

2016

# Academic Learning Compact : Environmental Science and Policy [Effective 2016]

University of South Florida St. Petersburg.

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Academic Learning Compact: Fall 2016- Spring 2017

*“ . . . to ensure student achievement in undergraduate and graduate degree programs . . . ”*



## **Academic Learning Compacts**

**Academic Year: Fall 2016 & Spring 2017**

**Due: May 19, 2017**

### **Academic Program-linked College Mission-based Goals/Objectives**

In the matrix on the following page, please place an X in the grid that identifies the degree program goals and objectives that align with the institutional mission-based goals/objectives and the College based goals/objectives. These goals/objectives need to be documented in your ALC data.



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**Signature Page for Academic Program**

Academic Program: ESPG

Chair/Coordinator:

Date:

**Summary Statement – Academic Program Performance in Fall 2016- Spring 2017**

*Provide a summary statement about academic program performance over the previous year including high points and low points*

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We expanded our programs, added new faculty and evolved our courses to better meet student needs. The faculty was better engaged in reporting progress in our ALCs. For the courses with data during 15-16, the fraction of students meeting the 16-17 scores appear to be better. With the addition of an internship coordinator, our students increased involvement in the communities. We incorporated greater roles for experiential learning in most of our courses. The student performance exhibited positive growth during this year.

We still lack though in simple clear definable goals. We will address our current ALCs with more pedagogical activities with greater inclusivity of university goals for 17-18 year. We will remove goals that are unrealistic such as 100% achievement. The goals will be tailored to best reflect the values we espouse for student achievement.

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### **Summary Statement – Impact of Changes Made in Fall 2015- Spring 2016**

*Provide a summary statement about the changes that were made in your program resulting from the ALC's in the preceding Academic Year.  
Include both the high points and low points*

We went from a low participation to high participation. We had a greater buy-in from the faculty and it showed with increased student achievement. We still need to refine our courses and goals for this coming year. We should have done that during this period. We did see a dramatic improvement in the program.

**Mission of Academic Program (include URL):** ) The status of the Earth’s environment has been a major concern since the 1960s. Currently, it represents one of the most critical issues facing nearly all nations. Increased population, technology, globalization and diminishing natural resources all play important roles in the changing environment. As a consequence, governments at all levels are devoting resources to help understand and mitigate the problems we are facing. The actions of people, as individuals or society as a whole, are crucial for environmental well-being and long-term sustainability. This degree emphasizes the understanding of interrelationships between social phenomena and the natural (i.e., biological-physical-chemical) environment.

<http://www.usfsp.edu/espg/programs/bseesp/>

**List Program Goal(s) / Objective(s):** (1) increase student awareness of these interconnections in their everyday lives; (2) introduce students to a variety of social science perspectives (including politics and policies) along with hard environmental science perspectives, that help students make sense of these connections; (3) identify the contributions of each of these perspectives to our understanding of environmental problems; (4) discuss how natural resource management and environmental policy reflect these perspectives; and (5) produce graduates who promote sustainability in all facets of human enterprise.

**Program Goals / Objectives must be mapped to College Goals / Objectives – use consistent nomenclature.**

[Please note impact of any changes that were made as a result of 2009-10 assessment]

*ALCs must address student learning in four areas: 1. Content/Discipline Skills; 2. Communication Skills; Critical Thinking Skills; and 4. Civic Engagement.*

## ALC GOALS ESTABLISHED FOR DATA COLLECTION: Fall 2016 & Spring 2017

### 1. Content / Discipline Skills:

Learning Outcomes	Means of Assessment	Criteria for Success	Findings	Plan for Use of Findings Fall 2017 & Spring 2018
1a. Evaluate and implement the scientific process	EVR 2001, questions asking students to explain the scientific process and to detail an example of its implementation will be administered in the final exam	100% of ESP majors will earn a minimum grade of 80% in the relevant questions in all three courses.	IveyNo ESP made below 80%. The average was 95% for all ESP Students.	Needs to be changed from 100%
1b. Apply the science of ecology to specific issues in the field of environmental science.	EVR 4921 – An exit assessment test will be administered containing questions testing knowledge of ecological principles in environmental science.	100% of ESP majors will answer correctly a minimum of 80% of these questions.	15 out of 16 ESP students scored above 80%. One student did not take the test.	Needs to be changed from 100%
1c. Demonstrate an understanding of the major environmental issues, the science underlying them (including chemistry, geology, and biology), and potential solutions, including scientific and policy strategies.	EVR 4921 – An assessment test will be administered which will include questions testing knowledge in this area.	100% of ESP majors will answer correctly a minimum of 80% of these questions.	5 out of 16 ESP students scored above 80%. One students did not take the test.	This test was not inclusive of all these areas. A comprehensive exit exam should either be removed as a departmental requirement of this course or the class needs to have boosted credit hours and a review lecture to include this exam.
1d. Demonstrate competency in the application of	All ESP majors taking GIS 3006 and GIS 4043 will be assessed via	(a) 65% of ESP students will earn 80% or higher on their term project.	1a) For GIS 3006, (Fall 2016, 29 students enrolled) of the	This course (GIS 4043) is only required by ESP Science

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mathematical and GIS concepts to the field of environmental science.	(a) term project that requires synthesis and integration of GIS concepts tools and thinking and (b) the Midterm II.	(b) 75% of ESP majors will earn a minimum of 85% in the relevant questions in Midterm II.	students enrolled in this class 19 of them were ESP majors. 1 of them earned 95%, 2- 90%, 4-85%, 5 - 80%, 4-75% and 3-70%.  For GIS 4043 (of the total 11 students, 4 students were ESP majors and 4 of these students earned 80% or above in their midterm (key questions).	track students – hence give limited information. We should remove this course from ALC. But we should use GIS 3006 instead since all students are required to take GIS 3006.
1f. Demonstrate a thorough understanding of the major environmental policies under which political decisions are made.	EVR 2861 will assess student understanding of the state of US environmental policy in relationship to air, water, land use, energy, waste management, biodiversity, natural resources, and human populations in a series of three examinations.	100% of ESP majors will earn a minimum grade of 80% in the relevant questions in exams given.	Of the 41 students who took this class, 32 of them were ESP majors. Of the 32 ESP majors 29 (90.6%) of them earned a grade of 80% and higher in the relevant questions in exams given. Nineteen (19) students earned a grade of 80% or higher but lower than 90%. Nine (9) students earned a grade of 90% or higher. Three (3) students earned a grade of 70% or higher but lower than 80%, and one (1) student earned a grade of 60% or higher but lower than 70%.	The goal of 100% of ESP majors earning a grade of 80% or better in the relevant questions was not met. Criterion will be kept to generate data for comparison.
1g. Demonstrate an understanding of the framework of stages of policy development.	PUP 4203 will assess student understanding of the process of environmental policy formation, adoption, implementation and evaluation in Exam #1	100% of ESP majors will earn a minimum grade of 80% in the relevant questions	Of the 18 student who took the class, 9 of them were ESP majors. 7 of the 9 ESP students (77.7%) earned a grade of 80% or higher in the relevant questions. Two (2) students earned a grade of 80% or higher but lower than 90%. Five (5) students earned a grade of 90% or higher.	The goal of 100% of ESP majors earning a grade of 80% or better in the relevant questions was not met. Criterion will be kept to generate data for comparison.
1h. Demonstrate an understanding of underlying	EVR 4873 will assess student understanding of environmental	100% of ESP majors will earn a minimum grade of 80% in the	Students were highly engaged in class discussions regarding	



sustainability principles in the context of environmental sciences.	and sustainability issues, problems, and solutions in three examinations.	relevant questions related to ecological economics, science and technology, and environmental policy	sustainability principles in the context of environmental science. They enjoyed having the opportunity to present and discuss current topics relating to sustainability, and expressed these exercises positively added to their learning experience. 100% of students earned a grade of 80% or above in the Attendance and Participation portion of the final course grade.	
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## 2. Communication Skills:

Learning Outcomes	Means of Assessment	Criteria for Success	Findings	Plan for Use of Findings Fall 2017 & Spring 2018
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.	1) All ESP students taking GIS 4043 will write an extensive report on the term project that includes: introduction, objectives, literature review, methods, results/discussion, and conclusions.  2) EVR 2001  3) EVR 4921 – students will be required to write an appropriate term paper demonstrating these skills.	1) 60% of the ESP students will earn 80% or higher on their term project report.  2) 100% of ESP majors will earn a minimum grade of 80% in the lab term paper and portfolio (EVR2001), final paper (GLY3720), and final review paper (GLY4734).  3) 100% of ESP majors will earn a minimum score of 80/100 in the term paper	1) Of the 5 ESP students, 4 of them earned 80% or higher. 1 earned 95%, 1 90%, 1 85% and 1 80%.  2) All except one ESP student earned above 80% on the research paper. The one did not turn in a paper.  3) Twelve out of fourteen EVR 4921 students submitted papers and earned over 80%	1) This course (GIS 4043) is only required by ESP Science track students – hence give limited information. We should remove this course from ALC. But we should use GIS 3006 instead since all students are required to take GIS 3006.  2) Needs to be changed from 100%.  3) Needs to be changed from 100%.
2b. Select a topic, and develop it for a specific audience and purpose, with respect for diverse perspectives,	1) EVR 2001, students will be required to write lab term reports/portfolios, a final paper, and a final review paper	1) 100% of ESP majors will earn a minimum grade of 80% in the lab term paper/portfolios, final paper, final review paper) respectively	1) All except 2 students out of 22 taking the lab earned a final grade of over 80%. Two received	#1 & #4) Needs to be changed from 100%.

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<p>Demonstrate the ability to conduct literature research and to prepare written critiques of environmental science and policy research.</p>	<p>respectively in these courses.</p> <p>2) In PUP 4203 students will write a research project paper in 3 sequentially phases with a review of the literature related to an environmental politics topic.</p> <p>3) In EVR 4873 students will write a research project paper in 3 sequential phases including a literature review related to a sustainability topic.</p> <p>4) EVR 4921 – students will be required to write a critique of scientific literature (a published paper).</p>	<p>2) 90% of ESP majors will earn a grade of 80% or better on the research project final paper.</p> <p>3) 90% of ESP majors will earn a grade of 80% or better on the final paper.</p> <p>4) 100% of ESP majors will earn a minimum grade of 80% in the assignment.</p>	<p>grades of 78 and 79 respectively.</p> <p>2) Each student was able to successfully develop a presentation around a topic and deliver an oral presentation to the class. 100% of students received a 90% or above on the individual oral presentation.</p> <p>3) Each student successfully completed two reflection/synthesis papers that demonstrated their knowledge and personal experience related to topics discussed in the course. 100% of students received a 90% or above on the two synthesis papers.</p> <p>4) Twelve out of fourteen EVR 4921 students submitted papers and earned over 80%</p>	
<p>2c) Select a topic, and develop it for a specific audience and purpose, with respect for diverse perspectives. Demonstrate the ability to conduct literature research and to prepare oral critiques of environmental science and policy research.</p>	<p>1) All ESP students taking GIS 4043 will present a power point presentation on their term project that includes: introduction, objectives, literature review, methods, results/discussion and conclusions.</p> <p>2) EVR 2001, GLY 3720, GLY 4734 – oral presentations will be required of students in all three</p>	<p>1) 70% of the ESP students will earn 80% or higher on the oral component of their term project report</p> <p>2) 100% of ESP majors will earn a minimum grade of 80% in the oral presentations.</p>	<p>1) Dixon Of the 11 students who took this course, 5 were ESP majors. Of these 5 students, 1, earned 90%, 1, 85%, 2 earned 80%, and 1 earned 75%.</p> <p>2) Out of 17 ESP students in EVR2001 only one earned below 80%. They turned their presentation in after all</p>	<p>1) This course (GIS 4043) is only required by ESP Science track students – hence give limited information. We should remove this course from ALC. But we should use GIS 3006 instead since all students are required to take GIS 3006.</p> <p>2) Needs to be changed from 100%. Out of 17 ESP students in EVR2001 only one earned below 80%.</p>

	<p>courses.</p> <p>3) EVR 4921 - All ESP majors will be required to deliver an oral presentation on an approved topic relevant to environmental science and/or policy.</p>	<p>3) All ESP majors will earn a minimum of 80% in the oral presentation portion of the course</p>	<p>the oral presentation had been completed and did not show up to give an oral presentation.</p> <p>3) All ESP majors earned 80% or higher in the oral presentation of EVR 4921</p>	
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### 3. Critical Thinking Skills:

Learning Outcomes	Means of Assessment	Criteria for Success	Findings	Plan for Use of Findings Fall 2017 & Spring 2018
3a. Developing an appropriate problem-solving strategy involving formulating and testing a research hypothesis.	<p>1) All ESP students taking GIS 4043 will be assessed via relevant questions in Midterm II.</p> <p>2) EVR 2001 – essay question in test 3, students will be required to review a major paper and identify the hypothesis and the strategy used to test it.</p>	<p>1) 75% of the Students will earn 80% or greater</p> <p>2) 100% of ESP majors will earn a minimum grade of 80% in the essay questions of test 3, final term paper, and final review paper, respectively.</p>	<p>1) Dixon For GIS 4043, 5 students were ESP majors and 5 of these students earned 80% or above in their midterm (key questions).</p> <p>2) All students identified a hypothesis and reviewed a paper as part of their presentations in the lecture.</p>	<p>1) This course (GIS 4043) is only required by ESP Science track students – hence give limited information. We should remove this course from ALC. But we should use GIS 3006 instead since all students are required to take GIS 3006.</p>
3b. Identify assumptions and underlying relationships in environmental research and planning.	<p>EVR 4921 – students will be required to critically analyze 3 published papers and identify any assumptions and underlying relationships in them.</p>	<p>70% of ESP majors will successfully demonstrate mastery of this in their critiques</p>	<p>All students either presented an analysis or posted questions in analysis of published papers.</p>	

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3c. Synthesize competing perspectives, understand dichotomies and dualism and draw reasoned inferences in environmental research and planning.	EVR 4921 – students will be required to assess competing perspectives on important environmental questions and write a report demonstrating these skills	70% of ESP majors will successfully demonstrate mastery of these skills in their written reports.	NA I missed adding this to the class.	I will make sure I add this in as part of the criteria. Even though students discussed these issues as part of their selected papers, where was not a set topic involving competing perspectives.
3e. Evaluate the feasibility of strategies in environmental research and planning.	EVR 2001 – students will be tested with relevant questions in semester exams.	100% of ESP majors will earn a minimum grade of 80% in the relevant questions	No ESP student made below 80% in an average of three exams.	

### 4. Civic Engagement (optional):

Learning Outcomes	Means of Assessment	Criteria for Success	Findings	Plan for Use of Findings Fall 2017 & Spring 2018
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	Students enrolled in PUP 4203 will select an ongoing public project and assist with policy implementation and practical application to a specific environmental politics and/or policy theme embodied by a community partner. Students are expected to spend at least 15 documented hours involved in civic engagement type activities related to a public project, keep a log sheet of the hours of engagement, and summarize their civic involvement and significant findings in the final paper on the civic engagement project.	Civic Engagement will be assessed by student commentary on social, political, economic, environmental, and ethical parameters of their civic engagement as well as answer student reflection questions on importance, relevance, accessibility, and goal achievement in the project research. Success would be measured by 70% of students answering 80% of the parameter questions and 80% of students answering 75% of the self-reflection questions.	88% of students answered 80% of the parameter and self-reflection questions.	The goal of 70% of students answering 80% of the parameter questions and 80% of students answering 75% of the self-reflection questions was met. Criterion will be kept to generate data for comparison

## ALC GOALS ESTABLISHED FOR DATA COLLECTION: Fall 2017 & Spring 2018

### 1. Content/Discipline Skills

Goals/Objectives	Means of Assessment/ Corroborating Evidence*	Criteria for Success	Findings	Plan for Use of Findings in Fall 2018 – Spring 2019
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Demonstrate an understanding of underlying sustainability principles in the context of environmental sciences.	EVR 4873 will assess student understanding of environmental and sustainability issues, problems, and solutions in ongoing class discussions. Course will be heavily discussion-based, which will allow students to demonstrate their understanding of environmental policy and sustainability topics. In addition, one class period per week, students will be required to lead a brief (5 minutes or less) class discussion based on a current sustainability topic.	100% of ESP majors will earn a minimum grade of 80% in the Attendance and Participation portion of the final course grade	Students were highly engaged in class discussions regarding sustainability principles in the context of environmental science. They enjoyed having the opportunity to present and discuss current topics relating to sustainability, and expressed these exercises positively added to their learning experience. 100% of students earned a grade of 80% or above in the Attendance and Participation portion of the final course grade.	

\*Please include multiple assessments. For example: students perform well on classroom assignments, norm-referenced tests/surveys, and they get accepted to graduate school or are employed.

<b>2. Communication Skills</b>				
<b>Goals/Objectives</b>	<b>Means of Assessment/ Corroborating Evidence*</b>	<b>Criteria for Success</b>	<b>Findings</b>	<b>Plan for Use of Findings in Fall 2018 – Spring 2019</b>
Select a topic, and develop it for a specific audience and purpose, with respect for diverse perspectives, Demonstrate the ability to conduct literature research and to prepare oral and written critiques of environmental science and policy research.	In EVR 4873 students will identify a topic related to environmental science and sustainability policy. They will then develop a 15 minute oral presentation to demonstrate research	To be determined...	Each student was able to successfully develop a presentation around a topic and deliver an oral presentation to the class. 100% of students received a 90% or above on the individual oral presentation.	

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	capabilities and communication skills. Additionally, students will be required to write two reflection/synthesis papers that demonstrate their knowledge and personal experience related to several sustainability topics.		Each student successfully completed two reflection/synthesis papers that demonstrated their knowledge and personal experience related to topics discussed in the course. 100% of students received a 90% or above on the two synthesis papers.	

**3. Critical Thinking Skills**

<b>Goals/Objectives</b>	<b>Means of Assessment/ Corroborating Evidence*</b>	<b>Criteria for Success</b>	<b>Findings</b>	<b>Plan for Use of Findings in Fall 2018 – Spring 2019</b>

\*Please include multiple assessments. For example: students perform well on classroom assignments, norm-referenced tests/surveys, and they get accepted to graduate school or are employed

## 4. Civic Engagement:

Goals/Objectives	Means of Assessment/ Corroborating Evidence*	Criteria for Success	Findings	Plan for Use of Findings in Fall 2018 – Spring 2019

\*Please include multiple assessments. For example: students perform well on classroom assignments, norm-referenced tests/surveys, and they get accepted to graduate school or are employed