

**Environmental Studies Planning Unit
The Evergreen State College
Program Review
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Last Program Review Submitted: 1998

I. Brief Description of the Area and Data Summarized in this Self-Study

The Environmental Studies Planning Unit on the Olympia Campus fulfills a major focus of The Evergreen State College's commitment to education, service, and practice of life-long learning. The Environmental Studies Unit (ES) has been a part of the college's curriculum since the college's founding in 1970. The first Environmental Studies program, Political Ecology, was taught in 1971-72. Since that time, ES has expanded its curriculum and become a major attracter for students to the college. The faculty continues to create, adapt, and improve curriculum to meet student needs and demands. This report summarizes faculty commitment to curriculum and student needs based on a questionnaire and discussion by members of the planning unit.

This self-study indicates measures taken by ES faculty to address the college's general education requirements, efforts to provide students with career information and options, and a candid review of the unit's ability to meet student demands in the future.

A. Focus

Environmental Studies is a significant planning unit at The Evergreen State College. The planning unit has maintained a core of faculty and students committed to examining the ways in which natural and social sciences can clarify, synthesize and develop potential solutions to environmental conditions. Faculty and students work together in interdisciplinary programs that address a number of environments and conditions including human communities and the environment, natural history, and environmental sciences. Faculty in biology, geology, geography, economics, social and political sciences, and environmental history cover these areas.

B. Vision

Faculty across the Environmental Studies curriculum commit to studying the interactions between human societies and natural systems to sustain survival of both. The primary goal is to create learning opportunities for students to develop knowledge and skills that are relevant to a wide-ranging number of environmental careers as well as civic engagement. Specifically, students are presented with opportunities to:

- 1) Qualitatively and quantitatively investigate the chemical, physical and biological elements that define terrestrial ecosystems;
- 2) Understand the physical systems that underlie life on Earth;
- 3) Understand the nature, development and interactions of human societies with the environment;
- 4) Examine the richness and limits of environmental and social resources available to sustain both human and natural systems; and
- 5) Engage in applied research and work to develop skills that support this

effort.

C. Service to Students

Environmental Studies students have the unique opportunity to participate in programs that address environmental issues and engage in natural and social sciences within the context of learning communities. Students can also work independently with support from faculty in independent contract learning, internships, and research. There is consistently high demand for ES offerings from students coming to Evergreen for the first time. For example, based on Fall 2003 data, 13% of enrollment in first-year seats in Core and All-Level programs were in ES programs. In the same year, 20% of all non-resident first year students indicated a primary academic interest in ES; and 9% of Washington resident first-year students indicated this primary interest. Transfer students also have a high preference for ES curriculum. Again, based on Fall 2003 data, 15% of all new transfer students indicated a primary academic interest in ES. ES was the primary academic interest of 14% of new Washington resident transfers and 20% of non-resident transfers. During the same year, 12% of first generation, first-year students expressed a primary interest in ES. First generation transfer student demand was similar at thirteen percent. These numbers indicate a high demand for ES curriculum, especially among non-resident students. Based on annual average FTE data for AY 01-02, ES curriculum served students across academic offerings as follows:

- a. Core Programs – 101.7 FTEs (26.6 % of total core programs)
- b. Inter-Area Programs – 44.3 FTEs (7.1 % of total inter-area programs)
- c. Other Full Time Programs – 240.6 FTEs (17.5% of full time programs)
- d. Courses – 9.6 FTEs (2.7% of courses)
- e. Contracts – 33.7 FTEs (9.3% of contracts)
- f. Internships – 29.3 FTEs (22.2% of internships)

In 2000-01, ES had an annual average of 18.7 undergraduate (UG) instructional lines out of a campus total of 158.2 or 11.8% of the campus. ES generated 11.0% of all undergraduate FTEs that year. In 2002-03, ES had an annual average of 16.0 instructional lines assigned to the UG curriculum or 10.0% of all UG instructional lines, and ES generated 9.6% of all undergraduate FTEs. The total annual average faculty lines in ES instructional lines in 2002-03 was 28.7; however, only 16.0 lines were assigned to UG instruction. The difference between total ES lines and UG instructional lines is due to 4.8 lines supporting the Masters of Environmental Studies program, 6.2 lines in administrative rotation, and 1.7 lines on leave. This disproportionate use of lines outside of the UG curriculum creates holes in the curriculum. Student demand, especially non-resident demand, is consistently high for all ES programs, but the lack of faculty lines is hindering the area and the college's ability to serve students.

The ability for ES faculty to continue to serve this level of student demand relative to other faculty groups is marginal. Twenty five percent of ES faculty are routinely not available for teaching while serving in other capacities across the campus or are on sabbatical. The unit has consistently required the support of visiting hires to fill curricular needs. These hires, while meeting student demand, often need additional support from teaching partners and other areas of the college. In addition, the number of visitor positions available changes annually, while the

number of faculty away from teaching is consistently one quarter of the unit faculty. Faculty are reluctant to plan programs with visiting hires during the catalog process since the availability and identification of visiting hires is unknown at the time. This has the net result of reducing the number of ES offerings and not reliably replacing the ES faculty who are out of the undergraduate curriculum on other assignments. Relying on visiting hires is both unpredictable and inefficient. The unit is under-staffed given the high student demand.

Students are not being well served in botany, natural history, eco-agriculture, and organismal biology curriculum due to the lack of a greenhouse facility. The need for a greenhouse has been identified on numerous occasions over the last ten years. A greenhouse would provide the opportunity for faculty and students to experience laboratory and experimental learning in plant physiology, genetics, crop production, and organismal interactions.

II. Curriculum

The ES curriculum has slowly expanded to meet social and scientific developments in environmental studies. The demand for ES curriculum is also driven by student demand. Led by faculty, the ES Planning Unit, now provides strong interdisciplinary programs that attract students from Washington and out-of-state students seeking interdisciplinary, experiential learning opportunities in environmental topics. General education requirements have been integrated into the ES curriculum.

A. Thematic Areas

The ES Unit offers curriculum in three areas:

- 1) Human communities and the environment—addresses environmental policy, ethics, and human relations with, and ways of thinking about the natural world. Programs in this thematic area include community studies, political economy, geography, environmental economics, environmental health, environmental history, and planning.
- 2) Natural history—focuses on observation, identification, and interpretation of flora and fauna using scientific field methods as a primary approach to learning how the natural world works. These programs include ecology, ornithology, mammalogy, herpetology, entomology, and botany.
- 3) Environmental sciences—studies the underlying mechanisms and structures of natural systems, both living and non-living. These sciences include chemistry, biology, geology, marine sciences, climatology, ecology, and biogeochemistry.

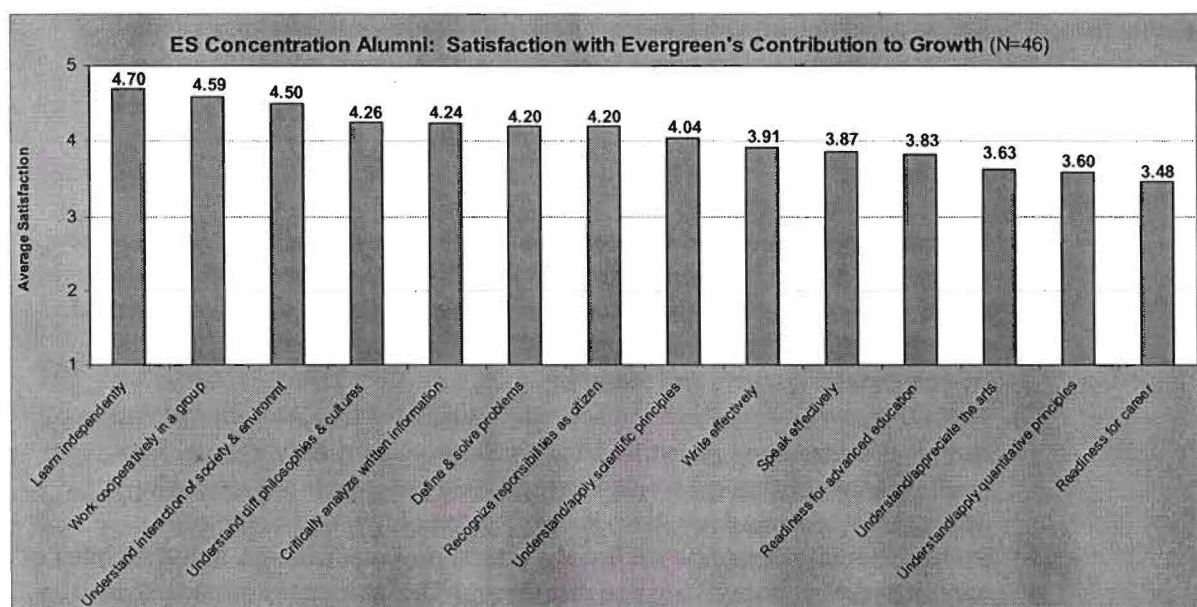
A. Satisfaction of General Education Requirements

The ES faculty incorporates Evergreen's general education requirements into the ES curriculum in a variety of ways. To review the requirements, graduates are expected to:

- 1) Articulate and assume responsibility for their own work;
- 2) Participate collaboratively and responsibly in a diverse society;
- 3) Communicate creatively and effectively;
- 4) Demonstrate integrative, independent and critical thinking;

- 5) Apply qualitative, quantitative, and creative modes of inquiry appropriately to practical and theoretical problems across the disciplines; and
- 6) Demonstrate depth, breadth, and synthesis of learning and the ability to reflect on the personal and social significance of learning as a culmination of their education.

Alumni from the Class of 2001 responded to a questionnaire which asked them to rate their satisfaction with Evergreen's contribution to their academic and personal growth. Overall, alumni who identified a concentration in ES indicated they were mostly satisfied or very satisfied with their growth at Evergreen. These data indicate that ES concentration students were among the most satisfied in terms of their growth compared to other academic concentration areas. The curricula scored high in writing effectively, critically analyzing written information, learning independently, working cooperatively in groups, understanding philosophies and cultures, understanding the interaction of society and the environment, and recognizing civil rights and responsibilities. For growth in applying scientific principles and methods and applying quantitative principles and methods, ES concentration alumni awarded the second highest satisfaction rating of the Olympia campus concentration areas.



Note: Satisfaction was rated on a five-point scale where 1=not at all satisfied, 2=little satisfaction, 3=somewhat satisfied, 4=mostly satisfied, and 5=very satisfied.

The data indicate that alumni were highly satisfied in the majority of categories and only somewhat satisfied with a readiness for career. A discussion of faculty work to meet general education requirements and career readiness appears in Section III.

Despite the apparent low recognition of career readiness perceived by alumni, ES students enjoy one of the highest levels of finding employment in their chosen fields. Sixteen percent of the responding alumni indicated that they had found employment in environmental fields one year from graduation. This number is second only to alumni in natural sciences at 20.5% and far above the majority of all other areas of employment. Another 6.8% of ES concentration alumni

found employment in agriculture, horticulture and landscaping. Overall, the rate of employment of ES alumni was the highest of any concentration area (96%). Furthermore, 70% of the employed ES alumni found work which they felt was “somewhat” or “very” related to their primary area of study.

The success of ES alumni is also verified in the number of alumni indicating they were either currently in graduate school or planning to attend graduate school. Seven percent were enrolled in graduate school one-year following graduation from TESC; and 87% of those who had not yet attended, indicated a desire to attend graduate school in the future.

III. Faculty Work

A. Development of General Education Requirements in the Curriculum

Environmental Studies faculty were asked to respond to a series of questions about their efforts to address general education requirements. The questions and their responses are listed below:

1. How does your teaching support the general education requirements?

a. Quantitative reasoning:

Quantitative reasoning is consistently emphasized across the planning unit by all responding faculty. Quantitative work is stressed in natural sciences, economics, and social science programs. Qualitative analysis and interpretation is also stressed in programs that emphasize human interaction with nature such as environmental history and cultural landscapes. Mathematical skills are emphasized at the Core level as part of material on civility.

b. Writing:

Responding faculty consistently emphasized writing as central to their work with students. Writing skill levels were distinguished by faculty who worked with students at different skill levels from graduate level to upper and lower division work. A variety of writing forms are emphasized depending on programs and student needs. These skills include expository, analytical, narrative, personal journal, field journal, lab reporting, interpretation of visuals and speakers, and web-based writing. Some faculty members offer intensive research writing opportunities including draft editing. Seminar papers are common.

c. Effective communication:

Effective communication is equal to writing in student learning. Faculty use a variety of mechanisms to encourage and facilitate student oral communication. These mechanisms include seminar participation, large group presentations, small group engagement, observation and participation in public meetings, and engagement with local communities. Skilled web-based communication is also encouraged. Students work with faculty through interactive evaluation and written comment.

d. Critical thinking:

Critical thinking was identified “at the core of the work we do.” All reporting faculty wrote of their work to encourage critical thinking by students including in seminar, lab, discussions, readings analysis, and analysis of quantitative work. Students also use the use of scientific methodologies to facilitate critical thinking. As one faculty wrote, “scientific baffle-gab” is decoded as well as post modernist jargon. Student critical

thinking encourages students to take responsibility for their work. Student creativity and resolution to problems regularly occurs in programs.

e. Synthesis of learning:

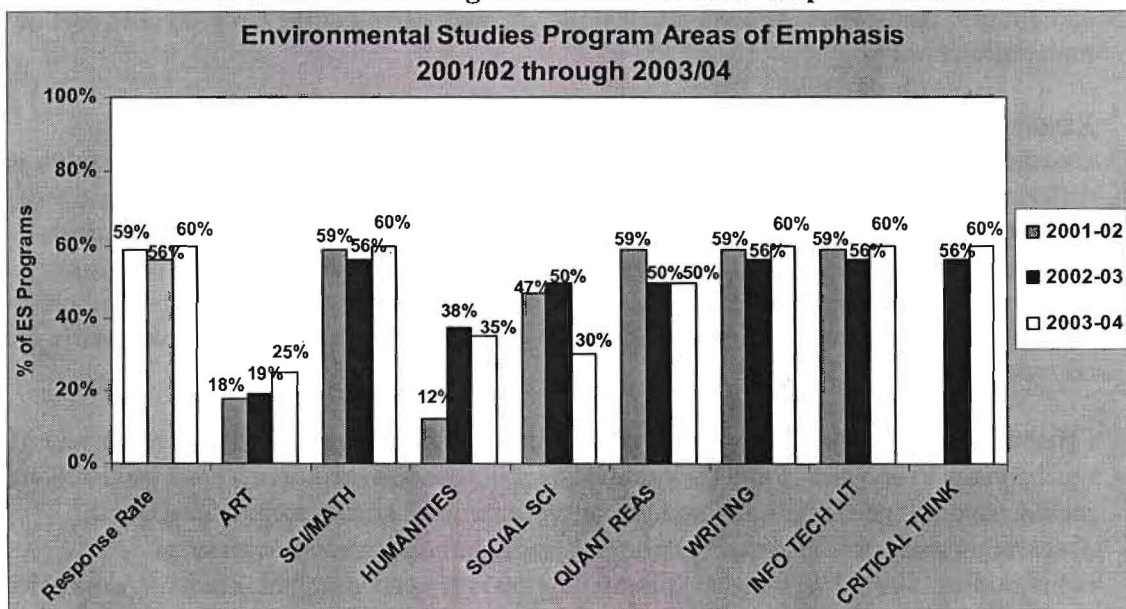
Synthesis of learning occurs in a variety of ways across the planning unit. Students integrate disciplinary work through research, lab work, and fieldwork. The ability for students to make connections, faculty strive to engender interdisciplinary work through careful articulation of program foci, problem statements, selection of readings and seminar materials, crafted exam questions, and identifying ways of thinking such as across scales of reality. Ecology, for example, requires the synthesis of data and process across scales.

f. Responsibility for work:

Responsibility for work offers a variety of interpretations. Students are consistently reminded of their role in participating in programs. Class attendance, turning in materials, citing authors in research, and participating in class are identified as being a good citizen.

A second way of identifying faculty commitment to general education requirements is found in End of Program Review written by faculty. Data from full-time faculty for programs taught in 2001/01 to 2003/4 is displayed below:

**Environmental Studies Programs AY 2001-02 to 2003-04
Results from End-of-Program Review for Each Reported Domain**



Note: the chart above shows the percentage of all full-time ES programs that reported any emphasis (major or minor) in each of the measurement domains. Inter-area and Core programs that included ES faculty are not included in this chart.

This chart emphasizes the interdisciplinary and nature of the curriculum and measures the efforts of faculty to address quantitative reasoning skills, writing skills, and critical thinking skills.

B. Development of Career Opportunities in Curriculum

Faculty members were also asked to address how they assisted students with ideas and opportunities about careers. The questions and faculty member answers are summarized below:

1. *What aspects of your teaching support student learning for specific student careers?*

All responding faculty indicate a variety of ways in which they reinforce career opportunities either related to their fields or to careers with interdisciplinary foci. Faculty employ various methods to emphasize career opportunities including guest speakers and personal experience. A number of faculty include learning objectives such as research and analysis, lab work, field work, writing, and presentation work, and supporting internships as part of their effort to prepare students for careers.

2. *As a planning unit, how should we address the issue of ES students feeling that they were not adequately prepared for careers after Evergreen?*

An alternative range of ideas came forward in response to this question. Some faculty do not feel career development was part of the teaching mission. This work is done by other parts of the campus. Faculty responded that it is their goal to provide the academic foundation and skill building necessary for students to engage in career options on their own. More than one respondent indicated they did not know how to adequately prepare students for careers. Alternatively, other faculties indicate that they feel they are doing these types of work. Their responses include thoughts on student failure to take necessary science classes.

Several faculty suggest providing students with more information about career possibilities by bringing former students to speak about their experiences, creating information sessions, emphasize internships, and inviting local and state agencies to speak to students in the classroom.

To summarize, ES faculty generally address career opportunities in a variety of ways. While some respondents indicated they did not know how to adequately prepare students for careers. A number of possible ways to reinforce career options were provided by other faculty.

IV. Planning Unit Assessment of Needs and Accomplishments

This self-study highlights the over-all success of the planning unit while shedding light on areas that require improvement. First, student demand indicates that ES is a significant attractor of students to the Evergreen campus. Second, the two largest groups of students coming to campus for ES are Washington resident transfer students and non-resident first-year students. These students identify Evergreen as one of the few campuses that offers an interdisciplinary, experiential learning environment.

Overall, students leaving Evergreen with a focus in environmental studies are mostly to very satisfied with their learning experience. A relatively high number of these alumni find employment in environmental fields.

Conversely, the one area identified by alumni that faculty could provide more assistance in the learning experience is in helping students identify potential career opportunities.

V. Recommendations

The results of this self-study are instructive to the ES planning unit and the college in general.

A. Recommendations from the Environmental Studies Planning Unit

Environmental Studies faculty recommend the following needs to support environmental studies curriculum and student demands:

- 1) Additional growth faculty lines to cover areas in community studies, natural history, geology, physical geography, environmental economics and eco-agriculture, and social sciences (this list is not by priority nor is it conclusive);
- 2) Greenhouse facilities for botanical, agricultural, and organismal biology;
- 3) Develop an ES alumni group and create stronger ties with graduating seniors
- 4) Identify a liaison in programs to work with community groups;
- 5) Integrate classroom learning, contracts, and internships with the community-based learning center.

B. Recommendations for the campus regarding Environmental Studies

Environmental Studies faculty recommend the following for work with the larger Evergreen campus:

- 1) Identify commonalities and possibilities for curriculum with the Evening and Weekend Studies (EWS) program;
- 2) Support new faculty lines in environmental studies in EWS;
- 3) Work with Scientific Inquiry to facilitate greenhouse construction and Lab 1 remodel.