

MEMO

To: John McCardell, for the Teaching Resources Committee
From: Steve Trombulak, Director of Environmental Studies
Date: 8 January 1991

Subj: Request to the Teaching Resources Committee for faculty support for the Program in Environmental Studies

Introduction. The Program in Environmental Studies at Middlebury College, founded in 1965, is arguably the oldest such program in the United States. For all of its 26 year history, however, it has operated on the energy and enthusiasm of faculty who were willing to take on the extra load of developing curricula, advising students, and teaching courses. Additionally, the curriculum of the Program has by-and-large been supported by the goodwill of related departments. Although this approach may be successful over short periods of time, it is largely dependent on the willingness and abilities of both the faculty and the departments to accommodate the needs of the Program and its students.

In recent years, the Program has succeeded in attracting a large number of students to the major, straining the abilities of the related departments to offer the courses necessary to provide a curriculum of sufficient quality and stability. The root of the problem is that there are no faculty who can take on, as part of their long-term contribution to the College, the task of offering the courses necessary to serve this group of students.

Therefore, the faculty of the ES Program request that the TRC provide permanent faculty positions in the Program.

What are we asking for? We ask that the TRC change the conditions of appointment for two people currently on the faculty of the College and participating in the ES Program, John Elder and Steve Trombulak. We ask that Elder's position be changed from Professor of English to Professor of English and Environmental Studies (with 50% appointment in each), and that Trombulak's position be changed from Associate Professor of Biology to Associate Professor of Biology and Environmental Studies (with 50% appointment to each).

The specific implications of these changes for the Departments of English and Biology will be discussed in requests that they are submitting separately. The purpose of this document is to justify the need for these appointments and to explain how these appointments would be used to support the ES Program.

What is the current status of support for the ES Program? The ES Program has never had any tenure-track positions directly associated with it. We currently have one temporary, part-time instructor (Ms. Barbara Rusmore; Fall and Winter 1990-91) to teach the senior-level course on policy

formation. This position, which represents a salary of \$9,000, disappears at the end Winter Term. Also, one tenure-track line in the Department of Political Science, presently filled by Chris Klyza, has associated with it the stipulation that it will provide two courses to the ES Program each year.

The Program does not have any other staff support. All clerical work has been done by the Director out of his office. The budget for the ES Program is included within the budget for the Vermont Wild Lands Foundation, the majority of which goes to maintain the High Pond Field Station. The portion of the budget associated with the ES Program has never exceeded \$500.

Why is ES worth supporting? In the past 5 years, the Program has grown both in quality and quantity. This has happened in parallel with, and in part as a consequence of, an increased importance of environmental education at the college level throughout the U.S.

Students: The number of students majoring in Environmental Studies at Middlebury College has increased over 400% since 1985-86, with increasing numbers in each class (Figure 1). Indications are that the trend will remain the same for the class of 1994. Sixty first-year students attended the Introduction to the ES Major session during Freshman Orientation Week in September 1990; this compares to the 10 who attended in 1987. As of December 1990, we had 46 declared majors in the junior and senior classes, placing us in the top 25% of all majors on campus (10th of 42). There is also an increased interest in ES among students entering Middlebury College. In 1987, only 3 entering students stated in the application material that ES was their first choice for a major, compared to 27 students making this statement in 1990.

Faculty: By the early 1980's, only 5 faculty identified themselves as being associated with the ES Program, all of whom were due to retire in the near future. In the previous 20 years the identity of the faculty associated with the Program had not changed, and little attempt had been made to attract new faculty, especially those from the Humanities Division. Since 1985, 13 tenure-track faculty have come to identify themselves with the Program. These include senior faculty who were already at Middlebury College and junior faculty hired since 1985, coming from 8 departments and all divisions except the Foreign Languages (Table 1).

Educational mission: By 1985, the primary focus of the ES Program was environmental biology. The only senior-level course required for the major was BI 411 (Topics in Ecology), and no courses from the Humanities Division were part of the major. In 1986, however, we adopted the following educational mission:

To provide an interdisciplinary major that addresses the relationships between humans and the environment. This will involve (1) significant exposure to the natural sciences,

social sciences, and the humanities to provide breadth across the curriculum, and (2) extensive coursework in one or two focussed areas to provide depth of understanding.

We feel we have been quite successful in meeting these goals. All ES majors now graduate with coursework in biology, geology, writing and literature, and economics. Additionally, the number of students focussing in areas outside of the natural sciences has increased steadily. Currently, there are as many students focussing in areas in the social sciences (Economics, Political Science, Geography, and Sociology/Anthropology) and humanities (Writing and Literature, and Philosophy) as there are in the natural sciences (Biology and Geology).

How does this request support ES? The two 50% positions will be used to teach (1) a set of required core courses, (2) the senior-level course, and (3) electives to support the writing and literature focus. This will result in new courses and a change in the requirements for the ES major; our request for these additions and changes will shortly be considered by the Curriculum Committee. Although these courses are primarily intended to benefit ES majors, we expect that all of the courses will be open to the entire student body, and therefore they will make a general contribution to the curriculum of the College, particularly with regard to the Distribution Requirement.

Because the request for these positions are being made with respect to the overall needs of the Program, I will first briefly describe what the overall Program design is, and then list more specifically the contributions of both Elder and Trombulak.

The major currently requires students to take 5 required courses, 4 electives, and a set of 5 - 7 courses in an area of focus (Table 2). This arrangement has been problematical over the past few years, especially with the tremendous increase in the number of majors.

First, of the five required courses, four are offered by other departments, causing these departments problems with staffing and space. As a case in point, there were six required courses this past summer when Geography announced that we could not longer require GG 260 (Social Aspects of Environmental Issues) because the instructor did not like having classes that big.

Problems also exist with some of the remaining required courses. Geology cannot offer enough places in GL 112 (Environmental Geology) because of a limit on laboratory space, and therefore they requested that we accept GL 170 (Global Tectonics) as an alternative, thereby defeating our goal of having a common educational core for the ES majors. Also, English is not committed to offering EL/AL 113 (Visions of Nature) as an integral part of its major. Therefore, it was not taught in Spring 1990 when Elder went on sabbatical leave.

Second, the single course offered by the ES Program, ES 401 (Environmental Policy Formation), has been a successful addition to our curriculum and has provided a unifying senior experience for our majors, yet has been a challenge to offer each year. In 1988, it was taught by Trombulak as a course overload (i.e., he taught it in addition to his full load in Biology). In 1989, the course was going to be bracketed until a physical disability forced Jack Schmidt to cancel a field Geology course, allowing him to teach ES 401. Finally, the Program had planned to have the course taught in 1990 by Burke Rochford, until he was appointed Chair of Sociology/Anthropology. This forced the Program to make a last minute request to TRC for a temporary instructor to teach this course during this past fall.

With this requested change in the faculty appointments to ES, we expect to be able to alleviate these problems. We would change the required course list so that BI 190 (General Ecology), GL 112 (Environmental Geology) or GL 170 (Global Tectonics), EC 365 (Environmental Economics), and EL/AL 113 (Visions of Nature) are replaced by 3 courses, one that represents the strengths of each of the three participating divisions:

PS 211 (Environmental and Natural Resource Policy). This course was first taught this year by Chris Klyza in Political Science. We anticipate that this course will remain stable through the foreseeable future because of the relationship between Political Science and ES concerning Chris' appointment. This would be taught each Fall. Enrollment this past semester was about 40, with a waiting list of over 30 students.

ES 212 (Natural Science and the Environment). This would be a new course taught each Spring by Steve Trombulak.

ES 213 (Visions of Nature). John Elder would teach this modification of his former EL/AL 113.

This would also solve the problems of staffing the senior-level course:

ES 401 (Environmental Policy Formation). This course would continue to be taught each Fall. Initially, the course will be taught by Steve Trombulak. The potential exists, however, for it to be taught by some combination of Trombulak, Elder, and Klyza depending on sabbatical leaves and the status of Klyza's other environmentally related course (currently PS 421).

Why is this an improvement over the existing situation? This request benefits the ES Program in several ways. First and second, as were emphasized above, it allows us to offer a stable set of core courses that neither parasitizes or depends on other departments, and it allows us to offer the senior-level course without seeking stop-gap solutions each year. Third, it makes it possible to offer these courses without requiring that the participating faculty regularly teach extra courses. Fourth, it provides to

the Program two people who are already on the faculty of Middlebury College, who are already tenured, and who have already demonstrated an ability and desire to teach in, advise students in, and administrate the Program.

It should be noted that these requests correspond to the recommendations of the external committee that reviewed the ES Program in 1988. Among their recommendations and conclusions were:

"Find a way to offer several dedicated environmental studies courses. The introductory level course(s) should get first priority, . . ."

"It is very important that identifiable faculty resources be committed to ES. It would be highly desirable to establish one or more new faculty positions primarily focussed in ES."

"Unless Middlebury moves to take the next essential steps, you run the risk of falling behind the competition of comparable first class institutions."

How would this change be implemented? Both the English Department and the Biology Department will be submitting separate proposals to deal with the implications of this change with respect to their curricula. It may help the TRC, however, to see how the teaching loads of Elder and Trombulak would be distributed.

John Elder: Beginning in 1991-1992

Fall: Freshman Seminar
EL seminar to support English Department or
EL 265 (Nature Writer's Workshop) (alternating)

Winter: Course of choice

Spring: ES 213 (Visions of Nature; formerly EL/AL 113)
EL 203 (Interpretation of Literature)

Steve Trombulak: Beginning in 1991-1992

Fall: Biology 302 (Vertebrate Natural History; with lab)
ES 401 (Environmental Policy Formation)

Winter: Course of choice

Spring: Biology 202 (Vertebrate Biology; with lab)
ES 212 (Natural Science and the Environment)

Number of ES graduates

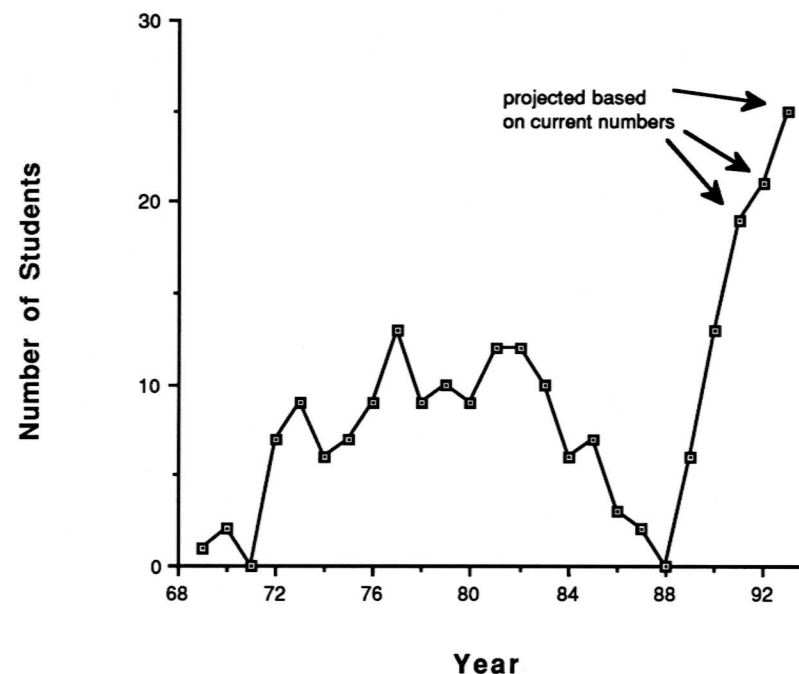


Table 1. Faculty associated with the Environmental Studies Program

David Andrews (Sociology/Anthropology)
 John Elder (English)
 Victor Nuovo (Philosophy)
 Robert Churchill (Geography)
 Raymond Coish (Geology)
 Stephen Trombulak (Biology)
 Richard Arthur (Philosophy)
 Lucy Harding (Geology)
 Chris Klyza (Political Science)
 Neil Leary (Economics)
 Burke Rochford (Sociology/Anthropology)
 Jack Schmidt (Geology and Geography)
 Sallie Sheldon (Biology)

Table 2. The requirements for a major in Environmental Studies

Core courses: Each of the following courses is required.

BI 190 (General Ecology)
 EL/AL 113 (Visions of Nature)
 GL 112 (Environmental Geology) **or** GL 170 (Global Tectonics)
 EC 365 (Environmental Economics)
 ES 401 (Environmental Policy Formation)

Cognate courses: Any four of the following courses; at least three of them must be from divisions other than that of the focus, and at least three must be above the 100 level.

BI 302 (Vertebrate Natural History); BI 390 (Advanced Ecology)
 CH 103 (Fundamentals of Chemistry I)
 EC 465 (Special Topics in Environmental Economics)
 GG 210 (Geography of Development) **or** 211 (Economic Geography);
 250 (Physical Earth Processes) **or** 254 (Weather and Climate); 255
 (Surface Water Resources and Development); GG 260 (Social
 Aspects of Environmental Issues); GG 320 (Geographical
 Information Systems)
 MA 106 (Introduction to Statistical Science) **or** EC 210 (Economic
 Statistics) **or** GG 300 (Spatial Statistics)
 NE 252 (Biogeography)
 PA 207 (Ethics and the Environment), 214 (Science and Society), 216
 (Philosophy of Science)
 PS 103 (Comparative Politics) **or** 104 (American Political Processes) **or**
 208 (U.S. Congress); PS 211 (Environmental and Natural Resource
 Policy); PS 421 (Perspectives on the Environmental Movement)
 RE 303 (Religion, Ethics, and the Environment)
 SA 307 (Social Movement and Collective Action)
 Any Winter Term course listed as Environmental Studies

Foci: Complete all the requirements for one of the following foci. Courses taken as part of the core sequence and as cognates may not normally be used as part of the focus.

Biology: 185, 195, 4 additional courses at the 200-300 level
 Chemistry: 4 courses at the 200-300 level, 2 courses at the 400 level
 Economics: 210, 355, 465, 2 additional courses above the 100 level, MA
 112
 Geography: 100, 4 additional courses at the 200-300 level, 1 course at
 the 400 level
 Geology: 3 courses at the 200-300 level, 1 course at the 400 level, 2
 units of 700
 Literature and Writing: EL 107 **or** 160 **or** 170, EL 260, EL 213, AL 202,
 CS 225

Philosophy: 180, 4 additional courses at the 200-300 level, 1 course at the 400 level

Political Science: 211, 421, 1 course at the 100 level, and 3 courses at the 200-300 level

Sociology/Anthropology: 103, 190, 301 **or 302, 2 Area Studies courses**