Department: Plant and Earth Science
Program Name: Environmental Science
Program Level: Undergraduate
College: Agriculture, Food, and Environmental Science
Program: Major
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Program Outcomes

Outcome 1: Analyze components, processes, and functions of Earth’s complex environmental systems. (a) Construct mental models of the components and processes of the Earth’s hydrosphere, geosphere, atmosphere, and biosphere. (b) Predict how the cycling of matter and energy in Earth’s systems will respond to alteration of different system components and processes.

Outcome 2: Evaluate the role that human actions and policies play in changing environmental systems. (a) Assess the impacts of human actions on environmental systems and processes. (b) Recommend strategies, including legislation, mitigation, remediation, and protection, that can be used to reduce human impacts.

Outcome 3: Design and implement environmental research and monitoring programs in natural and/or built environments. (a) Formulate and test hypotheses. (b) Measure and characterize environmental systems using appropriate field and laboratory instrumentation and techniques. (c) Analyze and Interpret environmental data in the context of the scientific literature. (d) Use computer models to simulate real-world situations and predict responses in environmental systems to human and natural changes.

Outcome 4: Assess the technical and social complexities of sustainable development. (a) Examine reinforcing and balancing cycles within biophysical, economic, and social systems. (b) Integrate knowledge of biophysical, economic, and social systems to discover novel ways of creating sustainable societies. (c) Critique the structure and function of current economic and social systems in the context of creating sustainable societies.
Outcome 5: Use professional skills of practicing environmental scientists. (a) Interpret and synthesize ideas from the scientific literature. (b) Prepare technical reports. (c) Present scientific concepts and the results of scientific research in written and oral form to technical and general audiences. (d) Correctly attribute the work and ideas of others from the scientific literature and other resources. (e) Report analytical and research results accurately and ethically.