

Sophia Foliano
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Educational History:

Courses: Climate Change Impacts, Environmental Regulations, Environmental Law, Ecology, Environmental Geology, Basic Soil Science, Analytical Chemistry, Physics I & II, Wastewater Treatment and design, Nutrient Management, GIS (Geographic Information Systems), Forest management, Forest History in Southeastern United States, Experimental Statistics, Science Communication

Science Communication:

Paleolimnology & Geography Undergraduate Research – assisted with charcoal data collection for a graduate student's thesis, then started my project turning a lake sediment core into past climate, vegetation, and fire data using the software CHARTOOL to record charcoal morphologies and morphometric data.

Teaching Assistant (August 2023-Present) - Taught three Concepts of Science labs weekly, prepared lab lectures, set up experiments, cleaned labs, hosted office hours, held makeup labs for all COS students, substituted for other TAs, and graded. I communicated scientific concepts into basic ideas for nonscience undergraduates for the lecture part of the lab. (Fall 2024)- Teaching four Concepts of Science Labs. CANVAS experience.

Charcoal Method Lab Teacher (January 2024)- Taught undergraduate and graduate students sediment preparation, charcoal extraction, and data collection techniques. As well as microscope work and charcoal identification variables.

Member of the Sigma Gamma Epsilon Auburn University Chapter (August 2023-December 2024)- Attended monthly meetings and helped plan events in the Geosciences department to help communicate science to the surrounding community.

Graduate Mentor (October 2023-August 2024)- Advised a geology undergraduate student. I have taught them lab methods, charcoal procedures, and data collection techniques. I helped them weekly in the lab and answered any questions they may have.

Earth Day Extravaganza (April 2022, 2023, 2024)- Ran the Crop, Soil, and Environmental Sciences booth (2022, 2023) teaching the filtration process of soils, soil tie dye shirt activity, and painting with soils. Helped the Geosciences (2024) rock painting booth and communicating science to a broad audience.

Thesis Proposal Presentation (April 2024)- Presented my thesis proposal defense for the Sigma Gamma Epsilon Club (Geosciences Graduate Club)

Science Olympiad Volunteer (March 2024)- Helped competing teams with any questions on their test and helped grade their wind turbine project and tests. Helped resolve speedometer problems.

REU Mentor (Summer 2024, 2025)- I created research projects for undergraduate REU students. Held check-up meetings with my mentee, provided relevant scientific literature, and helped with their abstract.

AMQUA Conference (August 2024)- I presented a two-minute spoken abstract of my thesis research and then presented my thesis poster.

Graduate Projects:

Lake Marian fire reconstruction, Lake Coba fire reconstruction and carbon dating shells, International Ocean Drilling Project fire reconstruction

Grant Proposal Applications:

Students 2 Action, Diversity Knowledge Students, GAB, Global Change Research Fellowship, AMQUA Travel Grant

Received Funding:

Geosciences Advisory Board Spring Student Travel Award 2024 (\$600)

AMQUA Student Travel Grant 2024 (\$350)

Employment/Volunteer:

USDA-NRCS, Normal, AL (May 2021 - August 2021)

Soil Scientist Intern – Learned how to take and classify soil samples, used GIS to map the soil classifications, and input into the USDA’s WEBSOILSURVEY website.

M. Oldam Barnett, LLC, Remote (May 2022 - August 2022)

Technical Expert Research Assistant – Worked under Dr. Barnett on technical issues related to an ongoing lawsuit, including wastewater treatment, water quality, and disinfectant byproducts, using EXCEL to graph the collected data, and outreach to accumulate needed information.

Brighter Design Co., Auburn, AL (August 2023 - July 2024)

Helped promote a small business make jewelry and create designs.

Leadership Roles:

Crop, Soil, and Environmental Sciences Club Treasurer, Auburn, AL

(May 2021-May 2022)

Kept up with club finances and ran social media. Quiz Bowl Participate in the Students in Agronomy, Soils, and Environmental Sciences (SASES) conference in Salt Lake City, Utah. SASES National Communication Officer Nomination.

Plant-Based Plainsman Vice President, Auburn, AL

(May 2021 -May 2023)

Coordinated club meetings, planned activities, and posted informational and promotional graphics. I set up and monitored the goals of the club. We engaged with diverse groups on campus to promote plant-based eating for health, climate, and animal rights reasons.

Search Committee for Auburn’s Agriculture Head of Department, Auburn, AL(April 2022 - April 2023)

Undergraduate Representative –Voiced the opinions of undergraduate students in the College of Agriculture. Helped create the job posting and reviewed applications for the HOD.

Crop, Soil, and Environmental Sciences Club President, Auburn, AL
(May 2022-May 2023)

Organized and coordinated meetings, events, and volunteer opportunities. I coordinated the food for the meetings following our budget, projected attendance, and picked up orders in a timely manner. I coordinated the CSES merch table and promotions. I competed in the President's Trophy Contest at the Students in Agronomy, Soils, and Environmental Sciences (SASES) conference in Baltimore, Maryland, on the SASES Delegate Committee. Prepared topics for each meeting, held graduate question panels, and hosted activities for mental health the week of finals. I received the Sustainability of Auburn Award in 2023 for promoting more sustainable living and setting up a compost bin for the department.

Sigma Gamma Epsilon Member (Geosciences Graduate Club) (Fall 2023-Fall 2024)

Volunteered to make Dynamic Earth Lab kits and attended meetings.

Geosciences Student Excellence and Accountability Committee (G-SEAC) Graduate Mentor-Mentee Chair (Fall 2024)

I proposed new ideas for better communication and pairing of graduate students in the Geosciences department. I created quizzes and events to match the best mentors with mentees. I created ideas and better involvement techniques for the Geosciences Student Excellence and Accountability Committee (G-SEAC) Graduate assistant.

Graduate Student Advisory Committee (Fall 2024)

We held monthly meetings with the Geosciences department chair to help improve the department.

AMQUA Conference Poster Presenter (August 2024)

Volunteering:

Crop, Soil, and Environmental Sciences Club, Auburn, AL
(January 2021 -May 2023)

I volunteered at local stream clean-ups. Donated sweet corn to the East Alabama Food Bank. Environmental education at local elementary schools. I was setting up and maintaining the club's compost bin. We conducted public outreach to neighboring elementary schools with interactive biology, soils, and climate impact games. Ran the Earth Day Extravaganza Booth for CSES in 2022 and 2023 showing soil filtration, painting with soils, and soil tie-dye shirts. I worked the AG Round-Up tent for Agriculture Alumni and set up boiled peanuts and corn chucking for families before an Auburn Football game. I held a professor dunking booth and local wildflower flyers for the College of AG Welcome Back Picnic. We held soil painting in the college of AG for Finals week to help students unwind.

Plant Ahead, Auburn, AL (January 2023 & 2024)

I volunteered at Kreher Preserve & Nature Center planted native seeds, grasses, and trees to help our local ecosystems.