1-1-2014

Academic Learning Compact: Environmental Science and Policy [Effective 2014]

University of South Florida St. Petersburg.

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Academic Learning Compact: Fall 2014- Spring 2015

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

Academic Learning Compacts

Academic Year: Fall 2014 & Spring 2015

Due: May 15, 2015

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>
<th>COLLEGE OF ARTS &amp; SCIENCES GOALS &amp; OBJECTIVES</th>
<th>UNDERGRADUATE PROGRAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOALS &amp; OBJECTIVES</td>
<td></td>
<td>Anthropology</td>
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</tr>
<tr>
<td>Use sustained evidence of SLO’s and student achievement for continuous improvement</td>
<td>Offer certificate, undergraduate and graduate programs that meet regional needs</td>
<td>Initiate and expand graduate programs and develop formal academic ties to other graduate programs within the USF system</td>
</tr>
<tr>
<td>Offer certificate, undergraduate and graduate programs that meet regional needs</td>
<td>Implement and support information and instructional technologies that facilitate effective pedagogies</td>
<td>X</td>
</tr>
<tr>
<td>Implement and support information and instructional technologies that facilitate effective pedagogies</td>
<td>Enhance programs that specifically support academic excellence</td>
<td>X</td>
</tr>
<tr>
<td>Enhance programs that specifically support academic excellence</td>
<td>Increase student awareness of participating in a global society</td>
<td>X</td>
</tr>
<tr>
<td>Increase student awareness of participating in a global society</td>
<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>
</tr>
<tr>
<td>Create a freshman experience that enables students to thrive and move successfully through to graduation</td>
<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>
</tr>
<tr>
<td>Foster institutional pride and strengthen connections within the campus community</td>
<td>Enhance opportunities for increased student involvement in curricular and co-curricular activities</td>
<td>X</td>
</tr>
<tr>
<td>Enhance opportunities for increased student involvement in curricular and co-curricular activities</td>
<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>
</tr>
<tr>
<td>Insure an inclusive community where differences are respected and valued</td>
<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>
</tr>
<tr>
<td>Attract and retain a diverse student population</td>
<td>Increase the diversity of faculty and staff</td>
<td>X</td>
</tr>
<tr>
<td>Increase the diversity of faculty and staff</td>
<td>Create a vibrant culture of faculty research and creative scholarship</td>
<td>Make significant and meaningful contributions to ongoing dialogues in our academic fields.</td>
</tr>
<tr>
<td>Create a vibrant culture of faculty research and creative scholarship</td>
<td>Promote and support undergraduate research as a meaningful aspect of campus life</td>
<td>We expect our undergraduate and graduate students to engage in research in collaboration with faculty</td>
</tr>
<tr>
<td>Promote and support undergraduate research as a meaningful aspect of campus life</td>
<td>Enhance and support research and scholarly collaborations with community partners</td>
<td>X</td>
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</tbody>
</table>
The 2014-15 academic year was also the year when we offered a completely reorganized curriculum that formalized three concentrations for our undergrad degree 1) science, ii) policy and iii) sustainability. A new and improved course design was created for the EVR 4921 – Senior Seminar-course. As the exit course that all ESP majors must take we realized that this is the one course where we can assess that students have been equipped with the necessary skills and knowledge they will need for employment and/or graduate school. We hired a new Visiting faculty member in 2014-2015 academic year for policy and renewed the current visitor line for the science. Our undergraduate students participated in research month and presented their work at the undergraduate research symposium hosted by USFSP as well as professional conferences such as Florida Society of Geographers and won the best poster award. We completed external review report. We have ongoing discussions about several strategies to engage undergraduates more closely to develop a greater sense of identity as belonging to ESPG and having a greater esprit de corps. We have successfully established two honor societies 1) Pi Epsilon and 2) GTU. Dept also established a new LLC called ‘Living Green’ targeted to freshmen. Another high point is that the department has been successful in encouraging undergraduate students to engage in more research activities. Several undergraduate students working on projects co-supervised by Drs. Alegria, Dixon, Pandey and Stewart worn prizes for their posters in local and state-wide conferences. In addition, the department faculty members have continued having success in generating publications. Our students and faculty are also engaged in sustainability efforts in the campus including student green energy funds and student organization such as SEAS and garden club (current president of the SEAS and garden clubs are ESP students). Further, we initiated a new club ‘called Environmental Science and Sustainability’. We have instituted a few awards for faculty and students using the summer rebate funds. Our internship program and record keeping for it has been revamped and some success story can be found at http://www.usfsp.edu/espg/internships-and-jobs/students/

We are working on a strategic plan to align the dept with USFSP’s vision20/20.
Summary Statement – Impact of Changes Made in Fall 2014- Spring 2015

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

The department successfully identified several areas for changes and improvements in 2011-2012 and started to implement them in 2012-2013 and continued with the process in 2014-2015. We recognized that the previous ALCs (prior to 2011-2012) relied excessively on one course – over 60% of learning outcomes (goals) were associated with one course, EVR 2001. We recognized that it was not a good idea to base the majority of assessment on the introductory course for the department. Instead, we recognized that students must be assessed throughout their entire time (introductory course, beyond, and at the end in the Senior Seminar). Thus, the new ALCs call for students to be assessed as to meeting the ALC goals at several points along their studies. We also recognized the need to assess mathematical/quantitative skills, which was not being done previously to any extent. We also recognized that students’ writing and oral skills need to improve and have introduced several avenues to assess these skills in the new ALCs. One of the required course is EVR 4921, which is only one credit hr course, but it is designed to be a cap stone experience. We are in the process of creating a new 3 credit hrs course to replace the current 1 credit hrs EVR 4921. This new course proposal was submitted for approval in Fall 2014. This is a result of our past observation that 1 credit is insufficient for the different areas we wish to assess in this course. Our new Visiting faculty member is teaching both EVR 2001 and EVR 4921 with a hope that we will see progress for individual students over the years. One strategy we have discussed and hope to implement hopefully in the future is to require students to maintain a portfolio for the duration of their studies so we can track their achievement of target goals over several years, however, faculty time is a real issue in adopting this method – but sometime in the future we will do so. This would also allow us to target areas of weaknesses across the course work. One problem we identified is that EVR 4921 is a Senior Seminar course, and requires senior standing. However, juniors have apparently regularly allowed to register for this course without approval of the department. Also, it appears that often students are seniors based on number of credits but they have not taken many of the upper level ESP courses which we need them to have taken in order to assess them as seniors about to graduate. This seems to be especially the case with transfer students who come with a lot of credit hours. It appears that such students are allowed to take this course as soon as they transfer to USFSP because they have enough credits to be classified as seniors but they struggle in the class because they have yet to take our upper level courses. The department will work with Advising to ensure that only true seniors in their last or penultimate semester are allowed to take this course. We incorporated civic engagement component in many of our courses and will continue to expand this effort.

Mission of Academic Program (include URL): This interdisciplinary and integrated major seeks to advance students’ critical abilities to solve real-world environmental problems, manage social-natural systems in a sustainable manner, and affect decisions involving environmental policy, resource management, and biodiversity conservation. The curriculum comprises an intensive foundation in the environmental sciences, physical-chemical sciences, social sciences, and the humanities, as well as the integration of these areas to study a problem at hand. Upon completion of the required course work, students will develop appreciation and a holistic view of how scientific truth (data and analysis based results) and policy (interpretation of data and analysis in the political context) work together to affect our everyday life (as an individual and as a society). This major will uniquely link
Academic Learning Compact: Fall 2014- Spring 2015

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

science, policy, and sustainability in the context of society and give greater meaning and context to environmental science and STEM education. The actions of people as an individual and 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. It is intended to (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.

http://www.usfsp.edu/espg/programs/bsesp/

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 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.

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<th>1. Content/Discipline Skills</th>
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<tr>
<td>1a. Evaluate and implement the scientific process</td>
<td>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</td>
<td>100% of ESP majors will earn a minimum grade of 80% in the relevant questions in all three courses.</td>
<td>EVR 2001 Fall 2014: Section 601- 84% met the goal Section 602- 80% met the goal Spring 2015: Section 601- 74% met the goal</td>
<td>EVR 2001 Both semesters: Students were tested in the first and second exam. Also, this was reinforced in EVR 2001L (those who registered for it). Examples of implementing the</td>
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Page 5
1b. Apply the science of ecology to specific issues in the field of environmental science.

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<thead>
<tr>
<th>Section</th>
<th>Percentage Met</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Spring Section 691</td>
<td>55%</td>
<td>Only 1 ESP major in this Spring 2015 EVR 2001 course Section 691 – Lecture only. The student earned at least 80% grade. Scientific methods were added to lectures. Will continue doing this.</td>
</tr>
<tr>
<td>Spring Section 691</td>
<td>55%</td>
<td>Include more discussions with examples of scientific process in lectures.</td>
</tr>
</tbody>
</table>

**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.

**EVR 4921**
- Fall 2014: Section 601 - 100% met the goal
- Section 602 - 90% met the goal
- Spring 2015: Section 601 - 90% met the goal
- Section 602 - 100% met the goal

For both semesters this objective was measured not through standard testing (See comments on Plan for Use of Findings in 2013-14).

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.

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<tr>
<th>Section</th>
<th>Percentage Met</th>
<th>Notes</th>
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<tbody>
<tr>
<td>EVR 4921</td>
<td>100%</td>
<td>Both semesters: This is an essential assessment to consider for this exit course. To make it feasible this course needs to be changed to a 3-credit course in order to carry this work load. In addition it is impossible (time-wise) to include it in the time allotted for the course. However, this objective was assessed indirectly. Throughout both semesters of EVR 4921 students read, prepared and delivered presentations, and participated successfully in class discussions specifically related to the role chemical pollution in biological</td>
</tr>
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**EVR 4921**
- Fall 2014: Section 601 - 100% met the goal
- Section 602 - 90% met the goal
- Spring 2015: Section 601 - 90% met the goal
- Section 602 - 100% met the goal

For both semesters this objective was measured not through standard testing (See comments on Plan for Use of Findings in 2013-14).

**EVR 4921**
- Both semesters: An assessment test will be administered which will include questions testing knowledge in this area. 1) 100% of ESP majors will answer correctly a minimum of 80% of these questions.

**EVR 4921**
- Fall 2014: Section 601 - 100% met the goal
- Section 602 - 90% met the goal
- Spring 2015: Section 601 - 90% met the goal
- Section 602 - 100% met the goal

For both semesters this objective was measured not through standard testing (See comments on Plan for Use of Findings in 2013-14).
1d. Demonstrate competency in the application of mathematical and GIS concepts to the field of environmental science.

| All ESP majors taking GIS 3006 and GIS 4043 will be assessed via (a) term project that requires synthesis and integration of GIS concepts tools and thinking and (b) the Midterm II. | 1) (a) 65% of ESP students will earn 80% or higher on their term project. (b) 75% of ESP majors will earn a minimum of 85% in the relevant questions in Midterm II. | 

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. | EVR 2861 The class size was 33. All 33 students were either ESP major or minor. The average score for the 33 students who took the course was 83.78%. Of the 33 students, who took the course, 32 of them earned 80% and higher on relevant questions in the exams. One (1) student did not take the final exam due to call-up for duty in the military. The student was given an incomplete (I) grade, and is due to complete the course by the end of fall semester, 2015. Twenty-six (26) students had 80% or more in the final grade. Four (4) students had 70% or more, but less than 80%. Only one (1) student scored less than 70% but, more than 60%. No student scored less than 60%. | EVR 2861 The students completed two objective type exams and two oral (role playing debate) type exams. The overall performance of the class was good. However, because one (1) student is still to complete the class, the goal of 100% of ESP majors earning a minimum grade of 80% in the relevant questions in exams can only be assessed after the student completes course activities and takes the final exam. 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 | 100% of ESP majors will earn a minimum grade of 80% in the relevant questions | PUP 4203 The class size was 31. The average score for the 31 students | PUP 4203 The students completed two short and long essay type exams. |
formation, adoption, implementation and evaluation in Exam #1

who took the course was 84.46%. Twenty-one (21) of the 31 students scored 80% or higher in the final grade. Eight (8) students scored 70% or more, but less than 80%. Two (2) student scored less than 70%.

The goal of this class was met as 100% of ESP majors earned 80% or more in the relevant questions. Criterion will be kept to generate data for comparison.

| 1h. 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 three examinations. | 100% of ESP majors will earn a minimum grade of 80% in the relevant questions related to ecological economics, science and technology, and environmental policy |

*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>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.</td>
<td>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/GLY 3720/GLY 4734</td>
<td>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).</td>
<td>EVR 2001 Fall 2014: Section 601- 100% met the goal Section 602- 100% met the goal Spring 2015: Section 601- 100% met the goal Section 602- 100% met the goal</td>
<td>EVR 2001 Both semesters: Students were exposed to essay type questions in the first and second exams. Also, they did a 3-page term paper on Human Overpopulation. Students registered in EVR 2001L wrote 5 short summaries of peer-reviewed papers. Will continue doing this. Spring Section 691 Only 1 ESP major in this Spring 2015 EVR 2001 course Section 691 – Lecture only. The student earned at least 80% grade on lecture written review homework assignments.</td>
<td>EVR 2001 Both semesters: Students were exposed to essay type questions in the first and second exams. Also, they did a 3-page term paper on Human Overpopulation. Students registered in EVR 2001L wrote 5 short summaries of peer-reviewed papers. Will continue doing this. Spring Section 691 All EVR 2001 exam questions are short answer/essay format. All homework assignments require a summary of assigned materials relevant to course topics.</td>
</tr>
</tbody>
</table>
### 3) EVR 2861

- In EVR 2861, students will write a research project paper with 3 sequential phases related to an environmental policy topic.

### 4) EVR 4921

- EVR 4921 – students will be required to write an appropriate term paper demonstrating these skills.

### 3) EVR 2861

- 90% of ESP majors will earn a grade of 80% or better on the research project final paper.

### GLY 4734

**Spring 2015:**
- Section 601 - 100% met the goal

### GLY 4734

**Spring 2015:**
- Students were exposed to essay type questions in all 3 exams. Also, they did a 5-page term paper on any topic on coastal issues (i.e., science, economy, policy, recreation, tourism, etc.). Will continue doing this.

### EVR 2861

**Fall 2014:**
- Section 601 - 100% met the goal
- Of the 33 students who took this class, 31 of them completed the research paper component.
- Twenty-seven (27) of them earned a grade of 80% and higher on the paper. The average score for the paper was 83%
- The goal of 90% of ESP majors earning a grade of 80% or better on the final paper was not met as only 87% of ESP majors earned 80% and higher on the paper. However, 1 student did not complete the class due to call up for duty in the military. That student received an incomplete grade (I), and plans to complete the class before the end of fall semester, 2015. Criterion will be kept to generate data for comparison.

### EVR 4921

**Fall 2014:**
- Section 601 - 100% met the goal
- Section 602 - 90% met the goal

**Spring 2015:**
- Section 601 - 90% met the goal
- Section 602 - 100% met the goal

### GLY 4734

**Spring 2015:**
- Students were exposed to essay type questions in all 3 exams. Also, they did a 5-page term paper on any topic on coastal issues (i.e., science, economy, policy, recreation, tourism, etc.). Will continue doing this.

### EVR 2861

**Spring 2015:**
- Section 601 - 100% met the goal

### EVR 4921

**Fall 2014:**
- Section 601 - 100% met the goal
- Section 602 - 90% met the goal

**Spring 2015:**
- Section 601 - 90% met the goal
- Section 602 - 100% met the goal

### EVR 4921

- This is an essential assessment to consider for this exit course. To make it feasible this course needs to be changed to a 3-credit course in order to include this course work load. However, as an indirect assessment measure students read peer-reviewed journals and generated PowerPoint.
2b. 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 written critiques of environmental science and policy research.

| 1) **EVR 2001** | 1) **EVR 2001**  
**Fall 2014:**  
Section 602 - 90% met the goal  
Section 603 - 95% met the goal  
**Spring 2015:**  
Section 601 - 92% met the goal | EVR 2001  
Both semesters:  
Students were exposed to 12 laboratory exercises which included lab reports, quizzes, and summaries of peer review journals. Will continue doing this.  
**Spring Section 691**  
ESP students in EVR 2001L sections will continue to prepare lab reports. |
|---|---|---|
| 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. | 2) **PUP 4203**  
Of the 31 students who took the class, 29 of them earned a grade of 80% or higher on the paper/oral presentation. Seventeen (17) students had a grade of 90% or higher. The average score was 88%, the high score 92%, and the low score was 66% | **PUP 4203**  
The goal of 90% of ESP majors earning a grade of 80% or better on the research project final paper was attained, as 94% of ESP majors earned 80% and higher on the research project final paper. Criterion will be kept to generate data for comparison. |
| 3) In **EVR 4873** students will write a research project paper in 3 sequential phases including a literature review related to a sustainability topic. | 3) **EVR 4921**  
Fall 2014:  
Section 601 - 100% met the goal  
Section 602 - 90% met the goal  
**Spring 2015:**  
Section 601 - 90% met the goal | **EVR 4921**  
Both semesters:  
As part of their course assignment in reviewing and studying peer-reviewed papers, students were asked to include questions that provide constructive presentations and delivered very effective oral presentations in different topics related to environmental science. Will continue doing this. |
| 4) **EVR 4921** – students will be required to write a critique of scientific literature (a published paper). | 4) **EVR 4921**  
Fall 2014:  
Section 601 - 100% met the goal  
Section 602 - 90% met the goal  
**Spring 2015:**  
Section 601 - 90% met the goal | **EVR 4921**  
Both semesters:  
As part of their course assignment in reviewing and studying peer-reviewed papers, students were asked to include questions that provide constructive presentations and delivered very effective oral presentations in different topics related to environmental science. Will continue doing this. |
<table>
<thead>
<tr>
<th>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.</th>
<th>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.</th>
<th>1) 70% of the ESP students will earn 80% or higher on the oral component of their term project report.</th>
<th>Section 602 - 100% met the goal critiques about any aspect of the paper (methodology, objective, discussion, conclusion, type of graphics, etc.). Also, students were asked to provide their own opinion (agree/disagree with the scientific article in question) and explain why. Will continue doing this.</th>
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<tbody>
<tr>
<td>2) EVR 2001, GLY 3720, GLY 4734 – oral presentations will be required of students in all three courses.</td>
<td>2) 100% of ESP majors will earn a minimum grade of 80% in the oral presentations.</td>
<td>EVR 2001 Both semesters: This was not assessed.</td>
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<tr>
<td>3) EVR 4921 - All ESP majors will be required to deliver an oral presentation.</td>
<td>3) All ESP majors will earn a minimum of 80% in the oral presentations.</td>
<td>EVR 4921</td>
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<td>EVR 2001 Both semesters: With sections of 20+ students is very challenging incorporating such activity in the amount of allotted time without taking time away from lecturing.</td>
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<td>Spring Section 691 With 20 plus students in the EVR 2001 lecture section of this introductory course, incorporating student oral presentations would use 2 weeks of lecture time and reduce the number of topics introduced in this 1 semester course.</td>
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<td>GLY 4734 Spring 2015: Same as above.</td>
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<td>EVR 4921 Both semesters:</td>
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</tbody>
</table>
presentation on an approved topic relevant to environmental science and/or policy. presentation portion of the course

Fall 2014:
Section 601 - 100% met the goal
Section 602 - 100% met the goal

Spring 2015:
Section 601 - 100% met the goal
Section 602 - 100% met the goal

Students did two oral presentations of 15 minutes followed by 10 minutes of questions from the audience. In addition, students were assigned peer-reviewed articles in order to have open-class discussions. Will continue doing this.

*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>3a. Developing an appropriate problem-solving strategy involving formulating and testing a research hypothesis.</td>
<td>1) All ESP students taking GIS 4043 will be assessed via relevant questions in Midterm II. 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.</td>
<td>1) 75% of the Students will earn 80% or greater 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.</td>
<td>EVR 2001  Both semesters: This was not assessed. Final exam was T/F, multiple choice, name/draw/define questions Spring Section 691 Only 1 ESP major in this Spring 2015 EVR 2001 course Section 691 – Lecture only. All exams are short answer/essay format. The student earned at least 80% grade on each of the 3 exams. There was no requirement to review a major paper and identify the hypothesis and testing strategy.</td>
<td>EVR 2001 Will add again these types of questions for the final exam. Spring Section 691 Add a major paper with hypothesis identification and testing strategy as a homework assignment and add a scientific hypothesis/testing strategy question to the Final Exam.</td>
<td></td>
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### 3b. Identify assumptions and underlying relationships in environmental research and planning.

**EVR 4921** – students will be required to critically analyze 3 published papers and identify any assumptions and underlying relationships in them.  
70% of ESP majors will successfully demonstrate mastery of this in their critiques.

- **EVR 4921** Fall 2014:  
  - Section 601- 100% met the goal  
  - Section 602- 100% met the goal  
- **Spring 2015:**  
  - Section 601- 100% met the goal  
  - Section 602- 100% met the goal

Both semesters:  
Students did a good job in addressing this during their oral presentations and open class discussion of articles. I told them that they should include potential issues and inconsistencies in the papers that they analyzed. Will continue doing this.

### 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.

- **EVR 4921** Fall 2014:  
  - Section 601- 100% met the goal  
  - Section 602- 100% met the goal  
- **Spring 2015:**  
  - Section 601- 100% met the goal  
  - Section 602- 100% met the goal

Both semesters:  
See above comment

### 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.

- **EVR 2001** Fall 2014:  
  - Section 601- 100% met the goal  
  - Section 602- 100% met the goal  
- Spring Section 691  
  - Only 1 ESP major in this Spring 2015 EVR 2001 course Section 691 – Lecture only. This ALC was not assessed in this section.

Both semesters:  
Will add again these types of questions for exams

### 4. Civic Engagement:

|------------------|--------------------------------------------|----------------------|----------|---------------------------------------------------|

*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.
| 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 | 1) 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. 2) 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. | 1) Students must earn a grade of S for the paper. 2) 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. | PUP 4203 In place of an ongoing public project, the specific elements of this component of the class were measured using two strategy development (SDAs) activities dealing with human concerns related to environmental issues. These activities were used to assess student’s ability to apply policy tools in resolving environmental problems. For SDA #1, 81% of the students answered the questions, while 83% answered the questions in SDA #2. Overall, this component of the class is rated as a success as 82% of the students responded to question in this activity, surpassing the 75% response rate required for success. PUP 4203 Criterion will be kept to generate data for comparison. However, for the 2015-2016 academic year a different criterion was used. Two strategy development (SDAs) activities dealing with human concerns related to environmental issue was used to assess student’s ability to apply policy tools in resolving environmental problems. |

*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

**ALC GOALS ESTABLISHED FOR DATA COLLECTION:** Fall 2015 & Spring 2016
1. Content / Discipline Skills:

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Means of Assessment</th>
<th>Criteria for Success</th>
<th>Findings</th>
<th>Results</th>
<th>Plan for Use of Findings Fall 2016 &amp; Spring 2017</th>
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2. Communication Skills:

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### 3. Critical Thinking Skills:

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### 4. Civic Engagement (optional):

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### 5. Multiculturalism / Diversity

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<thead>
<tr>
<th>Goals/Objectives</th>
<th>Means of Assessment/Corroborating Evidence*</th>
<th>Criteria for Success</th>
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*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.
“... to ensure student achievement in undergraduate and graduate degree programs ...”