

ENVIRONMENTAL STUDIES ASSESSMENT REPORT – 2009

Submitted by Dan Hornbach, Chair

The Environmental Studies Department developed its Departmental Assessment Plan during the 2008-2009 academic year. This plan was provided to the Provost and Institutional Research department in April 2009. Based on this plan there are 4 tasks in the assessment plan that are to be undertaken each year:

1. Transcript analysis of graduates,
2. A senior survey,
3. An assessment of graduates performance relative to the learning objectives set out by the department, and
4. Discussion of #1-3 above and planning to improve the education of our students.

This document represents the department's first attempt at implementing its assessment plan. Attached are summaries of the data we collected and discussions the department had in Spring 2009. In the Fall of 2009 we will continue our discussions of ways to improve our curriculum based on the outcome of this assessment. However, we believe that we have gained enough insight from our brief discussions of the data to make some initial modifications to our program that we will begin to implement in 2009-2010.

There are three separate summaries of the transcript analysis, senior survey and outcomes assessment conducted during 2009, found below. We expect that as we continue these analyses on an annual basis the longitudinal nature of this assessment program will provide us more insight into the strengths and weaknesses of our curriculum.

As mentioned in our Departmental Assessment Plan we will review our Mission Statement and Learning Objective in the self-study preceding our next Departmental Review.

TRANSCRIPT SUMMARY FOR 2009 ENVIRONMENTAL STUDIES GRADUATES

As part of the Environmental Studies Department annual assessment program , we undertook an analysis of the transcripts of the 24 2009 ES graduates. For each student the Registrar's office provided a list of all courses taken by the individual. Dan Hornbach, Chair of ES, analyzed these data and the results (below) were discussed by the ES Department on April 1st, 2009. A summary of the analysis and discussion is presented below.

Figure 1 shows the distribution of cores chosen by the 2009 graduates. Our major requires that student choose a core in order to gain depth in some area within

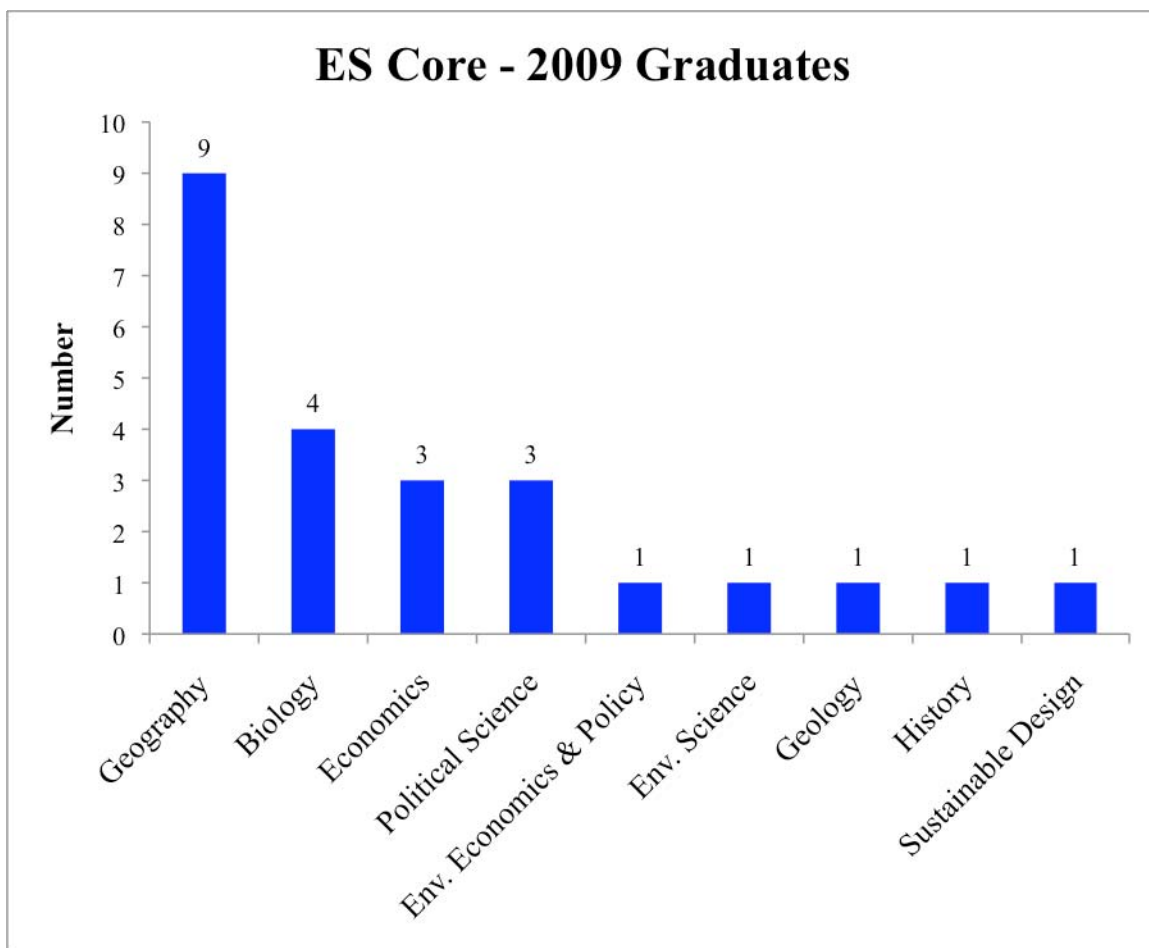


Figure 1. Number of students choosing various cores in ES.

Environmental Studies. The most popular core was Geography, followed by Biology, Economics and Political Science. These results support our subjective impression that a large number of ES students were interested in Geography. We were somewhat surprised that only 3 students took advantage of our interdisciplinary cores (1 each in Env. Science, Env. Economics and Policy and Sustainable Design). We just recently developed specific

requirements for these interdisciplinary cores, so we expect more students to take advantage of these options in the future.

Figure 3 shows the range of classes taken by the 2009 graduates. Sixty-seven percent of our students (16 of 24) studied away during their time at Macalester. This shows in the most common courses are students have taken are non-divisional study away courses. After that most students took Environmental Science (ENVI 133), Senior Seminar (488) and Internship (489). Students who did not take ENVI488 (Senior Seminar) took the Geography Senior Seminar (GEOG488). We were somewhat surprised that more students did not take ENVI 215 Environmental Politics/Policy (8 students) or ENVI 234 American Environmental History (14 students). These are both introductory classes. The class of 2009 started under a different set of requirements for the major than other ES students and was required to take ENVI 133 (or equivalent). We expect that a greater number of students will take these courses in the future.

The only cross-listed class that shows up in Figure 3 is BIOL180/ENVI180 – so the total enrollment in this course is 19, making Ecology the second most enrolled course by ES students. Geography 225, Intro to GIS is a very popular course, which is unsurprising given the number of geography cores. We were interested to see that almost half of the ES majors took ECON 119 – Principles of Economics.

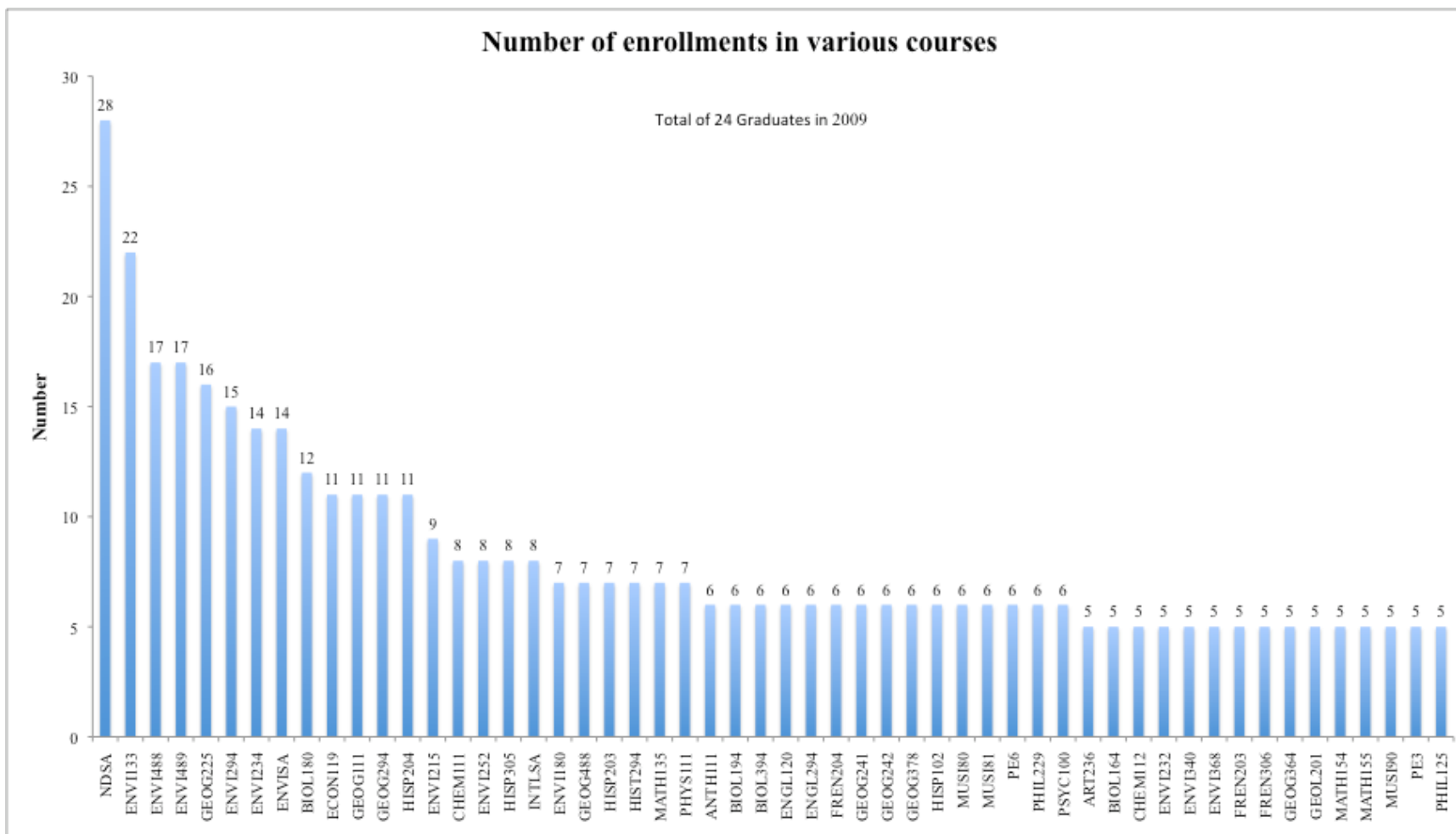
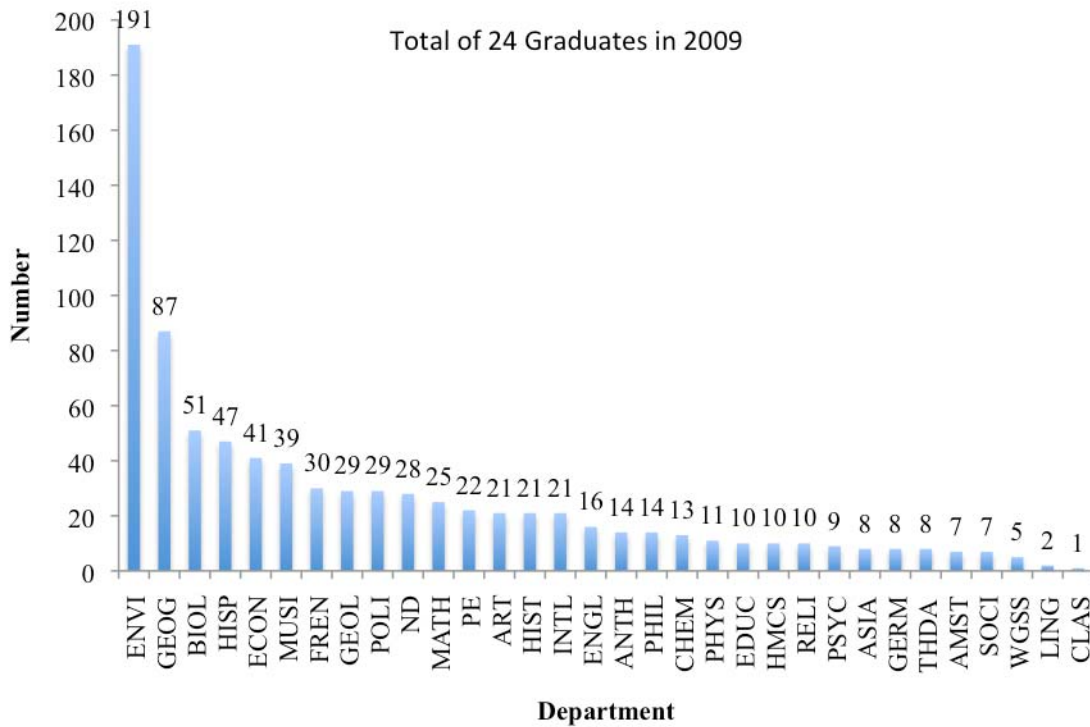


Figure 2 Number of course enrollments. NDSA – Non-divisional Study Away. Course titles are given in Table 1.

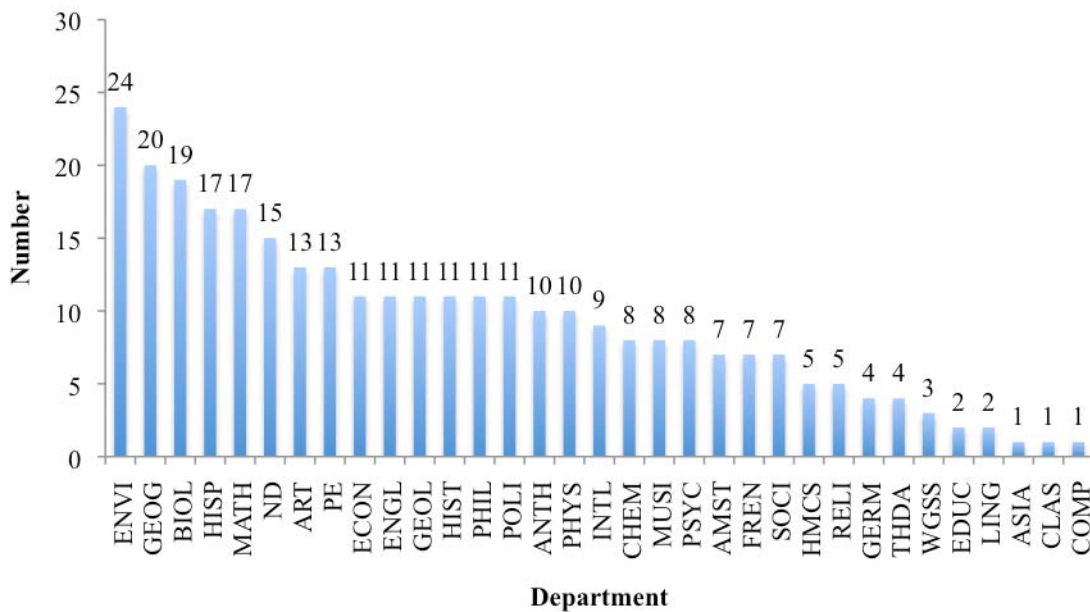
Table 1. Course titles.

ANTH111	<i>Cultural Anthropology</i>	GEOG225	<i>Intro to Geographic Information Systems</i>
ART236	<i>Printmaking I</i>	GEOG241	<i>Urban Geography</i>
BIOL164	<i>Therapeutics: Cell Bio/Genet I</i>	GEOG242	<i>Regional Geog of US and Canada</i>
BIOL180	<i>Ecology</i>	GEOG294	<i>Medical Geography</i>
BIOL194	<i>Evolution & Politics of Science</i>	GEOG364	<i>GIS: Concepts/Applications</i>
BIOL394	<i>Biogeography</i>	GEOG378	<i>Discipline and Methods of Geography</i>
CHEM111	<i>General Chemistry I</i>	GEOG488	<i>Geography Senior Seminar</i>
CHEM112	<i>General Chemistry II</i>	GEOL201	<i>Geological Excursions</i>
ECON119	<i>Principles of Economics</i>	HISP102	<i>Elementary Spanish II</i>
ENGL120	<i>Intro to Creative Writing</i>	HISP203	<i>Intermediate Spanish I</i>
ENGL294	<i>Literature and Environment</i>	HISP204	<i>Intermediate Spanish II</i>
ENVI133	<i>Environmental Science</i>	HISP305	<i>Visions Hisp World: Oral/Writ</i>
ENVI180	<i>Ecology</i>	HIST294	<i>Native America</i>
ENVI215	<i>Environmental Politics/Policy</i>	INTLSA	<i>Globalization/Nat Environment</i>
ENVI232	<i>People and the Environment</i>	MATH135	<i>Applied Calculus</i>
ENVI234	<i>American Environmental History</i>	MATH154	<i>Elementary Statistics</i>
ENVI252	<i>Water and Power</i>	MATH155	<i>Intro to Statistical Modeling</i>
ENVI294	<i>Environment and the Media</i>	MUSI80	<i>Mac Jazz Band</i>
ENVI340	<i>US Urban Environmental Hist</i>	MUSI81	<i>Mac Jazz Band</i>
ENVI368	<i>Sustain Dev/Global Future</i>	MUSI90	<i>Wind Ensemble</i>
ENVI488	<i>Sr Seminar in Environmental St</i>	NDSA	<i>Independent Study Project</i>
ENVI489	<i>Environmental Leadership Pract</i>	PE3	<i>Beginning Social Dance</i>
ENVISA	<i>Sustainability Seminar</i>	PE6	<i>Yoga I</i>
FREN203	<i>French III</i>	PHIL125	<i>Ethics</i>
FREN204	<i>Text, Film, and Media</i>	PHIL229	<i>Environmental Ethics</i>
FREN306	<i>Intro Literary Analysis</i>	PHYS111	<i>Contemporary Concepts</i>
GEOG111	<i>Human Geography of Global Issu</i>	PSYC100	<i>Introduction to Psychology</i>

Number of courses per department

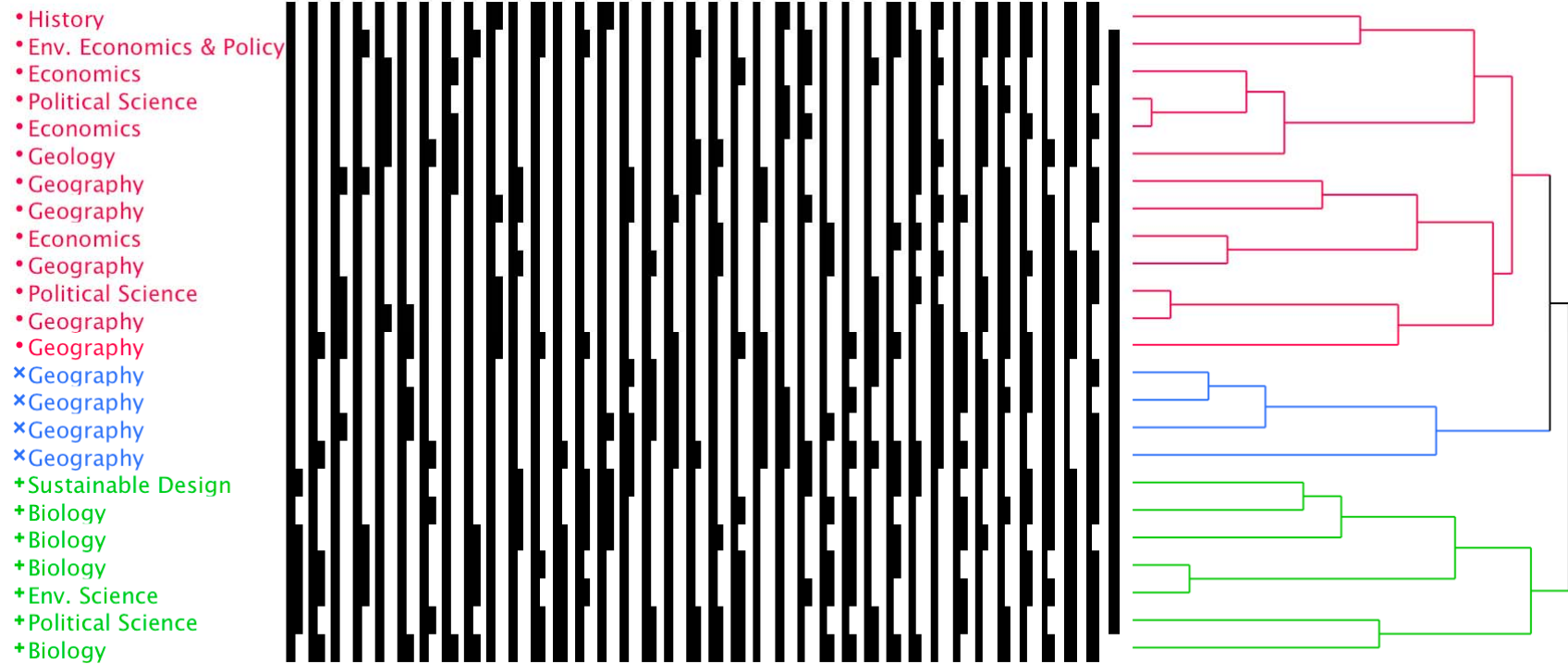


Number of students who took at least one class in the following departments



Course distribution of various cores.

Course distribution of various cores with language and PE courses removed.



How to read this graph: Cores are found on the left. In the center, each column represents an individual course. The thick bar indicates that an individual student took the course. For example the last column shows that the vast majority of students took this course (Environmental Science). On the right, the cluster “tree” shows how students are clustered together based on shared courses.

We used this cluster analysis to examine trends in how students with various cores take classes. The first thing to notice is that there are three major clusters – one which contained most of the Geography cores, one that contained most of science-related cores and one that contained most of the social science cores other than Geography. In a discussion of these data we had an interactive graph where we could examine the specific courses taken and which students took those courses. For example all but two students with Geography cores clustered together. The 2 outgroup students had both taken French as their language whereas the remaining Geography students had taken Spanish as their language. The other major difference is that both of the students in the outgroup took Geog 378 (Discipline/Methods of Geography) while none of the other Geography students took this course.

If we remove the courses that are not directly related to ES (Art, language, PE, etc.) we once again get the three major clusters indicating that the core is very important in describing the group of courses taken by students. However the distribution of students taken any individual course across these clusters, show that students are quite interdisciplinary in their choice of courses.

We did notice that students who were science cores, were less likely to have taken Ethics or Environmental Ethics. We plan to include a module on ethics in the Environmental Science course (ENVI 133) to assure students are exposed to issues of environmental ethics.

Left → Right					
BIOL164	MATH154	ENGL294	GEOG488	ECON119	ENVI488
CHEM112	MATH155	GEOG241	HIST294	GEOG111	ENVI489
ENVI232	PHIL125	GEOG242	MATH135	GEOG294	ENVI133
ENVI340	ANTH111	GEOG378	PHYS111	BIOL180	
ENVI368	BIOL194	PHIL229	CHEM111	ENVI234	
GEOG364	BIOL394	PSYC100	ENVI252	ENVI294	
GEOL201	ENGL120	ENVI180	ENVI215	GEOG225	

Summary of Environmental Studies Senior Survey - 2009

Introduction

The senior survey was distributed to all seniors via e-mail in late April 2009. Students were asked to complete the survey using Survey Monkey. Two follow up messages were sent to students asking them to complete the survey. We had a total of 16 of the 24 graduates completing the survey (a 67% return rate). We were surprised that some students did not complete the survey. Apparently some had opted out of getting any surveys from Survey Monkey, and while we asked them to change their defaults so they could participate, it's possible some did not. It is also possible that the survey was conducted too late in the semester and that the crush of exams, final papers and graduation, discourage some students from taking the survey. Next year we will administer the survey earlier in the semester.

Results

The survey results are presented at the end of this document. On May 13, 2009, members of the ES Department met to discuss the results of this survey and to lay out a plan to address any issues that arose from the document.

First we were pleased to see that students felt they were well acquainted with the environmental issues that face the world today (Question 1A). We were also gratified that students felt they were able to view environmental issues from an interdisciplinary perspective (Questions 1J and 1K). Given the centrality of an interdisciplinary approach to environmental issues as laid out in our mission statement, we feel that our curriculum, pedagogy and department functioning is on the whole meeting the mission of the department. Also in Question 2, students seemed to rank both the breadth and depth of their education in ES as "about right). Despite the overall positive response of students to our program, we did find areas for future improvement.

The first of these is pointed out by students in Question 1D – we need to focus more on international environmental issues. In all of the introductory classes (Environmental Science, American Environmental History and Environmental Politics and Policy) a greater emphasis is placed on more domestic issues. We will hold a curriculum retreat in the Fall to discuss how we might improve our attention to international environmental issues.

The second issue pointed out by students is found in Question 1N – designing an empirical scientific study to address an environmental issue. In 2008/2009 we added labs to the Environmental Science course as suggested by our outside review. None of the current seniors took Environmental Science with a lab. We anticipate that over the course of time, students will be exposed to designing empirical scientific studies in the Environmental Science course, and thus we anticipate that more students will rate their ability to accomplish this goal higher in the future.

The other major issues pointed out in the quantitative portion of the survey is found in Questions 3B and 3C. Students didn't feel as if they were exposed to career advice from either academics or practitioners of Environmental Studies. We were somewhat surprised by these outcomes since we run a highly successful EnviroThursday program which brings in speakers from both the academic and applied worlds. Also the Environmental Leadership Seminar, which has been developed to complement the required internship program, has as a specific goal to expose students to the range of career possibilities in ES. We will redouble our efforts in the Leadership Seminar to help accomplish this task and will ask speakers in the EnviroThursday program to take a few minutes to comment on their professional life.

When asked about which additional courses should be required for the major, the answers were relatively scattered. The most common had to deal with Environmental Justice and Economics. In the past the ES program did require Environmental Ethics (related to Environmental Justice) and Principles of Economics. Once the department was established we reconfigured the required courses because of the expertise of the faculty within the department and the desire to have students gain exposure to environmental science, history and policy. Given the increased number of required courses we trimmed others (such as economics and ethics). We are concerned about these areas of the curriculum. In our fall 2009 retreat we will discuss strategies to provide these areas of knowledge to students.

Only a few students took the opportunity to discuss additional classes they would like to have offered (Questions 8 and 9). The most common courses mentioned were Environmental Justice and agriculture (we've also heard these directly from students in conversations). Environmental Justice will continue to be offered in the department by Chris Wells and we will discuss ways to have it offered on a more regular basis. Bill Moseley in Geography had changed his "People and the Environment" course to be "Agriculture, People and the Environment." Also Amy Damon in Economics is offering an agricultural economics course (although with ECON pre-requisites). These courses should help to provide offerings for ES students as they are both cross-listed.

When asked about which courses should be dropped from the ES major (Questions 10 and 11) the most often cited was that the Senior Seminar needs to be revamped (not dropped). First it should be pointed out that the current seniors started at Macalester before the current set of requirements were put in place, thus there are a number of students graduating under either the old requirements or under a hybrid set, thus this discussion of the efficacy of required courses may change in the future. Next it should be pointed out that a number of comments in the open response section (Question 12) also related to the senior seminar. We had a broad ranging discussion of the issues surrounding the senior seminar. One of the main issues with the seminar is that it focuses on a single topic even though students come from a variety of backgrounds and have differing interests. Thus for some students this

course serves more as a “capstone” that builds on their expertise in a particular area, while for others the seminar engages them in the difficult task of working on an issue that may be of little interest and for which they have little background. Since one of the major goals of the seminar is to engage students in interdisciplinary teamwork, the struggle, while difficult, is exactly what we expected. It is clear that we need to provide more support for students as a department and that the instructor for the senior seminar cannot bear the entire load for this course. We have decided to have the department *as a whole* work to develop the topic for the senior seminar course. We will do this in the fall, starting in the fall of 2009. Once the entire department is invested in the topic, we will be able to provide more support for the seminar and its students. Hopefully the senior seminar will become more of a department project.

The other main issue mentioned by students was the lack of community in the ES Department. The students that were part of the class of 2009 started at the same time the ES Department was created. Two new faculty started with them and Dan Hornbach’s appointment was moved from Biology to a jointly shared position in ES and Biology. Consequently we are in the process of building the “ES community.” Given the multiple interests of our students and the great variety of student groups associated with environmental issues, we suspect that it may be difficult to develop a tight-knit community. We hope that the students become more closely acquainted with one another in classes such as Environmental Classics (hopefully taken as a sophomore), Environmental Leadership Practicum and Seminar (most often taken as a junior) and the Senior Seminar. The current graduating class came in under a different set of requirements and we designed the new curriculum with an eye towards building a community of environmental scholars. We will watch closely to see if our new curriculum helps to develop this community.

2009 Environmental Studies Graduates Survey

1. How confident are you that you could...							
	1 Not at All	2	3	4	5 Very	Rating Average	Response Count
A. List the major environmental issues facing the world today?	0.0% (0)	0.0% (0)	0.0% (0)	37.5% (6)	62.5% (10)	4.63	16
B. Describe the history of how these issues arose?	0.0% (0)	0.0% (0)	25.0% (4)	50.0% (8)	25.0% (4)	4.00	16
C. Describe the major U.S. policies related to these issues?	0.0% (0)	0.0% (0)	37.5% (6)	50.0% (8)	12.5% (2)	3.75	16
D. Describe the major international policies related to these issues?	0.0% (0)	12.5% (2)	43.8% (7)	37.5% (6)	6.3% (1)	3.38	16
E. Describe issues of social justice related to these issues?	0.0% (0)	0.0% (0)	31.3% (5)	25.0% (4)	43.8% (7)	4.13	16
F. Describe the current state of scientific evidence and major areas of scientific dispute regarding major environmental issues?	0.0% (0)	0.0% (0)	25.0% (4)	50.0% (8)	25.0% (4)	4.00	16
G. Describe the canon of literature that defines the field of Environmental Studies?	0.0% (0)	6.7% (1)	26.7% (4)	33.3% (5)	33.3% (5)	3.93	15
H. Gather information about specific environmental issues?	0.0% (0)	0.0% (0)	0.0% (0)	40.0% (6)	60.0% (9)	4.60	15
I. Evaluate the quality of the information you have gathered?	0.0% (0)	0.0% (0)	6.7% (1)	53.3% (8)	40.0% (6)	4.33	15
J. Connect your learning in ES to other areas of study?	0.0% (0)	0.0% (0)	0.0% (0)	26.7% (4)	73.3% (11)	4.73	15
K. Think in an interdisciplinary manner?	0.0% (0)	0.0% (0)	0.0% (0)	26.7% (4)	73.3% (11)	4.73	15
L. Help a group achieve a desired outcome in a collaborative project?	0.0% (0)	0.0% (0)	13.3% (2)	53.3% (8)	33.3% (5)	4.20	15
M. Develop a strategic plan to identify and implement local solutions to an environmental problem?	0.0% (0)	6.7% (1)	6.7% (1)	60.0% (9)	26.7% (4)	4.07	15
N. Design an empirical study that tests or explores a basic scientific question important to environmental	0.0% (0)	20.0% (3)	26.7% (4)	33.3% (5)	20.0% (3)	3.53	15

problem solving?							
O. Deliver an effective presentation at a conference?	0.0% (0)	0.0% (0)	42.9% (6)	14.3% (2)	42.9% (6)	4.00	14
P. Work effectively in an organization, government agency, or business dealing with environmental issues?	0.0% (0)	0.0% (0)	6.7% (1)	46.7% (7)	46.7% (7)	4.40	15
Q. Make a case for your acceptance to a graduate program to advance your education?	0.0% (0)	6.7% (1)	26.7% (4)	40.0% (6)	26.7% (4)	3.87	15
	answered question						16
	skipped question						0

2. How satisfied are you with the...							
	1 Not Enough	2	3 Just Right	4	5 Too Much	Rating Average	Response Count
A. Breadth of your education in ES?	6.3% (1)	25.0% (4)	31.3% (5)	31.3% (5)	6.3% (1)	3.06	16
B. Depth of your education in ES?	6.3% (1)	31.3% (5)	37.5% (6)	18.8% (3)	6.3% (1)	2.88	16
	answered question						16
	skipped question						0

3. How well exposed were you to...							
	1 Not at All	2	3	4	5 Very	Rating Average	Response Count
A. The different disciplines of ES (humanities, science, social science)?	0.0% (0)	0.0% (0)	0.0% (0)	87.5% (14)	12.5% (2)	4.13	16
B. Careers available to people with an academic interest in ES (masters or doctorate)?	0.0% (0)	31.3% (5)	37.5% (6)	18.8% (3)	12.5% (2)	3.13	16
C. Careers available to people with a professional interest in ES (NGO, government, industry or business)?	0.0% (0)	12.5% (2)	43.8% (7)	31.3% (5)	12.5% (2)	3.44	16
	answered question						16
	skipped question						0

4. What course(s) do you think the department should required all ES majors to take?












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	Comment Text	Response Date
 Find	1. Environmental Justice	Sat, 5/2/09 2:08 PM
 Find	2. Principles of Economics and maybe, Environmental Justice	Fri, 5/1/09 5:39 PM
 Find	3. environmental science, intro to global envi. history	Thu, 4/30/09 3:46 PM
 Find	4. Either environmental science or ecology, either principles of economics or statistics, and either environmental history, environmental policy, or environmental economics.	Thu, 4/30/09 1:37 PM
 Find	5. I like the requirements considering the available classes.	Thu, 4/23/09 11:42 AM
 Find	6. I think the requirements make sense	Wed, 4/22/09 10:24 PM
 Find	7. environmental leadership senior seminar statistics and/or gis (i wish there was one that was specifically designed for es like geography has)envi environmental economics	Mon, 4/20/09 8:37 PM
 Find	8. Env: classics, , history, politics, economics, internship	Mon, 4/20/09 2:47 PM
 Find	9. Ecology, Intro to ES, etc.	Mon, 4/20/09 2:44 PM
 Find	10. ECONOMICS! Maybe Science of Renewable Energy (I don't actually know if its a good class, but it seems useful), definitely Ecology and Environmental Science (though they can be repetitive of each other) or geology, the internship, People and the Environment or a similar geography-type course that addresses the social implications of environmentalism	Mon, 4/20/09 2:37 PM
 Find	11. More computer classes such as GIS, or ones that teach you how to build websites/do design layout.	Mon, 4/20/09 2:21 PM

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5. If you mentioned something above, why do you think all ES majors should take the course(s)?










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Comment Text	Response Date
 <p>1. Environmental justice goes deeper than the politics, the science and the economics. If we don't address this approach to environmental issues, we are missing a huge part. I think the devaluation of nature goes alongside the devaluation of certain people. Cultural and biological diversity are also linked.</p>	Sat, 5/2/09 2:08 PM
 <p>2. Economics because if we are going to approach environmental issues, especially policies, then we have to understand the capitalist system in which they were manifested and function in. How are we expected to enact change or reform when we don't have a good understanding for how our economy works? It's hard to have a conversation about environmental issues with an economist or business person because I don't know the lingo. Environmental Justice is ESPECIALLY important, I believe, because there are justice issues in any type of environmental work. While this doesn't have to be required exactly, I think it should be emphasized to the majors with a policy/development focus. Taking environmental justice my senior year forced me to reevaluate all of my thoughts/feelings about environmentalism that I have learned over the past few years (none of the classes I had taken forced me to evaluate current justice issues, toxic colonialism, white privilege, etc. Also, Economics would fit nicely in providing context for many justice issues.</p>	Fri, 5/1/09 5:39 PM
 <p>3. They are good basic courses that all majors should have knowledge in.</p>	Thu, 4/30/09 3:46 PM
 <p>4. All majors need (1) some scientific background, (2) some understanding of basic economic principles or at least quantitative analysis to be able to justify environmentally-based arguments, and (3) either a historical, policy, or economics background, maybe even two of the three.</p>	Thu, 4/30/09 1:37 PM
 <p>5. I think that there needs to be a little more emphasis placed on some of the practical skills that will help with career development and finding jobs. These classes will give the major more depth. Both the junior and senior seminar are important because they help create teh community and start to work to connect the broad and different education we have all had. Environmental economics should be taken by all students (especially if they are going to have to do senior sems like the one we are in. instead of teh way it is now where you have to take an econ class first, it should be redone so that there are no prerequisites</p>	Mon, 4/20/09 8:37 PM
 <p>6. To give a broad and full array of the ways in which we study and understand environmental issues</p>	Mon, 4/20/09 2:47 PM
 <p>7. They are basic classes that present systems thinking.</p>	Mon, 4/20/09 2:44 PM
 <p>8. Econ just seems extremely useful, and it is hard to argue about the economics when you don't really understand it in the first place. The science classes are actually really useful, but alot of people won't take them if they aren't forced to.</p>	Mon, 4/20/09 2:37 PM
 <p>9. As ES is so broad and interdisciplinary, you really need an abundance of practical skills to get your foot in the door to the organization you want. A liberal arts major helps out a lot once you're part of the organization, but you often need an abundance of computer skills to get hired in the first place and to perform effectively.</p>	Mon, 4/20/09 2:21 PM

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6. What currently offered course(s) do you WISH you had taken while majoring in ES?











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	Comment Text	Response Date
 Find	1. Imperial Nature	Sat, 5/2/09 2:08 PM
 Find	2. Econ, Advanced GIS, maybe Physics...	Fri, 5/1/09 5:39 PM
 Find	3. environmental justice, economics of global food problems	Thu, 4/30/09 3:46 PM
 Find	4. Environmental Politics and Policy	Thu, 4/30/09 1:37 PM
 Find	5. None	Thu, 4/23/09 11:42 AM
 Find	6. More environmental history! Also, I wish they had an environmental economics without the prerequisite (but maybe that would be a bad idea...)	Wed, 4/22/09 10:24 PM
 Find	7. gis (multiple courses) dynamic earth and global change bill mosley's political ecology senior seminar environmental economics	Mon, 4/20/09 8:37 PM
 Find	8. Politics and policy, justice, geology.	Mon, 4/20/09 2:44 PM
 Find	9. Environmental Justice	Mon, 4/20/09 2:37 PM
 Find	10. Car Culture, more computer classes	Mon, 4/20/09 2:21 PM

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7. If you mentioned something above, why do you wish you had taken that/those course(s)?










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Comment Text	Response Date
 <p>1. American influence around the world in terms of environment is talked about all the time, but taking this class would have been clarifying and fascinating</p>	Sat, 5/2/09 2:08 PM
 <p>2. Economics, for the reasons I explained in #5, Advanced GIS because I think it would nicely supplement the ES major (depending on concentration).</p>	Fri, 5/1/09 5:39 PM
 <p>3. My interest in the environmental field has evolved and expanded from a science focus to a human focus, and these courses would focus on more of the social aspects of environmental studies.</p>	Thu, 4/30/09 3:46 PM
 <p>4. Because I wish I knew more about environmental policies, and I love Roopali.</p>	Thu, 4/30/09 1:37 PM
 <p>5. The one enviro history course I took was great, but somehow could never fit another.</p>	Wed, 4/22/09 10:24 PM
 <p>6. GIS has been mentioned for almost all the jobs im applying for and i feel like im at a major disadvantage without having it. We don't really have that many marketable skills from the major, so that would be helpful. I think that dynamic earth is a good class to have had because it helps give an understanding to the major processes at play in the natural world. I highly suggest students take a geology! Lastly mosley's senior seminar because it seems like it was a much better senior seminar and conclusion to the major than the regular one. Enviro econ is so important because its the bottom line for so many environmental issues and it allows you to work with a variety of different actors. it is vital that everyone understand it. Also a lot of jobs would appreciate it.</p>	Mon, 4/20/09 8:37 PM
 <p>7. I feel I have a lack of knowledge in those areas.</p>	Mon, 4/20/09 2:44 PM
 <p>8. I am taking Justice, but it is not really relevant at all to the environment and think that the questions of justice in the movement are a fundamental issue that every needs to be aware of for the movement/work/etc. to be viable and acceptable.</p>	Mon, 4/20/09 2:37 PM
 <p>9. See above reasons. I've also heard that Car Culture is a great course.</p>	Mon, 4/20/09 2:21 PM

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8. What course(s) do you think are missing from our curriculum that you would like to see offered in the future?









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Comment Text	Response Date
 1. EJ should become a permanent offering.	Sat, 5/2/09 2:08 PM
 2. Um, not sure exactly.	Fri, 5/1/09 5:39 PM
 3. more science-based and problem solving courses	Thu, 4/30/09 3:46 PM
 4. Agriculture!!! Anything about sustainable ag.	Thu, 4/30/09 1:37 PM
 5. I decided to be an ES major because I am interested in ecology and conservation biology, not because I am interested in policy related to reduce greenhouse emissions etc. I wish that there were a wider variety of physical/natural science classes offered (aka, more ecology) that was required. I think there should be two focuses for ES-one natural, and one social/political.	Thu, 4/23/09 11:42 AM
 6. a specific research methods es class thats accelerated GIS with components of stats, social science research and field research skills. Also i would have loved one that focuses on food. It could be interdisciplinary and look at local food systems, aggriculture (policy and practices) and the science behind it (soil science and ecology and working in the MULCH garden). I think there is a LOT of interest in foods environmental impact	Mon, 4/20/09 8:37 PM
 7. more environmental justice and philosophy	Mon, 4/20/09 2:47 PM
 8. Anything a little more radical, student based research offered, etc.	Mon, 4/20/09 2:44 PM

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9. If you mentioned something above, why would you like to see the course(s) offered in the future?








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Comment Text	Response Date
 1. see #4	Sat, 5/2/09 2:08 PM
 2. Science is important in the environmental field and everyone can benefit from learning more science.	Thu, 4/30/09 3:46 PM
 3. Because our food system is a critical component of environmental studies that is inadequately covered anywhere in the department. Now that I think about it, I can only think of maybe a week (in Sustainable Development) when sustainable ag was ever addressed in an ES course.	Thu, 4/30/09 1:37 PM
 4. I am not really interested in policy and found it painful to sit through hours and hours of policy classes because the ecological offerings are few and far between.	Thu, 4/23/09 11:42 AM
 5. Kinda already explained it, but research methods gives a concrete skill and this class could be tailored to an es major instead of always feeling like you have to go outside of the major. the food course because i think its a growing field and because it would be popular.	Mon, 4/20/09 8:37 PM
 6. to make it as pertinent and applicable as possible	Mon, 4/20/09 2:47 PM
 7. The ES department has the tendency to feel a little stagnant and redundant and to not prepare its students for work outside of NGO advocacy.	Mon, 4/20/09 2:44 PM

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10. What course(s) do you think should be dropped as required for the ES major?








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Comment Text	Response Date
 1. I think that the Statistics requirement needs some attention. I think many majors don't get to apply the class to the ES major (especially majors with a more policy/development focus) and thus it's relevance is lost...	Fri, 5/1/09 5:39 PM
 2. ...	Thu, 4/30/09 3:46 PM
 3. The senior seminar, at least if the senior seminar has such a specific focus.	Thu, 4/30/09 1:37 PM
 4. I don't think courses should be dropped, I just think more emphasis should be made on dividing the major into one option that prefers ecology/conservation biology and one side that prefers environmental justice/greenhouse gas policies with some requirements from each because ecology majors should have to know about political history even if it is not the main focus.	Thu, 4/23/09 11:42 AM
 5. I really wish i hadn't needed to take environmental ethics. Also environmental science is too similar to ecology so there should be something done about those/ like take either or but both together was too much!	Mon, 4/20/09 8:37 PM
 6. the senior seminar needs to be revamped	Mon, 4/20/09 2:47 PM
 7. The senior sem needs to change. The leadership practicum needs to be bolstered. Both are weak classes.	Mon, 4/20/09 2:44 PM

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11. If you mentioned something above, why would you like to see the course(s) dropped from the ES requirements?

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Comment Text

Response Date

- | | | |
|--|---|----------------------|
|  Find | <p>1. The diversity of interests among ES majors really requires that they be able to study what they're interested in, which will rarely involve everyone working on a single project. If the senior seminar is more like the standard senior seminar in other departments, with individual-based research with lots of idea-sharing, then the senior seminar could remain a requirement. It really just needs more flexibility.</p> | Thu, 4/30/09 1:37 PM |
|  Find | <p>2. I didn't like ethics and didn't feel like i learned much. The professor didn't really seem to know that much and I have yet to use anything i learned in it. Environmental science because its too similar to ecology. I liked enviro science, but not if im going to take ecology</p> | Mon, 4/20/09 8:37 PM |
|  Find | <p>3. writing a sustainability report in 4 months is too great a challenge for one class one semester, not enough focus or organization, or leadership</p> | Mon, 4/20/09 2:47 PM |

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12. If you have any additional comments that you would like to share, please use the text box below.










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Comment Text	Response Date
 1. The senior seminar should be used to more broadly apply to majors interested in policy, humanities and social science rather than a focus on science and math which is maybe a third of the majors in my year.	Sat, 5/2/09 2:08 PM
 2. While I didn't actually take the class (I was abroad), I think that the Environmental Leadership Practicum is kind of a waste of a class. Some other majors require internships, but don't also require a class to be taken alongside the internship. I think the ES dept. advisors should just make more of an effort to advise the students through out the semester of the internship.	Fri, 5/1/09 5:39 PM
 3. It would be nice if there was more focus to the major. I felt like my major was not very cohesive, and I got by without taking many classes that are actually listed in the ES department. However, I'm on the old major plan and I think the new major plan better addresses this topic. There are plenty of courses now offered that I didn't take that would be expand my knowledge of environmental studies.	Thu, 4/30/09 3:46 PM
 4. I love the ES department and all of the faculty in it. They've been wonderful, and my only regret is that two of my favorite faculty at Mac were GONE for my senior year. SO sad. But in general, I'd just like to mention how wonderful these four years have been, and how fundamental my time in the ES department has been to the great experience I've had.	Thu, 4/30/09 1:37 PM
 5. bring back ornithology! I missed out on the opportunity to take that. Jerald Dosch is great!	Thu, 4/23/09 11:42 AM
 6. I understand the interdisciplinary nature of the ES major, but it felt a little too wide and not shallow enough. I learned a lot, but it never felt cohesive. I would have a difficult time answering the question "what did you come away with after majoring in ES?"	Wed, 4/22/09 10:24 PM
 7. While I loved being an ES major and wouldn't change it, I have had some major disappointments and concerns with it. 1. There is no community. Unlike the other departments that I am a part of, there is no community where the professors really know the students and even where the students know each other. I really feel like this made me miss out on a lot of the experience I was hoping for in my major. I am not even sure if all the professors know my name. Other departments have events multiple times a semester (holiday parties, BBQ, dinners, treat days) either in the office or at a faculty member's house, and we have had none of these this year. This really needs to be addressed in the future. Advisors really NEED to be part of their students lives. 2. The senior seminar is the worst class I have taken my entire time at Macalester (instead, it should have been the best and most important to my major). I know that everyone in my class is so incredibly disappointed and feels like the department has really done a disservice to its majors. In an interdisciplinary major it is SOOO important that the senior (and junior too) seminar works to tie the interdisciplinary major together and it should act as a conclusion to the major. We need to be having discourse on what it means to be an ES major and how to use it and carry on what I have learned in my life. We are having no meaningful vocational discussions and are not working to tie together my major. I would like to say that I do think a project based class is a good idea though. 3. I wish that we had been better advised to take some of the hard and not as fun classes like chemistry, economics, gis, statistics. I think that the major makes it too easy to skip out on hard but good classes and when students figure it out, it's too late. This was not meant to be complaining, but to raise some important concerns about the major. I really hope that you take these seriously because I think these problems could lead to people deciding not to become majors (and in the case of the senior seminar, it might lead the department to get in trouble by the college).	Mon, 4/20/09 8:37 PM
 8. i was not very happy with the format of the senior seminar. The class leadership was poor, class time was frustrating and overall the senior experience was weaker than for my other major, history.	Mon, 4/20/09 2:47 PM
 9. I think that, especially since so many of the courses are cross-listed, the ES department needs to work harder on building a strong community around the major. The geography department for example is really good at this, and it helps students have better relationships with each other and the profs, better feedback, and more investment in the department.	Mon, 4/20/09 2:37 PM

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Environmental Studies Senior Outcomes Summary - 2009

Introduction

As part of the Environmental Studies Department annual assessment program, we used the outcomes assessment found below to measure the progress our majors made during the course of their education at Macalester. Since this was the first time we conducted used this assessment instrument we also spent some time discussing the instrument itself and the efficacy of the method that we used to implement it. As part of our Assessment Plan development, we decided to have each student's adviser initially fill out the outcomes assessment form, and then we had all faculty in the department meet to discuss these forms.

Results

Not all of the Environmental Studies graduates have advisers that are members of the ES Department. Since a number of our students are double majors (their second major often being in the area of their ES Core) they often have faculty member from that department as their adviser. Usually these advisers teach cross-listed courses in ES and are members of the ES supporting faculty. However, because of this we did not obtain 100% compliance from faculty advisers in filling out these forms (the return was ??%).

Figure 1 shows the results of our ranking of students' mastery of outcomes based on the rubrics detailed in the outcomes assessment form.

On the whole the ES Department was quite pleased with the mastery of our graduates. We found the average mastery to be quite high in all areas. We found ourselves being somewhat conservative in rating students at the highest level of mastery, retaining that rating for the more exceptional students. We had the

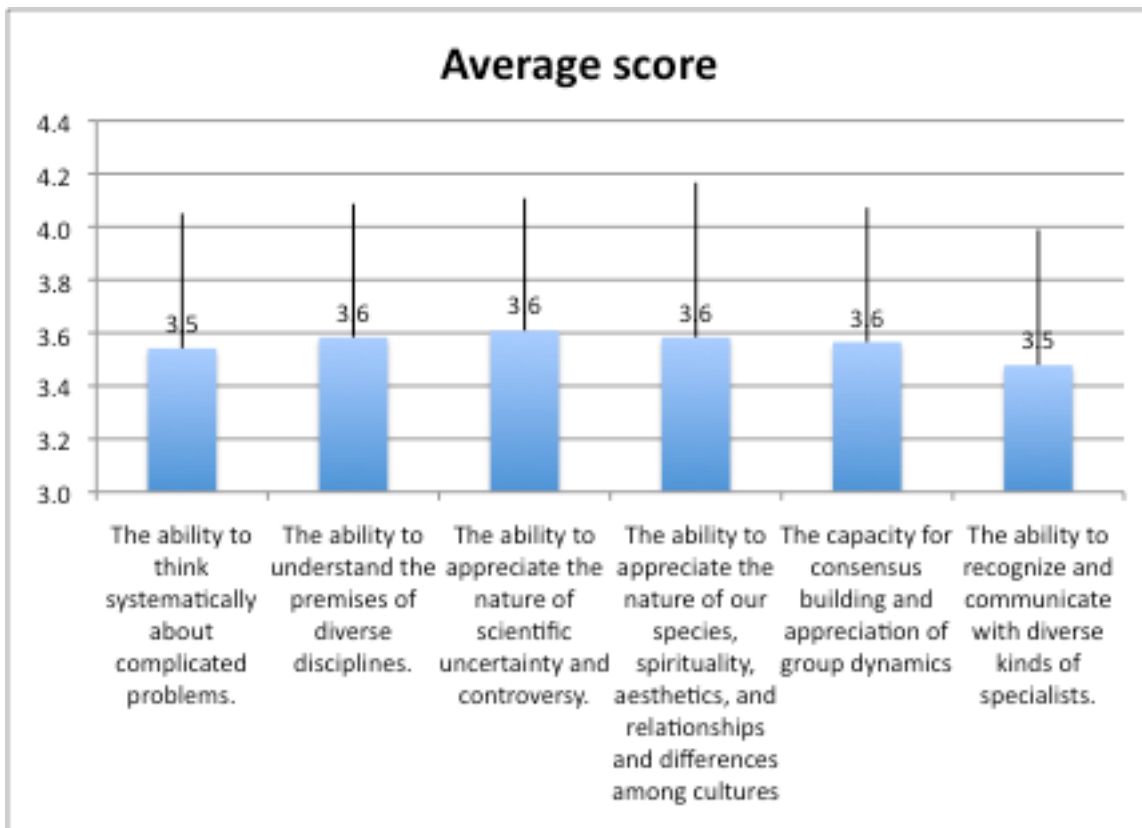


Figure 1 - Senior Outcomes Assessment - 2009

most difficulty assessing the students' ability to master "The ability to appreciate the nature of our species, spirituality, aesthetics and relationships and differences among cultures" and Figure 1 shows that this outcome had the highest degree of variability in the score. This is not to say that our students did not master this area, we just had trouble assessing this outcome. As indicated in the summary of the senior survey, many students are interested in areas of environmental justice and ethics, and desire to have more offerings in these areas. The department just found it difficult to assess "mastery" in this area, even with the rubrics provided.

Because we spent a good deal of time discussing the mastery of learning outcomes of individual students in our May 13, 2009 meeting, we had little time to focus on the outcomes assessment process itself. We agreed to discuss this process in greater depth in the fall of 2009. We did decide that discussing these outcomes at the end of a student's senior year was problematic. We felt we may be able to do a better job at assessment if we understood earlier on where our knowledge gaps in an individual student's mastery of outcomes resides. Thus we decided to try completing a first round examining student's mastery in the fall of the senior year. This would provide us the opportunity to gather more information from other faculty who have taught students about their mastery of particular outcomes.

All in all we found this an interesting process and one we believe will spark discussion of both our curriculum and the learning goals that we have articulated for our students. As indicated in our Department Assessment Plan, we expect to maintain our current mission statement and learning goals until our next departmental review. At that time we will use the information we have gathered in our annual assessments of students' mastery of our learning goals, along with other assessment information, to examine our mission and learning outcomes.

Student Name _____

Learning Objectives	Level 1	Level 2	Level 3	Level 4	Level achieved
The ability to think systematically about complicated problems. (based on written work and presentations)	Treats related ideas or data as unrelated, or draws weak or simplistic connections	Begins to establish connections and perceive implications of the material	Brings together related data or ideals in productive ways, thoroughly discusses implications of material	Develops insightful connections and patterns that require intellectual creativity	
The ability to understand the premises of diverse disciplines. (based on written work and presentations)	No connections to other disciplines.	Limited or forced connections to other disciplines.	Explores connections to other disciplines.	Meaningful and effective connections to other disciplines.	
The ability to appreciate the nature of scientific uncertainty and controversy. (based on written work and presentations)	Doesn't acknowledge that there is uncertainty or controversy.	Simply reports what one side or the other says with no discussion.	Acknowledges differing points of view within the scientific community, but overlooks or misrepresents some important points of view.	Is aware of and acknowledges differing points of view within the scientific community, and uses reasoned arguments to explain why he or she has adopted a particular view.	
The ability to appreciate the nature of our species, spirituality, aesthetics, and relationships and differences among cultures (based on written work and presentations)	Does not recognize the impact of human nature, spirituality, aesthetics and cultural knowledge and is unable to formulate clearly contextual analysis.	Recognizes the impact of human nature, spirituality, aesthetics and cultural knowledge but is unable to formulate a clear contextual analysis.	Recognizes the impact of human nature, spirituality, aesthetics and cultural knowledge and explains it using contextual analysis.	Recognizes the impact of human nature, spirituality, aesthetics and cultural knowledge and explains it using contextual analysis that addresses the relationship among different contexts.	

Learning Objectives	Level 1	Level 2	Level 3	Level 4	Level achieved
The capacity for consensus building and appreciation of group dynamics (based on group work)	All group members have different perspectives and are not willing to listen to those of the other group members. Bickering and miscommunication frequently occur.	Some members' perspectives are heard more frequently than others. No attempt is made to draw out the opinions and viewpoints of more "silent" group members.	All members are comfortable and satisfied with the means of making project decisions. However, not all members have a voice in the way those decisions are made.	All members are comfortable and satisfied with the means of making project decisions. All group members have a voice in decisions, whether they are finally made by the consensus of the group as a whole, or a leader or subcommittee. Decisions are made rapidly and efficiently.	
The ability to recognize and communicate with diverse kinds of specialists. (based on group work)	Several of the group members demonstrate an inability to work or communicate with others of differing knowledge and abilities. The members' work reflects apathy or callousness towards the feelings of others. As a result, group cooperation breaks down.	Some of the group members have difficulty adjusting communications to accommodate persons of diverse knowledge and sensitivities. Members do little to encourage respect in others for individual differences.	Most of the group members show the ability to communicate with persons of diverse knowledge and sensitivities. Each member respects the feelings of others.	Group members demonstrate insight concerning the feelings and levels of knowledge of the other members and exhibit this insight while communicating. Each respects individual differences and sensitivities of the others.	

Some rubric language provided by David Blaney, Political Science Dept. Macalester College.

Aesthetic and spirituality rubric derived from <http://www.mdc.edu/learningoutcomes/documents/Group4Rubric.pdf>.

Scientific uncertainty and controversy rubric derived from <http://uteach.utexas.edu/ResearchMethods/CourseRubric.pdf>.

Group dynamic rubrics derived from http://dhc.ucdavis.edu/faculty/seminarfaculty/rubrics/Group_Dynamics_Rubric.doc