

## Annual Departmental Assessment Report

by Dr. Rempel and Dr. Lynch

Department/Program: Environmental Studies Program

Academic Year of Report: 2017

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### Section 1: Learning Objectives Assessed for this Report

The learning outcomes for the Environmental Studies major are:

1. Articulate the contributions from the social sciences, natural sciences, and humanities in understanding environmental issues.
2. Articulate major root causes of environmental problems and avenues for addressing them.
3. Discuss several key concepts within the field of environmental studies (e.g. sustainability, environmental justice, climate change, humans' varied ways of understanding and representing nature, the relationship between nature and culture), drawing on interdisciplinary perspectives.
4. Demonstrate critical thinking and communication skills, including the ability to:
  - a) Critically analyze environmental information, data and problems
  - b) Interpret a variety of environmental writings
  - c) Synthesize diverse information sources
  - d) Communicate effectively through written and oral communication

### Section 2: Assessment Activities

This year we focused on our 200-level introductory courses, with a focus on **ENVS 202: Introduction to Environmental Studies: Natural Sciences**, which is required for all Environmental Studies majors. This focus was determined after our Executive Committee members participated in a "Goals Defining" activity (using Appendix 2: Goal Definition Worksheet) during our 12/2/16 Executive Committee meeting. Our ENVS Undergrad Affairs Committee then used this input to develop our assessment plan for the year. The first step entailed a meeting on 1/27/17 with all the faculty who have taught one of the 200-level courses, to discuss: a) the learning outcomes for these courses, 2) approaches, topics and readings covered, 3) the continuation/coordination of our Classroom-Community Connections efforts, and 4) assessment within the 200-sequence. At this meeting, Dr. Rempel stepped up to take on the assessment responsibilities for ENVS this academic year.

ENVS 202 is responsible for introducing Program-level learning outcomes 1-4c and for developing outcome 4d, above. The attached syllabus for the Spring 2017 course lists topics, course-specific learning outcomes (which support but do not reiterate Program-level outcomes), the rubric that guides letter-grade evaluations, and assessment tools: short weekly quizzes, class preparation assignments (short written assignments due before most classes), section participation, midterm and final exams, and a term project. In this course, all assessments of student achievement are recorded as grades; no other higher-level assessment is undertaken.

The first Program-level learning outcome is the ability to articulate natural science concepts that are central to understanding environmental issues. The second outcome, also emphasizing expression of ideas, is the ability to articulate major root causes of environmental problems and avenues for addressing them. In Spring 2017, ENVS 202 encouraged students to develop these abilities through small-group discussions in class and in section, weekly written homework assignments, a written term project, and an oral presentation of the term project. Exam review sessions and study guides urged

students to practice explaining concepts in their own words and diagrams, as well. Weekly assignments asked students to understand concepts and to use them to interpret new evidence, and the term project asked them to evaluate and synthesize evidence to support arguments for and against specific environmental actions. Student success in meeting outcomes 1 and 2, at the introductory level intended for ENVS 202, was then evaluated through letter grading of discussion effort, homework, and written and oral components of the term project, following the rubric.

The third learning outcome is the ability to discuss key concepts in environmental studies (e.g. climate change; air quality; sustainable agriculture) from multiple perspectives. To provide such perspectives, ENVS 202 readings include social and cultural commentary as well as scientific sources, and many articles address interfaces between scientific issues and economic, political, or social perspectives directly (see attached list). Students practice these multi-dimensional discussions primarily in section, in homework, and in their term projects, and their abilities in this realm are ultimately evaluated through homework and term project letter grades according to the rubric.

The fourth learning outcome includes the abilities to (a) analyze environmental data and writing critically; (b) to interpret it accurately; (c) to synthesize it into a clear argument; and (d) to communicate such arguments in written and oral presentations. Students practice analyzing and interpreting graphs, maps, and tables of quantitative evidence twice each week in class; these skills (4a and 4b) are then evaluated (as point scores) in several of the weekly quizzes, in the midterm exam, and in the final exam. Synthesis of multiple pieces of evidence are practiced at length in two classes, one involving California's groundwater crisis and one involving neonicotinoid effects on honeybees, to support term project development, and these skills (4c and 4d) are then evaluated (as letter grades) in term project reports and presentations.

While course evaluations are not yet available for the Spring 2017 offering of 202; term project grading is not yet complete; and the final exam has not yet been given, some useful themes have become apparent:

- In a large class such as 202, in which GEs assign most of the letter grades, diligence is necessary to ensure grading consistency and therefore value in revealing progress or problems during the term as well as ultimate achievement of learning outcome goals. To improve consistency, in the Spring offering, the teaching staff met weekly to discuss evaluation of each homework assignment and progress on the term projects. In addition, term project presentations and blogs were graded by the instructor in consultation with the respective GE.
- Grade penalties for late and/or missing work are necessary, but some students who otherwise seem to be learning (as evaluated by quiz and exam scores and viewed directly in class participation) lack the discipline to turn assignments in on time. As a result, final grades reflect a student's organization and diligence as much as learning, and specific assignments may be more useful than class scores for evaluating program-level learning outcomes.
- Group term projects invariably allow some students, in some groups to coast on the efforts of others. While group work is valuable in practicing collaboration, provides good opportunities for discussion and debate, and allows all students the opportunity to present their work orally, it limits the assessment of individual accomplishment.
- While short weekly quizzes were not popular with students, they did reveal conceptual and analytical problems with ample time to correct them. Quiz averages rose from about 60% to about 80% during the term, suggesting that students' abilities to express ideas and interpret quantitative evidence were improving.

- Students seemed increasingly better able to interpret graphs and maps in class discussions, in the sense of correctly distinguishing between conclusions they supported and those they did not, as the term progressed, according to the subjective impressions of the teaching staff. This suggests that regular practice in class, supported by small-group discussions followed by whole-class resolution, was useful in developing this ability.

### **Section 3: Actions Taken Based on Assessment Analysis**

As our assessment effort was focused on ENVS 202 in spring term, no actions have been taken yet.

However, Dr. Remple noted:

- Written communication is a general weakness and the current grading rubrics value content over the clarity and effectiveness of the writing itself. However, 202 also must cover numerous conceptually involved topics, and as one of the few science courses that Environmental Studies majors must take, 202 should perhaps develop learning outcomes 4a-c, and especially 4a, which focuses on analysis, rather than 4d.
- The value of the term project seemed clear for many students, judging from their enthusiasm and questions in class and during office hours. It also offers the primary opportunity for them to investigate a question of their own choosing. However, these should perhaps be conducted in pairs, with individual contributions clearly marked, and graded individually as well. This would emphasize the importance of the associated learning outcomes to the students as well as provide a more robust evaluation of the achievement.

### **Section 4: Other Efforts to Improve the Student Educational Experience.**

This year, the Environmental Studies Program:

- Hosted *Environmental Connect*, our signature networking event in which students met with ~19 organizations to learn about volunteer and internship opportunities, as well as practice networking skills. This year we moved it to Winter term to provide opportunities for graduating seniors to explore spring internship opportunities. This was a highly successful event.
- Launched the new Food Studies minor in Fall 2016 to respond to student interest.
- Adapted our internship program: we now offer ENVS 404 Environmental Internship and ENVS 404 Food Studies Internship in order to support new food-oriented internships, the minor, and streamline degree guide classification. We set up the administrative and instruction structure to manage the 2 different types of internships and created a new FS ENVS 404 syllabus.
- Invested in several planning and training workshops to transition ENVS to the new Student Success Collaborative database in the fall.
- Launched our new community-building initiative of holding town halls and social events so undergraduates could get to know each other enjoy some social time, and/or discuss current issues. This is critical for an interdisciplinary program and was well received.

In addition, the Environmental Leadership Program continually innovates to meet community needs and student interests. This year we offered two new projects: Explaining Estuaries and Cultivating Connections. Please see our website for more info: <http://envs.uoregon.edu/pastprojects/>

### **Section 5: Plans for Next Year**

The results from this initial assessment effort will be discussed at an ENVS Undergraduate Affairs Committee Meeting and then shared with the ENVS Executive Committee (most likely at our annual retreat at the beginning of Fall 2017). Specific actions will be discussed then and a strategy for 2017-2018 developed in early Fall.