1-1-2013

Academic Learning Compact : M. S. Environmental Science and Policy [Effective 2013]

University of South Florida St. Petersburg.

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Academic Learning Compacts
M.S. Environmental Science & Policy

2013-2014
Due: May, 2014

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.
<table>
<thead>
<tr>
<th>UNIVERSITY OF SOUTH FLORIDA ST. PETERSBURG</th>
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<tr>
<td>GOALS &amp; OBJECTIVES</td>
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<tr>
<th>COLLEGE OF ARTS &amp; SCIENCES GOALS &amp; OBJECTIVES</th>
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<td>Offer certificate, undergraduate and graduate programs that meet regional needs</td>
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<td>Implement and support information and instructional technologies that facilitate effective pedagogies</td>
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<td>Enhance programs that specifically support academic excellence</td>
<td>Initiate and expand graduate programs and develop formal academic ties to other graduate programs within the USF system</td>
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<td>Increase student awareness of participating in a global society</td>
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<td>Create a freshman experience that enables students to thrive and move successfully through to graduation</td>
<td>Our students will have critical skills and a broad outlook that will make them engaged and productive citizens</td>
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<td>Foster institutional pride and strengthen connections within the campus community</td>
<td>Incorporate civic engagement, service learning, and experiential learning into their classes, when appropriate</td>
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<td>Enhance opportunities for increased student involvement in curricular and co-curricular activities</td>
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<td>Insure an inclusive community where differences are respected and valued</td>
<td>Cultivate a vigorous liberal arts culture by recruiting talented diverse students, maintaining small class sizes, and mentoring those students we have.</td>
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<tr>
<td>Attract and retain a diverse student population</td>
<td>Encourage free discussion, foster critical thinking, demand that our students write, and work across disciplines</td>
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<tr>
<td>Increase the diversity of faculty and staff</td>
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<tr>
<td>Create a vibrant culture of faculty research and creative scholarship</td>
<td>Make significant and meaningful</td>
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Page 2
Promote and support undergraduate research as a meaningful aspect of campus life

Enhance and support research and scholarly collaborations with community partners

We expect our undergraduate and graduate students to engage in research in collaboration with faculty

Signature Page for Academic Program

Academic Program: ESPG Graduate Program
Chair/Coordinator: Dr. Armando Hoare Date: May 2014

Summary Statement – Academic Program Performance in 2013-14

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

From summer 2013 to spring 2014, the program graduated 3 students and one student is making corrections and should finish this summer. One is applying for her doctorate and the other two have already obtained full time employment. Three other students successfully defended their thesis proposal both oral and written parts. Ten students formed their thesis advisory committee. Five students were awarded a research assistantship for the first time in the program. Seven MS and 2 MA students entered the program. Several students presented both poster and oral presentations at conferences in and out of state and internationally.

The following are the high points of the graduate program from summer 2013 to spring 2014.

The program was able to give five deserving students a research assistantship. This allowed students to work on their research, present their work at different conferences. Moreover, students have been able to meet the different program deadlines which should have students complete their thesis in time fashion. Additionally, the administration paid three graduate credit hours for the students who were Graduate Assistants in spring 2014. Hopefully this is increased in the near future to allow the program to attract more qualified students in the program.
The students attended many local, national and international conferences. At the Florida Society of Geographers 50th Anniversary Annual Meeting, the five graduate student awards presented; our students, Steven Douglas, Kimberly Lyons, and Elizabeth Merton won three. Dr. Dixon is the advisor of these students. Of the 22 oral presenters, Steven competed against a field that was primarily composed of Ph.D. students(18) and was the only masters student to secure one of the three awards for oral presentation. Kimberly won the award for the best poster presentation and Elizabeth received the honorable mention for hers.

**Noteworthy accomplishments**

The ultimate measure of the quality of our SLO with the MS (thesis option) – is to be able to publish the thesis as a peer reviewed journal article. Our recent graduates successfully published their thesis work in peer reviewed journal (students names are denoted with *). The ESP faculty continue to be very busy working with students in many ways. Here are some results of that dedication in this cycle.


In addition, below are other ESP students’ presentations made at various conferences this year. (* ESP graduate student).

**Kristen Emrich**, Michael Martínez-Colón, and Henry Alegría; Assessing the Impact of Untreated Sewage on the Coral Reef off the Coast of Caye Caulker, Belize: Applying the Foram Index. International Symposium on Foraminifera Forams 2014, University of Concepcion, Chile, January 19-24

**Megan Burford** All Scientists Meeting, Florida Coastal Everglades Long Term Ecological Research, Miami, 2014


**Elizabeth Merton**, 2014. Finding suitable areas to create artificial wetlands as part of mitigation efforts. Florida Society of Geographers, Poster. Orlando Feb 7-9

The following are the low points of the graduate program from summer 2013 to spring 2014.

The MA degree still is not attracting students contrary to what was anticipated, despite considerable efforts on the part of the department to recruit via outreach events such as Information Sessions, presentations to our graduating seniors, and outreach to neighboring schools. There were 2 MA students admitted in fall 2013 and spring 2014. One of the students in the MS program (who was not successful in MS program and started the program in 2009) transfers to the MA program in fall 2013.

One student withdrew due to personal issues in spring 2014. Two students became inactive in spring 2014 for not signing up for courses in three consecutive semesters.

Providing adequate funding to students is still a challenge to compete with other similar programs across the nation.
The graduate program will continue its effort in supporting: the recruitment efforts of new students, program efficiency and its present students by reaching out more and encouraging the present students to successfully complete their degree in a timely fashion. The graduate program will continue in looking for different ways in making the MA program more effective and attractive. It will continue to search and encourage administration to support financially the MS program and thus increase research productivity.

Summary Statement – Impact of Changes Made in 2012-13

Provide a summary statement about changes that were made in your program as a result of ongoing assessment in 2012-13 and the positive/negative impact of the changes that were made.

One of the major additions to the MS was the competitive RAship in spring 2014. This brought much excitement among the graduate students. Many of the students applying made sure that they met all the deadlines of the program, for example forming their thesis advisory committee. In addition, the students that were awarded the RAships had more time to work on their research. As a result, there were many conferences’ presentations.

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

Academic Program: ESP Grad Program
Person Responsible: Dr. Armando Hoare

Mission of Academic Program (include URL):

Master of Science degree in Environmental Science and Policy: [http://www.usfsp.edu/coas/espg/gradprogram/index.htm](http://www.usfsp.edu/coas/espg/gradprogram/index.htm)

Our Master of Science degree in Environmental Science and Policy brings interdisciplinary expertise in the social and natural sciences together with advanced technologies, such as remote sensing and geographic information systems, to prepare students to effectively address complex environmental problems.

Our program graduates will be able to:

- develop solutions to the increasingly urgent problems resulting from human impacts on the environment;
- contribute to efforts to better understand and respond to those impacts; and
- protect and manage environmental resources in the face of population growth and economic change.

Two focus tracks - Applied Environmental Science and Society-Environment Interactions are available for students pursing an M.S. degree in Environmental Science and Policy.

Graduates of the Master of Science in Environmental Science and Policy program at USF St. Petersburg will be highly skilled and imaginative individuals, prepared for leadership roles in local, state, and federal agencies; non-profit organizations working to ameliorate environmental concerns; and private scientific, research, environmental and engineering firms. Our graduates will have the analytical skills to understand and impact the socio-cultural and political context in which environmental problems are created and ameliorated, and the scientific expertise to fully explore and analyze the consequences of ongoing environmental change and
interaction.

**Master of Arts degree in Environmental Science and Policy:** [http://www.usfsp.edu/coas/espg/gradprogram/ma/index.htm](http://www.usfsp.edu/coas/espg/gradprogram/ma/index.htm)

Our Master of Arts degree in Environmental Science and Policy provides a balance between Environmental Science and Environmental Policy through a themed course study in Core Concepts in Science, Core Concepts in Policy and an elective area of your choice. The degree culminates in a final project that allows you to integrate and apply the knowledge learned in the coursework with a personal relevant area of interest to result in your professional growth.

Designed with the environmental field professional in mind, as a program graduate you will be able to:

- develop solutions to the increasingly urgent problems resulting from human impacts on the environment;
- contribute to efforts to better understand and respond to those impacts; and
- protect and manage environmental resources in the face of population growth and economic change.

Graduates of the USFSP Environmental Science and Policy Master of Arts in Environmental Science and Policy will be highly skilled and imaginative individuals prepared for leadership roles in local, state, and federal agencies; non-profit organizations working to mitigate environmental concerns; and private scientific, research, environmental and engineering firms.

**List Program Goal(s) / Objective(s):**

*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 2012-13 assessment]

ALCs must address student learning in three areas: 1. Content/Discipline Skills; 2. Communication Skills; and Critical Thinking Skills.

*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.*
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<tr>
<td><strong>1a. Graduate students will demonstrate proficiency in statistical methods and use of statistical programming software in presenting, analyzing, interpreting and decision making concerning scientific data of real world problems</strong></td>
<td>The final exam for STA 5166 consists of two parts. In the first part students have to explain the data from descriptive statistic given. They have to explain the statistical structure of the data. In the second part they use statistical software to analyze the data and make recommendations based on their findings. Demonstration of statistical competency on statistics portion of comprehensive exam. Competency demonstrated by passing exams.</td>
<td>We want all students to earn at least a 70% on the final exam in STA 5166. Students need to score 70% or higher on comprehensive exam stats section to show proficiency in statistics</td>
<td>Of the nine students that took STA 5166 spring 2014, nine (100%) met the passing mark of the final exam. The comprehensive exam was restructured for this time period.</td>
<td>Continue to give students time in class to work on their hw assignments and to encourage group collaboration.</td>
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<td><strong>1b. Demonstrate a knowledge and understanding of contemporary issues in environmental science, especially as they pertain to human interactions with natural ecosystems, and how scientists have</strong></td>
<td>The final grade for EVR 6936 (Seminar in Environmental Science) taught during Fall of 2013 is comprised of 30% from Research Proposal (written and presentation), 40% from weekly scholarly article review, presentation and summarization, 20%</td>
<td>We want all students to earn at least 80% on the research proposal. Students need to score 75% or higher on comprehensive exam to show proficiency in environmental science</td>
<td>Of the 7 students, 2 earned A (90%), 1 B+ (85%) and 4 B (80%). The comprehensive exam was restructured for this time period.</td>
<td>I worked with them throughout the semester and gave repetitive feedback to ensure that they are making adequate progress toward developing their research</td>
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documented and reported those interactions as well as proposed future research to better understand and manage those same anthropogenic changes from exams and 10% on short project.

*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.

### 2. Communication Skills

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<tr>
<td>2a. Students will demonstrate an ability to conduct literature research and prepare both written and oral critiques of environmental science or policy research</td>
<td>All graduate students are required to take EVR 6936 (Seminar in Environmental Science), and complete a literature review and write a research Proposal. They are also required to present their research proposal in class.</td>
<td>All students in EVR 6936 are required to present their research proposal in class. They have to earn &gt;80% to pass.</td>
<td>Of the 7 students, 2 earned A (90%), 2B + (85%) 2B (80%) and 1C (75%) in their presentation.</td>
<td>I have discussed the presentation rubric with them before hand – perhaps in the future, I will let them give a ‘practice presentation’ before the final presentation.</td>
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<td>Students are also required to complete thesis (written and oral defense) for their degree.</td>
<td>Students are required to write a thesis and present their work in a public event (including open and closed door defense). The thesis committee will evaluate the success of the thesis.</td>
<td>1 student successfully defended their thesis during summer 2013 and 2 in spring 2014.</td>
<td>Strongly encourage students to defend their thesis proposal in a timely fashion and to enable them to be more effective in writing and defending their thesis. Enforcing timelines will also help.</td>
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<td>All graduate students are required to take EVR 6937 (Seminar in Environmental Policy) and complete 4 section review papers. Each section review paper has a literature review. They are also expected to discuss their papers in class during an open forum.</td>
<td>All students in EVR 6937 (Seminar in Environmental Policy) are required to complete 4 section review papers and discuss their critiques of environmental policy research in class. They have to earn &gt;80% on each paper to pass.</td>
<td>There were 8 students in this class; 7 graduates and 1 under-graduate. All 8 students (100%) met the 80% threshold on their papers. All 7 graduate students earned 90% and higher in the class, while the under graduate student earned &lt;90%. The highest grade was 98%. The average was 90%.</td>
<td>For 2014-15, students will be required to complete four short critical review papers on current environmental policy issues, a term project on environmental policy analysis, a midterm take-home exam, and an oral final exam. Students must earn 80% or higher on the four course components to validate the class.</td>
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### 3. Critical Thinking Skills

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<td>3a. Students will demonstrate the ability to design and conduct an original program of research in environmental science and policy, which results in a scholarly work of publishable quality</td>
<td>Write a research proposal that provides an introduction to the research question, methodology to be used, and significance of research. Successfully defend the thesis (written and oral)</td>
<td>Thesis research and results presented in a public forum and successfully defended by the student to the satisfaction of the thesis committee members.</td>
<td>1 student successfully defended their thesis during summer 2013 and 2 in spring 2014.</td>
<td>We will continue to work with both faculty and students to have timely defenses.</td>
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### 4. Civic Engagement:

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<td>In GEO 6116, the required seminar in Environmental Thought, students will demonstrate the ability to research, through field and archival methods, the perspective and praxis of a prominent environmental community organization. Students will volunteer for an approved local</td>
<td>Students will write a 15 to 20 page paper evaluating the organization, its mission and philosophy, praxis, and impact on environmental problems. Students will present the results of their findings orally to the class in a professional presentation.</td>
<td>Initially, 33% of students did not meet the criteria for passing the community paper. 3 out of ten students received scores that were unacceptable on this paper and had to rewrite it. Revisions were accepted over the winter break and all students passed the course successfully with a grade of B or higher.</td>
<td>All ten students received a</td>
<td>I have rewritten the instructions for the community engagement project and made them much more explicit. I have added additional instruction on the use of both archival and field methods to support a scholarly assessment of an NGO. It is anticipated that in Fall 2014, students will all be successful in receiving a score of 80%</td>
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environmental organization for the duration of the semester (a minimum of 10 hours). Students will keep a field notebook of their experiences and activities; a photo journal and map.

| score of 90% or above on the oral presentation. |
| or higher on their first attempt at this paper. |


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

Academic Program: ESP Grad Program
Person Responsible: Dr. Armando Hoare

Mission of Academic Program (include URL):
http://www.usfsp.edu/coas/espg/gradprogram/index.htm

List Program Goal(s) / Objective(s):
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 2010-11 assessment]
ALCs must address student learning in three areas: 1. Content/Discipline Skills; 2. Communication Skills; and Critical Thinking
Skills.

## 1. Content/Discipline Skills

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<td>We want all students to earn at least a 70% on the final exam in STA 5166.</td>
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<td>1b. Demonstrate a knowledge and understanding of contemporary issues in environmental science, especially as they pertain to human interactions with natural ecosystems, and how scientists have documented and reported</td>
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<td>All students in EVR 6936 are required to present their research proposal in class. They have to earn &gt;80% to pass. Students are required to write a thesis proposal and present their work in to their thesis advisory committee and ESPG faculty. The thesis committee will evaluate the success of the thesis proposal. A rubrics</td>
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Students are also required to complete thesis (written and oral defense) for their degree.

A rubrics ranking will be based upon a five point scale (5 = Exemplary, 4 = Strong, 3 = Competent, 2 = Marginal, 1 = Unacceptable). To be successful, the student must receive an overall average score of “Competent” or better from all Committee members AND no individual score of “Unacceptable” in any category.

Students are required to write a thesis and present their work in a public event (including open and closed door defense). The thesis committee will evaluate the success of the thesis. A rubrics ranking will be based upon a five point scale (5 = Exemplary, 4 = Strong, 3 = Competent, 2 = Marginal, 1 = Unacceptable). To be successful, the student must receive an overall average score of “Competent” or better.
All graduate students are required to take EVR 6937 (Seminar in Environmental Policy), students will be required to complete four short critical review papers on current environmental policy issues, a term project on environmental policy analysis, a midterm take-home exam, and an oral final exam. Students must earn 80% or higher on the four course components to validate the class.

Students will identify an environmental issue from the assigned readings and are expected to write a research paper on analysis of environmental policy options for the identified issue. The objective of the research paper is threefold: 1) Identifying the interests at stake; 2) Assessing where the issue stands in the policy process; and 3) Evaluating the policy design elements. Students must earn 80% or higher on the paper to be successful. In addition to the policy analysis paper, every third week of the semester each student is required to read a current event article (not more than two weeks old) of their choice, relating to environmental policy and...
write a response/reflection summary of the article in response to the following 3 questions:
1) Explicitly, how does this article relate to the themes of this course?
2) What are the implications of the thesis of the article for environmental policy?
3) What is your reaction to it (how it’s written/represented/etc.)?

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<td>Students will write a 15 to 20 page paper evaluating the organization, its mission and philosophy, praxis, and impact on environmental problems. Students will present the results of their findings orally to the class in a professional presentation.</td>
<td>100% of students will receive a score of 80% or higher on their community paper. 80% of students will receive a 80% or higher on their oral presentation of their community project.</td>
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1 – Academic Performance
Support and enhance programs that prepare students to be knowledgeable, reflective and engaged citizen scholars

1.1 Use sustained evidence of student learning outcomes and student achievement for continuous improvement
1.2 Offer certificate, undergraduate, and graduate programs that meet regional needs
1.3 Implement and support information and instructional technologies that facilitate effective pedagogies
1.4 Enhance programs that specifically support academic excellence
1.5 Increase student awareness of participating in a global society

2 – Student Engagement
Enhance learning and achievement and promote retention through active engagement in curricular and co-curricular programs

2.1 Create a freshman experience that enables students to thrive and move successfully through to graduation
2.2 Foster institutional pride and strengthen connections within the campus community
2.3 Enhance opportunities for increased student involvement in curricular and co-curricular activities

3 – Diversity and Inclusion
Create a vibrant, inviting, and enriching university community that values and respects all individuals and whose students, faculty, and staff represent the diversity of its region

3.1 Ensure an inclusive community where differences are respected and valued
3.2 Attract and retain a diverse student population
3.3 Increase the diversity of faculty and staff

4 – Research and Creative Activities
Encourage faculty research and creative activities, and engage students in local, national and international scholarship

4.1 Create a vibrant culture of faculty research and creative scholarship
4.2 Promote and support undergraduate research as a meaningful aspect of campus life
4.3 Enhance and support research and scholarly collaborations with community partners

5 – Environmental Stewardship
Foster stewardship of the environment and embody the values of sustainability

5.1 Enhance sustainability through energy conservation and recycling
5.2 Create a community that champions environmental awareness and sustainable living

6 – Administrative and Financial Stewardship
Enhance revenue, provide effective and efficient financial management, and ensure institutional sustainability

6.1 Create and obtain funding streams to support short and long term initiatives
6.2 Increase private and corporate funding
6.3 Strengthen academic infrastructure of the university to ensure the proper alignment of instruction, services, and student life
6.4 Strengthen institutional infrastructure for the recruitment and retention of faculty and staff
6.5 Evaluate and improve facilities and processes that foster services to faculty, students, staff, and the community.