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# Academic Learning Compact : Environmental Science And Policy [Effective 2013]

University of South Florida St. Petersburg.

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**Academic Learning Compacts – ALCs**  
**Environmental Science and Policy**  
**CIP: 03.0103**

**Academic Program Mission**

The Bachelor of Science program provides training, education and research opportunities for undergraduate environmental science and policy students. Graduates of the program are trained to serve as environmental professionals in local, state, and federal environmental resource agencies; in the private sector, as environmental consultants; in non-governmental organizations, as environmental scientists and advocates; or are prepared to enter graduate degree programs in environmental science and policy or related fields. Primary emphasis is placed upon acquiring a sound background in the underpinning concepts in environmental science and policy, participating in independent research or internships, and effectively communicating concepts in environmental science and policy in both written and oral forms. These professionals will be able to critically assess a wide range of environmental issues and create a plan for sound maintenance and/or sustainable environmental management.

**Career/Employment Options for Graduates**

Environmental Specialist, Wetlands Delineation Specialist, Environmental Project Manager, Environmental Educator, Environmental Analyst, Environmental Planner, Resource Manager, GIS analyst, GIS Coordinator

**Specific Information on this Academic Program**

<http://www1.usfsp.edu/coas/espg/index.htm>

## Details Relating to Student Learning Outcomes

<b>1.Content/ Discipline skills</b>		
<b>Goals/Objectives</b>	<b>Means of Assessment</b>	<b>Criteria for Success</b>
1a. Demonstrate an understanding of the size of human population and the factors that change its size in various areas of the world, including demography, doubling time, and factors affecting growth.	Eighty percent of the program's graduates will have achieved a grade of 85% or better on those sections of the EVR 2001 exams covering population issues.	Student scores will be compared to their grades for the capstone course, EVR 4921 ESP Seminar. Faculty will modify content of EVR 2001 to better focus upon environmental issues related to changes in global human population
1b. Demonstrate an understanding of the source, use, pollution and clean-up of the world's water resources.	As a component of the Introduction to Environmental Science course (EVR 2001), students will correctly respond to examination essay questions regarding the distribution, availability, use and rehabilitation of water resources.  Demonstrate understanding of topic in portfolio.	Eighty percent of the program's graduates will have achieved a grade of 85% or better on those sections of the EVR 2001 exams covering water resource issues. Rubric for portfolio attached.
1c. Demonstrate an understanding of the extent of the world's land resources, how these resources are used and how their use is limited, including soil resources, use of public, urban, and coastal/antis.	As a component of the Introduction to Environmental Science course (EVR 2001), students will correctly respond to examination essay questions regarding land resources, as well as the extent of their use and limitations.	Eighty percent of that program's graduates will have achieved a grade of 85% or better on those sections of the EVR 2001 exams covering land resource issues.

<p>1d. Demonstrate an understanding of the origin and extraction of natural resources, how these resources are used, and how their use is limited, including origin of ores, mines and mining, and solid and hazardous waste.</p>	<p>As a component of the Introduction to Environmental Science course (EVR 200 I), students will correctly respond to examination essay questions regarding the origin and extraction of mineral resources, as well as the fate and transport of hazardous waste.</p>	<p>Eighty percent of the program's graduates will have achieved a grade of 85% or better on those sections of the EVR 2001 exams covering minerals and other natural resource issues.</p>
<p>1e. Demonstrate an understanding of the origin of the world's sources of energy, limits to supply, and energy alternatives.</p>	<p>As a component of the Introduction to Environmental Science course (EVR 200 I), students will correctly respond to examination essay questions regarding the source and reserves of conventional energy resources, as well as new and developing technologies.</p>	<p>Student scores will be compared to their grades for the capstone course, EVR 4921 ESP Seminar.</p>
<p>1f. Demonstrate an understanding of the origin, effects and remediation of atmospheric pollution.</p>	<p>As a component of the Introduction to Environmental Science course (EVR 2001), students will correctly respond to examination essay questions regarding the components of our atmosphere, as well as the source and fate of atmospheric pollutants and common technologies to ameliorate these impacts.</p>	<p>Eighty percent of the program's graduates will have achieved a grade of 85% or better on those sections of the EVR 200 I exams covering the atmosphere and air-quality issues.</p>
<p>1g. Demonstrate the ability to apply current theory in applied ecology, conservation, and management of biological resources.</p>	<p>As a component of the Introduction to Environmental Science course (EVR 200 I), students will correctly respond to examination essay questions regarding current ecological theory and</p>	<p>Eighty percent of the program's graduates will have achieved a grade of 85% or better on those sections of the EVR 2001 exams covering applied ecology.</p>

	its application to conservation and management of biological resources.	
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<b>2. Communication Skills</b>		
<b>Goals/objectives</b>	<b>Means of Assessment</b>	<b>Criteria for success</b>
2a. Demonstrate the ability to write clearly and effectively and to produce well organized and well developed papers that report information on environmental science and policy; reflecting appropriate use of language and format.	<p>1: As a component of the capstone course, ESP seminar (EVR 4921). Students will conduct appropriate literature search and create reading assignments for other classmates prior to presentation of a formal seminar on a contemporary environmental issue.</p> <p>2: Students will prepare extensive research papers (ten or more pages) with comprehensive literature reviews in at least 50% of the upper division required and elective classes in environmental science and environmental policy.</p>	<p>1: Eighty percent of the program's graduates will have achieved a grade of 85% or better on their oral presentations, as well as their performance on creation of appropriate reading assignments and literature reviews.</p> <p>2: Eighty percent of the program's graduates will have achieved a grade of 85% or better on the term papers for upper division courses in environmental science and policy.</p>
2b. Demonstrate the ability to conduct literature research and to prepare both written and oral critiques of environmental science and policy research.	As a component of the capstone course, ESP seminar (EVR 4921), students will conduct appropriate literature search and create reading assignments for other classmates prior to presentation of a formal seminar on a contemporary environmental issue.	Eighty percent of the program's graduates will have achieved a grade of 85% or better on their oral presentations, as well as their performance on creation of appropriate reading assignments and literature reviews.

<p>2c. Demonstrate an understanding of how knowledge in environmental science and policy is gained and applied as well as show the ability to analyze and synthesize information.</p>	<p>As a component of the Introduction to Environmental Policy Course (EVR 2861), students will correctly respond to examination essay questions that require the synthesis of scientific findings and policy analysis into cogent responses focusing upon the development of new science/policy techniques to approach contemporary environmental issues.</p>	<p>Forty of the program's graduates will have achieved a final grade of 85% for the EVR 2861 in-class exams.</p>
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<b>3.Critical thinking skills</b>		
<b>Goals/objectives</b>	<b>Means of Assesment</b>	<b>Criteria for success</b>
3a. Demonstrate an understanding of how knowledge in environmental science and policy is gained and applied as well as show the ability to analyze and synthesize information.	As a component of the Introduction to Environmental Policy Course (EVR 2861), students will correctly respond to examination essay questions that require the synthesis of scientific findings and policy analysis into cogent responses focusing upon the development of new science/policy techniques to approach contemporary environmental issues.	Forty of the program's graduates will have achieved a final grade of 85% for the EVR 2861 in-class exams.
3b. Demonstrate an understanding of how to apply the basic principles of experimental design, as well as the mathematical statistical analysis of environmental data.	As a component of the Introduction to Environmental Science Laboratory course (EVR 200IL), students will prepare laboratory reports which report appropriate experimental design, complete materials and methods, as well as mathematical and statistical analyses of these data.	Eighty percent of the program's graduates will have achieved a grade of 85% or better on laboratory reports created as a component of the EVR 2001L class.

<b>4.Civic engagement</b>		
<b>Goals/objectives</b>	<b>Means of Assessment</b>	<b>Criteria for success</b>
<p>4a Demonstrate an understanding and ability to apply methods in environmental science and policy in dealing with human concerns related to environmental issues through participation in independent study, individual research, or internships with environmental organizations</p>	<p>As a component of EVR 4910 [ESP project], students will prepare a formal paper detailing literature research and knowledge of the "place" of the project relative to current environmental thought, the materials and methods used in the project, the results of the project endeavors, and the analysis and conclusions based upon those results.</p> <p>Students who choose to complete an internship (EVR 4940) must complete 15-18 hours service per week, write a literature review relevant to their internship, and demonstrate in a journal their work time line.</p>	<p>Eighty percent of the program's graduates will have achieved a grade of 85% or better as a final grade for EVR 4910 and EVR 4940.</p> <p>For the internship, students must demonstrate they worked 15-18 hrs/week through a formal work log, they must complete a 10 page literature review related to their topic and earn a grade of B. 10 pt Rubric includes original writing, organization, references, thesis statement, and grammar. Internship supervisors send a letter to coordinator of internships that comments on work ethic, quality of work, whether they would recommend student for similar research/work responsibilities, and usefulness of work.</p>