

ENVIRONMENTAL STUDIES (ES) PROGRAM ASSESSMENT: 2012-2013

Environmental Studies (ES) assesses its program annually through a senior exit interview (survey and written comments) followed by a discussion between the students and the ES Steering Committee members in attendance. The ES senior exit interview questionnaire asks students to assess the overall curriculum and the capstone experience on each of the eleven program goals (see Appendix A). Students provide a quantitative ranking for each objective and provide qualitative, written comments on any aspect of the ES Program they wish. Following the completion of the questionnaires, ES Steering Committee members conduct the focus-group portion of the ES senior exit interview during which students respond to a variety of faculty questions. Immediately following the senior exit interview, the ES Steering Committee discusses the senior exit interview.

This year, the Environmental Studies Program also began assessment of writing in the major with our first direct assessment of student writing in our ES 100 classes. Working from the goals and guidelines for capstone projects, we developed a suitable, scaled down rubric for ES 100 written work. A separate report on that assessment was submitted to the Assessment Office in February. This spring semester, we developed a rubric for assessing capstone projects that we hope to use this coming year (See APPENDIX C).

ES SENIOR ASSESSMENT

The Environmental Studies senior exit assessment activities were held on 16 May 2013. Although fifteen of the 30 senior ES majors participated in the exit interview, only 9 (3 Science track, 5 Social and Cultural track, and 1 unlabeled) completed the exit questionnaire. After finishing the questionnaire, Michael Marx, ES Program Director, led the exit interview. Additional members of the ES Steering Committee participating in the interview were Nurcan Atalan-Helicke, Assistant Professor of Environmental Studies; Anne Ernst, ES Program Coordinator and Lecturer; Josh Ness, Assistant Professor of Biology and ES; AJ Schneller, Visiting Professor of Environmental Studies; and Bob Turner, Associate Professor of Government. Ernst and Marx took notes during the discussion.

Summary of Questionnaire Responses

The questionnaire asks students to assess how well the ES Program is achieving its 11 goals. Students assess each goal for both how well the overall program and the capstone experience realized the goal (Table 1). Students rank each goal on a five point likert scale (0=no opinion; 1=poor; 2=fair; 3=good; 4=very good; 5=excellent). The capstone experience includes two required courses: ES 374 “Environmental Studies: Methods and Approaches” and ES 375 “ES Research Capstone”; the aim of the sequence is to strengthen students’ research skills and awareness of environment-related issues by engaging them in a year-long, community-based research project. The capstone sequence culminates in the presentation of the students’ community-based research projects to ES faculty, students, and community members.

Table 1. Summary of questionnaire responses for the 2013 senior exit interview.

How well does the OVERALL PROGRAM achieve this goal?

	2003	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13

1. The ES Program seeks to enhance students' abilities to understand ways that the social world and the natural world function as well as how they influence and are influenced by environmental issues.	3.8	4.3	3.7	3.8	3.6	3.8	4.3	4.1	4.3	4.1	3.8
2. The ES Program seeks to enhance students' abilities to understand the utility of an interdisciplinary perspective for studying interrelationships between humans and their environment and the issues that result from these interrelationships.	3.8	4	4	3.9	4.2	4	4.4	3.9	4.7	4	4.3
3. The ES Program seeks to enhance students' abilities to appreciate the complexity and importance of environmental issues across time and space. Specifically, students should be able to appreciate contemporary, historical, and future environmental issues as well as the interrelationships of local, regional, national, international, and global environmental issues.	3.7	4.1	3.6	3.9	3.6	3.5	3.7	4.0	3.5	3.7	3.8
4. The ES Program seeks to enhance students' abilities to understand various intended and unintended consequences of human responses to environmental issues.	3.9	3.8	3.9	3.8	4	4.1	4.1	4.0	4.1	3.9	3.3
5. The ES Program seeks to enhance students' abilities to appreciate environmental issues and personal responsibilities as a member of a community, which includes the Skidmore campus community and beyond.	3.6	3.8	3.1	3.3	3.4	3.5	4.3	4.0	4.1	3.8	3.1
6. The ES Program seeks to enhance students' abilities to work in collaborative and interdisciplinary contexts to address environmental concerns.	4.2	3.7	3.7	3.7	3.8	3.5	4.3	4.3	4.4	3.9	3.5
7. The ES Program seeks to enhance students' abilities to understand major methodologies for addressing particular environmental issues.	3.4	3.3	3	3.3	3	3.2	3.9	3.4	3.6	3.6	2.8
8. The ES Program seeks to give students opportunities to demonstrate basic problem solving and technical skills related to environmental issues (asking questions, analyzing empirical evidence, applying methodologies to answer questions, reporting results).	3.6	3.6	3.4	3.6	3.3	3.3	4.0	3.6	4.0	3.5	3.3
9. The ES Program seeks to enhance students' abilities to communicate effectively (both orally and in writing) regarding environmental issues.	3.4	3.6	3.3	3.8	3.6	3.8	4.1	3.7	3.8	3.9	3.4
10. The ES Program seeks to enhance students' abilities to examine personal and community values and ethical dimensions of environmental problems.	3.6	3.6	3.7	3.6	3.2	3.4	3.9	3.8	3.8	3.6	3.4

11. The ES Program seeks to enhance students' abilities to apply knowledge and skills to develop informed actions regarding environmental issues.	3.6	3.8	3.1	3.3	3.4	3.8	4.2	4.1	4.0	3.7	3.3
	(N=8-10)	(N=9)	(N=10)	(N=16)	(N=16)	(N=12)	(N=19)	(N=14)	(N=13)		(N=9)

How well does the CAPSTONE SEQUENCE help achieve this goal?

	2003	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
<i>Part I. Basic Concepts</i>											
1. The ES Program seeks to enhance students' abilities to understand ways that the social world and the natural world function as well as how they influence and are influenced by environmental issues.	3.5	4.3	3.6	4.1	3.7	3.3	4.2	3.7	4.2	3.7	3.8
2. The ES Program seeks to enhance students' abilities to understand the utility of an interdisciplinary perspective for studying interrelationships between humans and their environment and the issues that result from these interrelationships.	3.6	4.3	3.9	4.1	4	3.4	4.3	3.8	4.3	3.8	3.4
3. The ES Program seeks to enhance students' abilities to appreciate the complexity and importance of environmental issues across time and space. Specifically, students should be able to appreciate contemporary, historical, and future environmental issues as well as the interrelationships of local, regional, national, international, and global environmental issues.	3.4	4.2	3.6	3.6	3.6	3.3	3.4	3.9	3.5	3.5	3.1
4. The ES Program seeks to enhance students' abilities to understand various intended and unintended consequences of human responses to environmental issues.											2.8

5. The ES Program seeks to enhance students' abilities to appreciate environmental issues and personal responsibilities as a member of a community, which includes the Skidmore campus community and beyond.	3.8	4.1	3.4	3.6	3.3	3.7	4.4	4.4	4.0	3.9	3.5
Part II. Skills and Application											
6. The ES Program seeks to enhance students' abilities to work in collaborative and interdisciplinary contexts to address environmental concerns.	3.7	4.2	4.5	4.1	4.3	3.2	4.4	4.2	4.6	4.3	3.9
7. The ES Program seeks to enhance students' abilities to understand major methodologies for addressing particular environmental issues.	3.4	3.9	3.6	3.6	3.4	3.0	4.0	3.7	3.9	3.5	3
8. The ES Program seeks to give students opportunities to demonstrate basic problem solving and technical skills related to environmental issues (asking questions, analyzing empirical evidence, applying methodologies to answer questions, reporting results).	4	3.8	3.8	4	3.8	3.2	4.6	4.1	4.2	3.5	3.7
9. The ES Program seeks to enhance students' abilities to communicate effectively (both orally and in writing) regarding environmental issues.	3.9	4.4	3.9	4.4	4.2	4	4.7	4.2	4.5	4.4	4.1
10. The ES Program seeks to enhance students' abilities to examine personal and community values and ethical dimensions of environmental problems.	3.2	4.6	3.2	4	3.7	3.5	4.0	3.8	3.8	3.9	3.2
11. The ES Program seeks to enhance students' abilities to apply knowledge and skills to develop informed actions regarding environmental issues.	4	3.9	3.1	3.4	3.6	3.8	3.9	3.8	3.8	4.0	3.1
	(N=10)	(N=9)	(N=10)	(N=16)	(N=16)	(N=12)	(N=19)	(N=14)	(N=13)	(N=13)	(N=9)

The self-selected, but especially small number of students completing the senior assessment survey this year calls the numerical averages into question. Nonetheless, despite this small number, it is obvious that overall, the ratings declined for both the Program and the capstone sequence. In particular, for both the Program and capstone, item 7 (understanding major methodologies for addressing particular environmental issues) dropped significantly. This decline may be connected to these students' perception that ES courses should be more solution oriented. The ES program's ratings for item 2 (interdisciplinarity) and 3 (complexity/context) showed improvement. The improvement in item 3 is particularly gratifying given the recent attention we have given to the Environmental Social Sciences through the hiring of Atalan-Helicke and Schneller. The ratings of the capstone sequence in fulfilling the program goals also went down uniformly. Slight improvement on items 1 and 8 (demonstrate problem solving skills) is evident. Although it did not come up as a cause of this decline in either these students' written comments or in the Exit Interview discussion, it is possible that the increased size in the capstone

courses (30 students) and the move to project teams of 3 students contributed to these lower ratings.

The conclusion of the questionnaire invites students to provide written comments on any aspect of the ES Program they wish. Focusing on their recently completed experience as Environmental Studies majors, students expressed the following suggestions and/or criticisms:

- The most frequent comment this small group of students voiced was that ES courses need to be more solution oriented.
- Some students felt theories needed to be presented more critically in courses. One student expressed dismay to discover that there was opposition to the Tragedy of the Commons theory, which seemed to have an unassailable monolithic stature in early courses. Other students asked for a more two-sided examination of issues and theories.
- A couple of students wished there were more Environmental science courses; one specified more technical courses (GIS and engineering)
- Several students expressed dissatisfaction over the way to achieve honors in ES: having to do a thesis in addition to the capstone project seemed unfair.

Thinking about their capstone experience, students offered the following:

- We need to make more productive use of ES 374, emphasizing research methods and data analysis.
- Capstone projects should benefit the community and not be “research for research’s sake.”
- A couple of students were unhappy that given the change in the Academic Festival, ES capstone presentations were no longer part of the Festival. They suggested doing capstone presentations on a different day.

Reflecting on the strengths of their Environmental Studies experience, students wrote about many of their favorite aspects on the program:

- Students continue to recognize interdisciplinarity as a strength and defining quality of the ES program.
- The ES faculty won high praise from this small sample. They are “awesome.” A student noted they have “always given me great advise [sic].”
- One student particularly singled out ES 105 as a course she “was always thinking back to and reconnect with my experiences in the class.”
- The ES capstone was recognized as an important experience.

Summary of Senior Exit Interview (Student Discussion)

Although the faculty had a list of questions (see Appendix B) to focus the exit interview, the discussion with the students was unstructured but covered much of the same ground. Much of what was discussed among the students echoed the written comments from the survey (above). The discussion, overall, tended to focus more on the curriculum.

The students were generally happy with their classes—the variety of perspectives and disciplines. In particular, they praised the variety of classes at the junior and senior levels. Students from the Environmental Science track felt more classes needed to be available to them.

Although they praised ES 205 and ES 206, they felt that these were broad, introductory courses and desired more in-depth classes. As one student noted, “a lot of science work is about building skills,” so the more specifically environmental science classes the better. In particular, students were seeking more hands-on work in their classes. The students in the Social and Cultural Perspectives track hoped that classes could be more solution oriented and, like their Science peers, more skills based.

When asked about prerequisite courses in the major, the students seemed generally satisfied. Introductory Biology and Geoscience seemed immediately relevant to the ES Science track for the students present, but several wondered about the Chemistry requirement. A few students argued that Introductory Physics would be more suitable for their interests. The S&C students panned Microeconomics, complaining it was not ES specific enough. Another student suggested that all three dimensions of sustainability—not just economics—need attention in our requirements. In a similar vein, a student wished that ID 210-GIS could focus more specifically on the needs and interests of the ES majors who make up the majority of the class.

Given the composition of the group participating in the Exit Interview, it was not surprising that the question of student activism and its relation to the ES major was a major point of discussion. The activists in the group wanted more social action in the classes and throughout the major, calling for more service learning opportunities and more solution based courses. However, as a quieter student noted, “You don’t have to be an activist to be a successful ES major; it’s just one route.”

Although capstone received written comments, the discussion among the students was generally favorable. Time management, an issue that seems to pervade the entire two-semester experience, received the greatest scrutiny. One student suggested that we need to get students to begin to think about potential capstone projects earlier in their careers as Environmental Studies majors.

As might be expected from a self-selected group of students facing graduation in two days discussing their experiences as ES majors to their faculty, the students unanimously praised the ES faculty as “fabulous” and “fantastic.” They “go above and beyond” and are especially effective in terms of creating community. Another student noted that the faculty are particularly responsive to student requests about what courses are offered.

Summary of Faculty Discussion

After the exit interview with the students, the faculty stayed on to review and discuss their impressions of the remarks and suggestions from the students.

While the faculty noted that the tenor of the exit interview discussion was more a factor of the students present than in previous years, the faculty listened to this discussion in the context of those from previous years. We did not hear the complaint about repetition among ES classes that was so frequently voiced in the past. The students also seemed to be more receptive to dissenting views within their Environmental Studies courses. The students seemed surprisingly receptive to our more nuanced classes.

We were also surprised by some of the misperceptions of the students. Some students had expressed the need for the study of Environmental movements in the curriculum, totally overlooking the classes that Rik Scarce offers in Environmental Sociology. While the students requested more service learning opportunities, courses from Nurcan Atalan-Helicke and Rik

Scarce do include service-learning projects. Students also seemed to forget that internships and collaborative research provide them with much hands-on, skill-based learning that may not occur in the classroom. It was gratifying to see that some students recognized that with the new hiring Environmental Studies has done, the Program and its curriculum are continuing to evolve in very positive directions.

Possible Programmatic Changes Based on Assessment Results

The reflections, recommendations, and criticism we received during the senior exit interviews and our subsequent discussion will help set the agenda for priorities the year ahead.

- Although the Steering Committee has discussed the issue before, the student complaints about the process for earning honors as an ES major suggest that the subject may be worth our re-examination this year.
- In the past two years, we have been concerned with adding breadth to our curriculum, adding faculty so that we can offer more courses on a variety of subjects of interest to the students. Given the request for greater depth of study in our courses, we may want to look at the course offerings more carefully and provide topic classes at both the 200- and 300-level. We may also think about offering courses on an alternating basis so that we can meet the demands for both breadth and depth.
- The class of 2013 had only 4 Environmental Science track students. However, in the next two years, that number will more than double with 13 in the class of 2014 and 9 in the class of 2015. On the one hand, we need to continue to cultivate student interest in the Environmental Science track, and on the other hand, we need to find ways to respond to student requests for more courses in this track.
- Given that this coming year's capstone class will have 41 students and (so far) the class of 2015 has 35 declared ES majors, we need to continue to give attention to how we deliver the capstone sequence. In the coming year, three faculty (Turner, Gibson, and Schneller) will teach the course. But we may need to consider more that just of size of the project teams and the number of faculty involved to maintain the high quality of the capstone experience.

APPENDIX A

ENVIRONMENTAL STUDIES PROGRAM
SENIOR MAJORS ASSESSMENT
SPRING 2013

The information students provide on this form is a critical component in efforts to improve the Environmental Studies (ES) program. Each question asks you to assess how the overall program and capstone sequence (ES 374 and 375) are achieving particular goals. Circle one response for each question.

Please circle the track of the ES major you have declared: *Social & Cultural Perspectives track*

Environmental Science track

Part I Basic Concepts:

1. The ES program seeks to enhance students' abilities to understand ways that the social world and the natural world function as well as how they influence and are influenced by environmental issues.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

2. The ES program seeks to enhance students' abilities to understand the utility of an interdisciplinary perspective for studying interrelationships between humans and their environment and the issues that result from these interrelationships.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

3. The ES program seeks to enhance students' abilities to appreciate the complexity and importance of environmental issues across time and space. Specifically, students should be able to appreciate contemporary, historical, and future environmental issues as well as the

interrelationships of local, regional, national, international, and global environmental issues.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

4. The ES program seeks to enhance students' abilities to understand various intended and unintended consequences of human responses to environmental issues.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

5. The ES program seeks to enhance students' abilities to appreciate environmental issues and personal responsibilities as a member of a community, which includes the Skidmore campus community and beyond.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

Part II. Skills and application:

6. The ES program seeks to enhance students' abilities to work in collaborative and interdisciplinary contexts to address environmental concerns.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

7. The ES program seeks to enhance students' abilities to understand major methodologies for addressing particular environmental issues.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

8. The ES program seeks to give students opportunities to demonstrate basic problem solving and technical skills related to environmental issues (asking questions, analyzing empirical evidence, applying methodologies to answer questions, reporting results).

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

9. The ES program seeks to enhance students' abilities to communicate effectively (both orally and in writing) regarding environmental issues.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

10. The ES program seeks to enhance students' abilities to examine personal and community values and ethical dimensions of environmental problems.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

11. The ES program seeks to enhance students' abilities to apply knowledge and skills to develop informed actions regarding environmental issues.

a. In your view, how well does the overall program achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

b. In your view, how well does the capstone sequence, ES 374 and 375, help achieve this goal?

0	1	2	3	4	5
no opinion	poor	fair	good	very good	excellent

Use the next page for any additional written comments.

Comment on any aspect of the ES program. You are free to make any comments you think are appropriate. Some relevant considerations might be:

- Your achievement in the major.
- Breadth and depth of course selection.
- Academic advising.
- Your capstone project/course experience.
- Important strengths and weaknesses of the program.

APPENDIX B

ENVIRONMENTAL STUDIES PROGRAM SENIOR MAJORS ASSESSMENT *SPRING 2013*

Potential questions for the interview portion of the ES senior majors assessment:

- 1) What do you think are the strengths weaknesses of the ES major?
- 2) What one component would you change about the ES major to improve the program?
- 3) If you could omit one of the required courses from the major...which one, and why?
- 4) Do you believe there was an appropriate balance of structure and flexibility in your track of the ES major? Please explain.
- 5) Which two courses from the other ES track influenced you the most and why?
- 6) How well did ES 100 prepare you for being an Environmental Studies major? For instance, did it introduce you to the broader field you'd be exploring as an Environmental Studies major at Skidmore?
- 7) Looking back over your three/four years as an ES major, in terms of the categories below, which ES program experience meant the most to you?
 - A) intellectually
 - B) personally
 - C) professionally
 - D) civic engagement/community
- 8) In regard to ES-affiliated classes, were there a sufficient amount of choices, and which two contributed the most to your interdisciplinary understanding of Environmental Studies?
- 9) Is there one non-required course at Skidmore that ES students should be encouraged to take? Why?
- 10) Do you think the ES 374-375 sequence is an appropriate capstone for the ES major? Please explain.
 - a. Do you think the year-long capstone sequence was helpful? Please explain.
 - b. Do you think the capstone experience has strengthened your research skills and understanding of environmental issues? Please explain.
- 11) In terms of your educational experience and understanding of the environmental arena outside of academia, how important was your internship, independent study, or collaborative research project? (if you participated).
- 12) Which two co-curricular events (keynote speakers, events, hikes, Tang exhibits, etc.) stand out in your mind as the most (influential, inspirational, meaningful, educational) as an environmental advocate or scientist?
- 13) Do you feel there was an appropriate balance of classroom work and hands-on/experiential/ field work in your ES major? Explain what you would change if the balance was more flexible.

APPENDIX C

ASSESSMENT RUBRIC FOR ES CAPSTONE PAPERS

The following rubric is derived from the writing guidelines we provide to our students in ES 375 for their capstone project papers. We have converted these guidelines into a rubric format for assessing the writing of ES majors in ES 375.

Items should be rated according to a 5 point scale:
1-inadequate; 2-poor; 3-satisfactory; 4-good; 5-excellent

Reader: _____

Capstone Project Title: _____

Capstone Students: _____

	1	2	3	4	5
Shows why the issue is worth studying					
Provides appropriate context for understanding the research topic					
Uses scholarly sources to present the context and importance of the topic					
Generates a research question from the context provided					
Clearly articulates the research question (thesis)					
Uses appropriate methods to address the research topic and/or hypothesis in the introduction					
Uses appropriate scholarship to construct defensible methods					
Provides a clear description of how data will be collected					
Provides a clear explanation of how the data will be analyzed and how those interpretations bear on the research question					
Presents the data clearly in the paper					
Makes appropriate use of figures and tables					
Incorporates figures and text thematically into the written narrative					
Uses literature to help explain findings and discuss how the findings advance our knowledge					
Makes sound interpretations and conclusions based on data					
Flow of arguments is sound					
Theme of every paragraph is evident					
Paragraphs build on the preceding paragraph and support the subsequent paragraph					
Minimal unnecessary (or misplaced) content					
Follows conventions of grammar, spelling, and citation					