

The B.S. in Sustainability Sciences (SUS)

Department of Earth, Environmental, and Sustainability Sciences



Why Sustainability Science?

The grand challenge of sustainability science lies in finding ways to elevate the standard of living for all humans above a social foundation that protects against human deprivation, while at the same time lowering environmental impact below critical natural thresholds. Our SUS curriculum addresses this challenge and associated issues, training students to solve the most pressing complex problems we face as a global society. Our program provides students with a marketable skillset and a problem-based, solution-driven way of thinking, grounded in systems perspectives.

The Sustainability Science major focuses on the critical linkages between environmental, human, and social systems. Classes focus on real world sustainability challenges, such as: food security, energy production, climate change, population growth, production and consumption, economic growth, human security and health, and access to clean water. Our curriculum emphasizes complex systems analysis through project-based learning that integrates theoretical and methodological training in real-world settings to understand sustainability related problems and assessing potential solutions at local and regional scales.

Major Requirements

To fulfill major requirements, students must complete:

- EES-112 Environmental Science
- SUS-120 Principles of Sustainability Science
- SUS-241 Social Systems
- SUS-242 Dynamic System Modeling
- SUS-472 Research and Analysis OR SUS-473 Sustainability Science Practicum
- SUS-474 Senior Capstone
- 6 additional elective courses numbered 200 or above, at least 3 with SUS prefix and at least 1 with EES prefix.

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-230 Watershed Hydrology
- EES-301 Remote Sensing of the Environment
- EES-343 Environmental Systems
- SUS-210 Urban Sustainability
- SUS-320 Consumption and Culture
- SUS-325 Conservation and Communities
- SUS-330 Ecological Economics
- SUS-335 Sustainability and Social Justice
- SUS-345 Resilience and Adaptation
- SUS-370 Sustainability Solutions Workshop
- SUS-410 Sustainable Futures
- EES-410 Ocean and Climate Systems

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 sustainability and beyond 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.

