

Undergraduate Academic Assessment Plan

Environmental Science

School of Natural
Resources and
Environment

College of Agricultural
and Life Sciences

Tom Frazer,
frazer@ufl.edu

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Mission Statement

The School of Natural Resources and Environment (SNRE) provides undergraduate and graduate interdisciplinary education in environmental and ecological science, preparing tomorrow's scientists, managers, and leaders to integrate disciplines for securing the human life-support system. Students acquire skills and knowledge across a broad suit of disciplines and develop competency in critical thinking and communication to address complex environmental challenges within a scientific framework. The environmental science program accesses faculty and courses in thirteen different UF colleges and college-level units, aligning well with the broader mission of the University of Florida as it seeks to serve the nation's and state's critical needs by contributing to a well-qualified and broadly diverse citizenry, leadership and workforce.

Student Learning Outcomes (SLOs)

Content

1. Students acquire knowledge and demonstrate understanding of basic terminology, concepts, methodologies and theories in the physical and biological sciences that describe environmental systems.
2. Students acquire knowledge of essential concepts in the social sciences that describe human activity in the environment.

Critical Thinking

1. Students apply the scientific method to develop reasoned solutions to environmental problems.

Communication

1. Students communicate knowledge, ideas and reasoning clearly, effectively and objectively in both written and oral forms.

Curriculum Map

Curriculum Map for:

Environmental Science

College of Agricultural and Life Sciences

Key: **I**ntroduced

Reinforced

Assessed

Courses SLOs	EVS 3000 and 3000L	Ecology	Environ- mental Ethics	Environ- mental Policy	Earth and Soil Sciences	Global Systems	Hydrologic Systems	Natural Resource Mgmt	Human Dimensions	EVS 4021
Content Knowledge										
#1	I	R			R	R	R	R		A Oral presentation or written essay
#2	I	R	R	R				R	R	A Oral presentation or written essay
Critical Thinking										
#1	I	R	R	R				R	R	A Oral presentation or written essay
Communication										
#1	I		R	R					R	A Oral presentation or written essay

Assessment Cycle

SLOs will be assessed annually.

Assessment Cycle Chart

Assessment Cycle for:

Environmental Science

College of Agricultural and Life Sciences

Analysis and Interpretation:

May – June annually

Improvement Actions:

Completed by August 15 of each year

Dissemination:

Completed by September 15 of each year

SLOs	Year	10-11	11-12	12-13	13-14	14-15	15-16
Content Knowledge							
#1			X	X	X	X	X
#2			X	X	X	X	X
Critical Thinking							
#1			X	X	X	X	X
Communication							
#1			X	X	X	X	X

Methods and Procedures

All assessments will be administered through EVS 4021 (Critical Thinking in Environmental Science), a capstone course required of senior-level undergraduate students in both the Bachelor of Arts and Bachelor of Science options. This course is about the scholarship of integration. By the senior year, all Environmental Science majors have acquired comprehensive knowledge in the biological, physical and socio-economic sciences and are prepared to explore the implications of what has been learned, confront conflicts in classical paradigms, and apply knowledge and skills to real-world and emerging problems. Students adopting this mode of thought will be equipped to deal with a high level of complexity and to continue learning and adapting as they gain experience during further academic study and their work lives. Student Learning Outcomes in Content Knowledge, Critical Thinking and Communication are directly assessed through oral presentations and/or mid-term and final essays in EVS 4021 (see below).

Additional efforts are made by the SNRE Director and Academic Programs Coordinator for assessment purposes: (1) the SNRE administers an individual satisfaction survey as an anonymous exit interview questionnaire to each graduating student; (2) the SNRE Director has periodic discussions with the lecturers who teach the two undergraduate courses offered by the unit and lecturers are debriefed at least once a year; (3) the SNRE Academic Program Coordinator has numerous face-to-face and email conversations with each student, usually at least once per semester. During these advising sessions, students are quizzed on what they are learning and whether their learning experiences are positive; and (4) the SNRE Academic Program Coordinator has also coordinates a Student Liaison group and an SNRE Student Council (represents the school to UF Student Government). The individuals in these two groups offer numerous valuable suggestions about the undergraduate program. These individual advising sessions and small-group discussions yield qualitative “data” or insights that are more immediate and situational than the other data sources. We have gained early notice of and responded to several issues via these venues that were confirmed only later by other processes.

Grading Rubric for Oral Presentation and/or Written Essay (SLOs 1-4) in EVS 4021

Graded item	Unsatisfactory	Satisfactory	Outstanding
1. Problem statement	The main point of the presentation is unclear; presentation of the issue lacks key elements (structure, context and significance)	The main issue of the presentation is apparent, but essential elements (structure, context and significance) are not well developed	The nature (structure, context, significance) of the issue is clearly stated and appreciated by the audience
2. Organization and content	The presentation cannot be understood because there is no logical sequence of information; information is not relevant	Information is presented in logical sequence and can be followed by the audience; information is germane to the main thesis	Information is presented in a logical, interesting sequence that can be followed easily by the audience; information provided directly relates to main thesis and supports key points/claims
3. Conclusions	No conclusion or conclusions have no bearing on the problem	Conclusion restates the main points/claims in the presentation, but supporting information is not well synthesized and some flaws in reasoning may be apparent	Conclusions are well reasoned and supported by appropriate information
4. Overall impact	Presentation is uninteresting and not persuasive or compelling.	Presentation is interesting, but not persuasive or compelling.	Presentation is interesting, persuasive and compelling.

Assessment Oversight

This Academic Assessment Plan for the Environmental Science program is overseen by a committee consisting of the SNRE Director and the Academic Program Coordinator (the Director is the only budgeted faculty member in the SNRE).

Name	Department Affiliation	Email Address	Phone Number
Thomas K. Frazer, Director of Academic Programs	School of Natural Resources and Environment	frazer@ufl.edu	352-846-1634
Karen Bray, Student Services Coordinator	School of Natural Resources and Environment	kbray@ufl.edu	352-846-1634