a changing environment
3. Examine the impact of microplastic pollution on soil nutrients and microbes.

The hired students are expected to join and lead a three-week field campaign in summer 2026. The team will travel to multiple field sites and research stations in the southeast (AL, GA, NC, SC) to collect and pre-process soil and litter samples. Samples will be brought or shipped back to AU for further laboratory analysis. Students are welcome to build their own projects within the scope of soil health and nutrient cycling.

Responsibilities

1. Conduct literature reviews and learn/develop experimental protocols
2. Attend weekly or biweekly lab meetings to share updates and give comments
3. Generate, organize, and analyze data
4. Write and publish manuscripts in peer-reviewed scientific journals
5. Present research findings at local, national, and international conferences

Minimum Qualifications

1. BS degree in Forestry, Ecology, Environmental Science, Natural Resources, or a related field; MS degree is required if applying for PhD
2. Meet admission standards for the Auburn University Graduate School (<https://graduate.auburn.edu/>); International applicants please visit <https://graduate.auburn.edu/prospective-students/general-admission-requirements/> for English language score requirements
3. Ability to work independently and with others as a team

Preferred Qualifications

1. Ability to locate study sites/plots using GPS units and maps
2. Soil, water, and vegetation sampling experience
3. Soil geochemical and microbial analysis experience
4. Quantitative skills and writing experience
5. Valid driver's license (or ability to obtain one in several months)

Estimated Start Date and Stipend

PhD student, January 2026, \$26,500 per year + tuition remission and benefits

MS student, June 2026, \$23,500 per year + tuition remission and benefits

Financial support is typically provided for four years for PhD and two years for MS, subject to annual evaluation.

About Forest Soils and Biogeochemistry Lab

Research in the Forest Soils and Biogeochemistry Lab investigates the fate of carbon and other elements in forest soil and its surrounding environment to address soil conservation issues and develop sustainable practices. We integrate field measurements, laboratory experiments, and computational statistics to examine soil biogeochemical responses under warmer climate, shifted precipitation regimes, and disturbances in forest ecosystems. The lab consists of a main laboratory room, a soil texture room, two storage rooms with field equipment, and a shared walk-in refrigerator. The main laboratory room houses a Biological Digital Microscope, a Deionized Water System, a Shimadzu Total Organic Carbon Analyzer, an Electronic Thermostat Hova-Bator Incubator, an Isotemp Programmable Muffle Furnace, a Chloroform fumigation-extraction station, and a brand-new FlashSmart Elemental Analyzer.

Visit [Dr. Yang's profile](#) to learn more about the lab and research activities. Information regarding PhD and MS programs in the college of Forestry, Wildlife and Environment can be found at <https://cfwe.auburn.edu/graduate-study/graduate-degrees/>.

To Apply

Please email the following materials as a single PDF document to Dr. Yang Yang at yangy@auburn.edu, with the subject line "Potential Graduate Student at AU."

1. A cover letter (1 page max) outlining the research interests, relevant experience, and professional goals
2. Resume/CV and contact information only from three professional references
3. Unofficial transcripts

Applications will be reviewed on a rolling basis and accepted through August 31, 2025. If selected, the applicant(s) will be invited for a short virtual interview before submitting a complete application. A complete application includes a cover letter, Resume/CV, official transcripts, English language score (International students only), and three letters of recommendation. Please reach out with any questions.