

The B.S. in Earth and Environmental Sciences



Department of Earth, Environmental, and Sustainability Sciences

Why Earth and Environmental Sciences?

As an Earth and Environmental Sciences major, you will study the physical, chemical, and biological, natural and human processes, in both time and space, which have shaped the planet. Courses are designed to help you understand the complexity, interconnectedness, and dynamic nature of the Earth system.

All of the courses, including the introductory classes, involve a field component. Class excursions include extensive use of the campus living, learning laboratories as well as many local and regional field trips to places like the Okefenokee Swamp, Great Smoky Mountains National Park, Mammoth Cave National Park, and the South Carolina coast including the Cape Romaine Wildlife Refuge and the many barrier Islands along the coast. The highlight of the B.S. degree is an original research project completed in collaboration with a faculty member, the results of which are presented at a local or national professional meeting.

Major Requirements

To fulfill the major requirements, students must complete

- EES 111 - Earth Science and Silver Screen **OR** EES 112 - Environmental Science **OR** EES 113 - Natural Hazards and Natural Disasters **OR** EES 115 - Earth Systems
- EES 220 - Mineralogy and Petrology
- EES 472 - Research and Analysis
- EES 474 - Senior Capstone
- CHM 110 - Foundations of Chemistry
- CHM 115 - Kinetics, Thermodynamics and the Environment
- 6 additional elective courses numbered 200 or above within the department

In addition, all students pursuing Bachelor of Science (B.S.) degree are required to fulfill the Mathematical and Formal Reasoning (MR) general education requirement by taking:

- MTH-120 Introduction to Statistics **AND** MTH-145 Calculus for Management, Life and Social Sciences **OR**
- MTH-150 Analytic Geometry and Calculus I

Students will work closely with their advisor to develop an individualized pathway that includes coursework; co-curricular activities; study away, internships, and research; and professional experiences.

Major electives offered by the EES Department include:

- EES 201 - Geographic Information Systems
- EES 210 - Surficial Processes
- EES 218 - Plate Tectonics and Earthquakes
- EES 220 - Mineralogy and Petrology I
- EES 221 - Mineralogy and Petrology II
- EES 230 - Watershed Hydrology
- EES 301 - Remote Sensing
- EES 310 - Sedimentary Systems
- EES 325 - Structural Geology
- EES 330 - Hydrogeology
- EES 343 - Environmental Systems
- EES 402 - Geochemistry
- EES 410 - Oceans and Climate Systems
- EES 425 - Regional Tectonics

Sustainability Science and The Furman Advantage

100 % of majors participate in undergraduate research project

47 % of majors have studied away



Furman's location at the foothills of the Blue Ridge Mountains and proximity to the City of Greenville provide easy access to a geologically, ecologically, and socially diverse region, with ample opportunity for getting students out into the field and community. Department offers and supports two engaged living programs – the first year Environmental Community of Students (ECOS) Engaged Living Program and the second year Greenbelt Community that are intended to foster and develop student passion for the environment and sustainability through an intentional coupled residential / academic experience. We have a strong tie with the Shi Institute for Sustainable Communities at Furman that offers an array of student fellowship experiences.