

approved 12-13-76

M I N U T E S

COMMISSION ON UNDERGRADUATE STUDIES

September 27, 1976
3:00 p.m. - Board Room
Burruss Hall

PRESENT: Dr. J. D. Wilson, Chairman; Deans Atwell, Bellas, Gilmer, Gray, Humphreyville and Lacy; Professors Carson, Fu, Herakovich, Houck, T. N. Meacham (for Dean Johnson) and Miller; Senators Grender, Marshall, and Stout; and Student Representatives DePaola, Mizoue, Neumann and Nevin.

ABSENT: Dean Regan and Professors Gary, Oyler and Salmon.

1. The first meeting of the 1976-77 academic year was called to order by Dr. Wilson. He welcomed both new and continuing members and asked that they introduce themselves.
2. The agenda was modified and APPROVED.
3. The minutes of May 24, 1976 were APPROVED.
4. Copies of a proposed examination schedule for the fall quarter were distributed by Mr. R. E. Keller, Registrar. He explained the rationale for the change in format of the schedule in order to accommodate the scheduling of common examinations for multiple section courses in accordance with the policy as approved last spring. Several suggestions were made for modifications and they were duly noted. In particular, it was recommended that examinations be given on Saturday, November 20, rather than on Wednesday, November 24, to provide a longer Thanksgiving holiday. Also, it was suggested that the 48-hour deadline for reporting grades be extended for those occurring on the last day. (A corrected copy is attached.)

Faculty will be requested to post grades so students will be able to properly adjust their winter class schedules at check-in on the Monday after Thanksgiving. Fall grade reports will not be completed for distribution until about a week after the winter quarter begins. Following the discussion, the Registrar then reported that he will poll the departments for common examination requests and publish the schedule as quickly as possible.

5. A summary of CUS functions and responsibilities was presented by Dr. Wilson with particular reference to the distributed copies of the July 5, 1972 "Report of the CUS Procedural Self-Study Committee." He cited a number of major issues that were considered by CUS during the past year and admonished the members to take the initiative to bring academic matters to the CUS rather than to wait for them to be introduced by others. He requested that each member prepare and submit to him, in writing, a list of issues that should be addressed by CUS this year. CUS members must set priorities; they must identify problems and areas of significant need so as to assist, rather than impede, the progress of academic programs. Dr. Wilson then cited some areas of concern: the need for

more 4- and 5-credit hour courses and the implications when students would take fewer more intensive courses; the need to vitalize the Honors Program; the grading system and grade inflation; how to improve the advising system; how to ensure an adequate number of hours of upper level courses in each program.

6. CUS members' preference on committee assignments were requested. From those choices, assignments will be made for 1976-77.
7. Meeting dates for CUS will continue to be on the second and fourth Mondays of each month.
8. Course Approvals:

COLLEGE OF AGRICULTURE AND LIFE SCIENCES

New Courses - All effective Winter, 1977.

1. AGEC 3750 - Agricultural Law I (3H,3C).
2. AGEC 3760 - Agricultural Law II (3H,3C).
3. ANSC 2031 - Intermediate Equitation (1H,3L,2C).
4. ANSC 2032 - Advanced Equitation (1H,3L,2C).
5. ANSC 3030 - Stable Management (2H,3L,3C).
6. AVS 3151 - Animal Nutrition I (3H,3C).
7. AVS 3152 - Animal Nutrition II (4H,4C).
8. AVS 3153 - Animal Nutrition III (2H,3L,3C).
9. AVS 3160 - Animal Nutrition II Laboratory (3L,1C).

COLLEGE OF ARTS AND SCIENCES

New Courses - All effective Winter, 1977.

1. BIOL 4440 - Fundamentals of Parasitology (1H,6L,3C). UG&G.
2. BIOL 4450 - Medical Protozoology (3H,3C). UG&G.
3. BIOL 4480 - Medical Helminthology (3H,3C). UG&G.
4. HIST 3310 - The Late Roman Empire (3H,3C).

Revised Courses - All effective Winter, 1977.

1. PHYS 2371-2372-2373 - Foundations of Physics (3H,3L,4C) each. (Rearrangement of Contents). Effective Winter, 1977.
2. BIOL 4490 - Histophysiology (3H,3C) (Number change only from 4460)

COLLEGE OF ENGINEERING

New Courses - All effective Winter, 1977.

1. IEOR 4400 - Industrial Work Physiology (3H,3C). UG&G.
2. EE 4560 - Computer Systems Laboratory (3L,1C). UG&G.

Revised Courses - All effective Summer, 1977.

1. EE 4501 - Digital System Design I (3H,3C). UG&G. (Title change only from "Digital Networks.")
2. EE 4502 - Digital System Design II (3H,3C). UG&G. (Title change only from "Digital Networks.")

9. Textbook Approvals:

"Logic Lectures: Part One" by Roger D. Rosenkrantz, Department of Philosophy and Religion, Ridgeview Publishing Company, California, 1976 (paperback), for use in PHIL 3511 - Symbolic Logic, was APPROVED.

"Arguments, Arrows, Trees and Truth" by Harlan B. Miller, Department of Philosophy and Religion, Southern Printing Company, Blacksburg, 1976 (paperback), for use in PHIL 1500 - Language and Logic, was APPROVED.

10. A report on the progress of the University Self-Study was presented by Dr. A. H. Krebs. The work of the many committees is drawing to a close and final reports are now being prepared. In presenting a preview of issues that are developing in the reports, Dr. Krebs pointed out that the CUS will play a very important part in processing the recommendations and thus determining the future shape of VPI&SU as a people's university or as a classical academic university. Those issues cited included:
- a. Raising academic standards and admission requirements, and the resulting effect on the size of the university.
 - b. Permitting the late admission of talented students as well as talented athletes.
 - c. Control of enrollments at the university, college and department levels with variable admission requirements and quotas.
 - d. Direct admission to the professional schools or admission through an initial common core. Distinguishing between students with career goals and those who are shopping. Evaluating the effect of career choices on interest and motivation.
 - e. Improving retention; defining minimum progress toward degrees; the need for financial aid; assistance for the disadvantaged.
 - f. Evaluations for new and existing programs; guidelines for measuring the success of programs; the effect of duplication of courses on students and on resource allocation.
 - g. The need for a university common-core program; the need for remedial courses to upgrade student qualifications, particularly for disadvantaged students.
 - h. A review of courses that might not be used for credit toward graduation or QCA building; credit for participation in research.
 - i. Procedure for processing new courses.

- j. Review of requirements for major and minor programs; intra-department programs.
- k. The university calendar; class scheduling; evening classes.
- l. The concern for quality, uniformity of grading, setting standards, use of the P/F grade, upgrading P/F to C equivalency, and setting minimum proportions of upper level credits needed for graduation.
- m. Teacher evaluations; the use of the TGA, abuse of independent studies for course substitutions; innovative grading forms; improved communications.
- n. Enrollment projections and goals; the need for more space; tying enrollment to resources; the mandate for minority affirmative action; increasing graduate enrollments.

Dr. Krebs pointed out that the report will contain specific recommendations and also a list of suggestions for future action. The CUS will then have an opportunity to react to them. After a period of questions and discussion, Dr. Wilson expressed his thanks to Dr. Krebs on behalf of the CUS for the fine presentation.

- 11. A report of the Committee on Environmental Courses was presented by Dr. R. C. Hoehn. For the benefit of new members, part of the Annual Report of the Committee was reviewed. Developments through the summer and plans for future recommendations regarding minor programs in Environmental Studies were cited. The Committee has been expanded to 9 persons; 20 others have indicated a willingness to serve on an Advisory Committee; a GRA staff assistant has been appointed; and work has begun on formulating the framework of a January interim report and a May final report. (A copy of the Annual Report and a copy of a May, 1976 Status Report are attached.)

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- 12. A report on fall enrollments was presented by Dean Lacy.

16,635 undergraduates	12,588 men
<u>2,679 graduates</u>	<u>6,726 women</u>
19,314 total	19,314 total

Of the 3,687 freshmen, 34.0% were in the upper 10% of their high school senior classes (31.2% in 1975). 62.0% were in the upper 20% (55.2% in 1975) and 92.0% were in the upper 40% (88.0% in 1975). The average SAT score for the freshmen (math and verbal) was 1050 (1030 in 1975). The 3,687 freshmen were selected from over 9,500 applicants.

- 13. The subject of grades and grade inflation was discussed briefly and will be placed on the agenda for a future meeting. Dr. Carson suggested that CUS consider an assignment to explore grading techniques. Attention was called to the recent issue of "Context" and the article therein by Professor C. E. Cardwell on "Some Reflections on Grade Inflation." An article on the same topic by Mr. Raymond R. Weil is in preparation and will be available soon.

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14. A report on recent actions by the University Council was made by Dr. Wilson. The principal action was approval of a report from the Commission on Faculty Affairs and approval of a new faculty study-research leave program.
15. The meeting was adjourned at 5:00 p.m.

Respectfully submitted,

George A. Gray
Secretary

kdk

Examination Meeting Times	Examination Days				
	THURSDAY November 18	FRIDAY November 19	SATURDAY November 20	MONDAY November 22	TUESDAY November 23
7:45 - 10:45A.M.	08B	09B	14B	12B	10B
8:45 - 10:45A.M.	08T	09M	14M	12M	10M
11:00A.M. - 1:00P.M.	10T	09T	Common exams	Common exams	12T
1:15 - 3:15P.M.	11T	Common exams	08M	17M	16T Common exams
3:30 - 5:30P.M.	13M	15T	17T	11M	16M
3:30 - 6:30P.M.	13B	15B	17B	11B	16B
7:00 - 9:00P.M.	18H 19H Common exams	18W 19W 14T	No exams	18M 19M 13T Common exams	18T 19T 15M

Except for common examinations, the sections scheduled for each examination period are indicated by the first three characters of the section numbers of the courses. These are based on the hour and day of the first meeting of the section in a full week. Section numbers appear in the Time Table of Classes.

A common exam---an examination given in one period for all sections of a course---will meet in the examination period shown for the course number.

Three-hour exam periods are provided for courses with more than three clock hours of lecture and/or discussion per week.

Examinations for one credit hour courses are scheduled by the instructor to be held in a regular class meeting before these close.



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DEPARTMENT OF CIVIL ENGINEERING

May 24, 1976

TO: The Commission on Undergraduate Studies
FROM: Robert C. Hoehn, Chairman
SUBJECT: Committee on Environmental Courses Annual Report

We are pleased to present our annual report that discusses the matter of a proposed environmental minor program at this university. We met at your direction on May 17 after each of us had reviewed the proposal made available by Dr. Wilson. We met first with Professor Kroontje, then discussed the matter in closed session in order to formulate a report that we hope will be useful in your deliberations concerning action on the proposal. We recognize that there was a need for a prompt response, and, for that reason, we may have left some questions unanswered. However, our past meetings have been spent discussing issues very similar to those inherent to the proposal in question, so the rationale behind our report is based on more lengthy deliberations than occurred in our most recent meeting. The specifics of the report, however, were formulated during our May 17 meeting.

We of the Committee thank you for the opportunity to advise in the disposition of the proposed environmental minor program, and we await direction from you as to how we can be of further service.

ANNUAL REPORT
of
The Committee on Environmental Courses
to
The Commission on Undergraduate Studies
May 24, 1976

At the request of Dr. Wilson, the Committee on Environmental Courses met to assist the Commission in a review of a proposal that the University consider the establishment of an academic minor in four environmental areas: 1) resource management and planning, 2) air and water quality, 3) environmental law and policy, and 4) environmental health. The proposal was formulated by a group of interested faculty who constituted an ad hoc coordinating committee for an environmental studies program. The committee was chaired by Professor Kroontje. The substance of the following report is an evaluation of the proposal by the Committee on Environmental Courses and a summary of our recommendations to the Commission.

First, the Committee wishes to reaffirm our former commitment-- set forth in its May, 1974, report to the Commission-- that we support the structuring of new and innovative courses that are designed in response to demonstrated needs for developing specific skills in individuals, skills that cannot be obtained by taking courses presently offered at this university. A major conclusion of our report was that there was an obvious lack at this university of environmentally oriented courses, which we described as "problem-solving" in nature, that taught a student how to study specific environmental problems and to use information learned in "cognitive" and "awareness-level" courses to effectively solve those problems. We urged that there be an attempt at this University to develop more problem-solving courses because there was only one so-identified at the time (There are now two). We of the Committee are convinced that a critical need of the future will be for universities to prepare a large number of people at the undergraduate level who have an array of skills that are immediately utilizable by industries and governments. We do not minimize the importance of broadly based courses that are variously described as "survey", "philosophical", or "attitudinal" in nature, but we do believe that individuals whose education includes only these types of courses have a glaring weakness when evaluated from the perspective of those who will employ them, namely that they are unable to accomplish specific, goal-oriented tasks necessary for solving environmental problems. Such a requirement may be a departure from what we traditionally have viewed as "undergraduate" capabilities, but recently passed environmental legislation (e.g. PL 92-500, 93-523) has created a market for these individuals and reflects the changing academic requirements which we must meet at the university level.

As we studied the proposed environmental minor program, we noted that some of the courses listed had prerequisites that would increase the number of quarter hours of "required" courses well over the 40 that was mentioned. However, our major criticisms were that the program was glaringly weak in that it does not seem to be formulated to prepare students with specific skills and, furthermore, no one yet has even identified what those skills should be in each of the four areas of competency suggested in the proposal. While it should be recognized that the Committee on Environmental Courses had only a short time to complete our deliberations for this report, we still were unanimous in our belief that the Commission should not proceed with any definitive action on the proposal in its present form and that steps should be taken to strengthen it before it is considered again.

We suggest that the proposal be reviewed by the departments that will be involved and that they be asked to report specifically on the following questions:


1. What skills in each discipline can be documented as being likely requirements in the future for environmentalists at the undergraduate level?
2. What courses are presently being offered by their departments (or others) that develop these specific skills? If there are none, what type of new course offerings should be developed?
3. What does each course listed in the proposed environmental minor program contribute to the preparation of an undergraduate who, after graduation, will be employed to help solve environmental problems? Which of the proposed courses in each of the four suggested minor programs can be considered as broad, overview-type courses and which actually teach very specific skills?
4. What steps could each department recommend that could be taken to insure that students who elect a minor in a specific subject area do, in fact, have the skills that have been identified as essential once he completes the prescribed program of study?

A critical look at the last question, we believe, will lead to the development of some excellent quality-assurance mechanisms within the individual departments, mechanisms which will permit this university to endorse, with confidence, that a student who minors in a particular environmental area is, in fact, capable to perform certain specific tasks. We believe that a well-conceived, quality-assurance mechanism is essential to avoid possible embarrassment to the University if it graduates students who cannot perform as they will be expected to perform once they are on the job. We reiterate our belief that the marketability of bachelors-level environmentalists will be dependent upon their ability to accomplish specific tasks and not upon their ability to broadly generalize about a particular environmental concern. Qualified generalists require much more education and experience.

While the Committee has avoided use of the word "certification," perhaps because it has connotations of licensing and legal status, we do believe that the University, in effect, will be certifying that a student is capable in a particular environmental area if he completes a minor in that area. Therefore, the need for an explicitly defined, quality-assurance mechanism must be explored as part of the deliberations we suggest as preliminary to the institution of any environmental minor program at VPI and SU.

In essence, the Committee has come full-circle in our deliberations to suggest that there still exists a definite need at this university for more courses to be developed (at what we have called the problem-solving level) to meet specific needs of our students. We recommend, therefore, that the Commission consider our report and take whatever action it deems appropriate to encourage departments to study this matter as soon as possible, to respond to the particular questions we have posed, and to put forth some definitive effort to develop new courses if a need to do so can be demonstrated. Perhaps a steering committee could be convened to deliberate how best to encourage the departments that would offer an environmental minor to address the issues at an early date and to report at some specified time to the Commission. Of course, the Committee, as always, remains available to serve in whatever capacity the Commission deems appropriate. We appreciate the opportunity that you have given us to respond to this matter.

Respectfully submitted,


Robert C. Hoehn, Chairman

For the Committee:

John Cairns, Jr.
Eugene Carson
Paul Downing
Rebecca Lovingood
Thomas Regan
Thomas Teates



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

OFFICE OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS

May 12, 1976

MEMORANDUM

TO: Commission on Undergraduate Studies

FROM: John D. Wilson *JDW*

SUBJECT: Status Report on the ad hoc Committee - Environmental Studies

1. This Committee was first appointed in fall, 1973 by Dr. Malpass to:

Serve as advisors to CUS in evaluating proposals for new environmental courses;

To survey and evaluate courses currently being offered.

In addition, the Committee hoped to establish a mechanism at the University level by which quality control of environmental study courses could be maintained.

2. Members appointed to the original Committee included:

E. W. Carson - Agriculture
Tom Regan - Architecture
John Cairns - Center for Environmental Studies/Arts and Sciences
Paul Downing - Business
Tom Teates - Education
Betty Lovingood - Home Economics
Bob Hoehn, Chairman - Engineering

All of the above are still on campus.

3. The Committee reported to CUS (2/14/74) and had identified introductory courses currently available at VPI&SU. The Committee was in the process of requesting content information on other courses.

4. On 5/13/74, the Committee sent a report to CUS containing:

The classification scheme of courses offered at Virginia Tech via levels-awareness; attitudinal; problem-solving; and cognitive.

In order to serve in an advisory function to CUS, the Committee recommended that it be notified if any department wished to make significant changes in a syllabus for a course currently offered.

Memo to CUS
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May 12, 1976

A summary of the recommendations made by that Committee at that meeting is attached.

5. On May 30, 1974, a letter was sent to Dr. John Cairns from Dr. Malpass indicating appreciation for the very good report and stating that Dr. Malpass would like to appoint the current membership of the ad hoc Committee on a continuing basis to implement the report recommendations.

No other information is available in the VPAA file. It is recommended that CUS discuss and determine whether or not this ad hoc Committee on Environmental Studies should be continued and, if so, what function may be served by this Committee.

JDW/kdk

A Hochmuth

REPORT OF THE AD HOC COMMITTEE ON ENVIRONMENTAL COURSES
May, 1974

I. INTRODUCTION

In January, 1974, the Commission on Undergraduate Studies (CUS) appointed an ad hoc committee to consider several areas of interest regarding undergraduate, environmental courses offered and Virginia Polytechnic Institute and State University. The specific items in the charge to the committee, given by Dr. Malpass, were:

1. to investigate and report to the CUS on the possibility of defining sequential courses of study that might lead to an academic option in environmental studies;
2. to identify areas of weakness in current academic offerings and to recommend means to correct them; and finally,
3. to identify areas of serious duplication in academic offerings, if any, and recommend changes to correct them.

Committee members included:

John Cairns, Jr. Center for Environmental Studies; E. W. Carson, Agronomy; Paul Downing, Economics; Robert Hoehn, Civil Engineering, Chairman; Rebecca Lovingood, Management, Housing, and Family Development; Thomas Regan, Architecture; and Thomas Teates, Curriculum and Instruction, Education.

As a result of discussions with Dr. Malpass and of the committee's interpretation of the charge given by the CUS, the seven members formulated a summary statement of the philosophy upon which to base future deliberations and actions. That philosophy, simply stated, is that the committee's function was to establish a mechanism at the University level for maintaining quality control on environmentally related, undergraduate courses. Our first formal action was to state in a memorandum to Dr. Malpass that the committee was active and ready to serve as advisors to the CUS in evaluating proposals for new environmental courses. The substance of that memorandum was read into the minutes of the February 14, 1974, meeting of the CUS by Dr. Malpass. Subsequently, those minutes were transmitted to the Deans and Department Heads of the University.

The committee's first task was to survey and evaluate courses currently being offered on campus that were environmental in nature and that might be considered as broad in scope and introductory in nature. Later, other courses were considered in the survey, these being somewhat narrower in scope yet which could be considered environmental courses that would be of interest to the general student body. Only those courses dealing with the physical environment were considered. Once the necessary information was available the committee sought to determine: whether there was duplication of subject matter among any of the courses, whether some sequential arrangement of the courses be proposed, and finally, whether certain results of the survey and the committee's analysis and recommendations based on these results.

II. COURSE SURVEY

The committee identified five courses that were to be evaluated first because they appeared to be introductory in scope and seemed to transcend the traditional disciplinary boundaries. An analysis of information regarding these courses resulted in the formulation of a classification scheme into which all the courses could be placed. Once the scheme was formulated, the committee realized that other environmental courses, not included in the initial survey, should be examined. Table I is a presentation of the classification scheme and the courses which the committee believes fit into each category. The first three categories in the table can be considered to be degrees of sophistication, while the fourth is listed last only for convenience. Courses that should be included possibly were omitted but can be included later.

III. ANALYSIS AND RECOMMENDATIONS

Duplication Among Courses

The committee recognized that there was a certain degree of duplication of subject matter among some of the courses, but it did not regard duplication per se as undesirable, especially when interpreted in light of the proposed course classification scheme. The committee believes that certain of the materials presented in ALS 200 will be duplicated by necessity in courses where environmental problems are interpreted from the point-of-view of a particular discipline.

The committee recognized that there was only one course on campus for each of two categories in its classification scheme - ALS 200 in the first level and ME 4050 in the third level. The committee recommends that no other course of the awareness level be approved in the future unless sufficient differences between the proposed course and ALS 200 be demonstrated.

On the other hand, the committee believes that one of the weaknesses in environmental education at VPI & SU is the lack of problem-solving courses at the undergraduate level, and it recommends that departments consider developing these. In this regard the committee discovered that there is a general lack of courses at the undergraduate level where methods of data collection and analysis are stressed. Individual departments, it seems, could structure environmentally related courses in their respective disciplines that would stress those skills and that would require one of the existing environmental courses as prerequisite.

Another weakness in course offerings identified during the committee's deliberation was in courses that relate aspects of environmental sciences and engineering to consumer interests. This weakness needs to be discussed more fully by the committee before any recommendations can be made, but, in general, there are no environmental courses that are designed specifically to help consumers not educated in the environmental sciences and engineering make "real life" decisions.

TABLE I
 RECOMMENDED CLASSIFICATION SCHEME FOR ENVIRONMENTAL COURSES OFFERED AT VPI & SU AT THE
 UNDERGRADUATE LEVEL AND THE CATEGORIZATION OF EXISTING COURSES BY THAT SCHEME

CATEGORY	DESCRIPTION	COURSES INCLUDED
Awareness-Level Courses	Create an awareness of environmental issues and problems. Material is presented in such a way that the biased attitudes of any particular discipline are not forced on the student. The major objective is to establish a range of concerns about the environment, and, for this reason, the courses are truly basic, introductory courses, broad in scope, and should be considered as the least sophisticated. At the same time, however, these courses are extremely worthwhile for students interested in environmental areas and are sufficiently rigorous that they cannot be considered as "QCA builders."	ALS 200 "Man, Environment, and Pollution"
Attitudinal-Level Courses	Develop an attitude toward environmental issues and problems that reflects the biases of a particular discipline. A student is not expected to become proficient in solving problems as, for example, an engineer or forester would, nor is the course organization dependent on such abilities as a prerequisite to understanding the course material. Instead, the course is taught in such a way that a bias, or attitude, is developed so that the student sees environmental problems primarily from one perspective.	CE 4034 "Environmental Quality Engineering CE 4026 "Introduction to Air Pollution" ECON 403 "Introduction to Environmental Economics" EUS 4013 "Man and Environment" FW 302 "Conservation of Natural Resources" MINE 302 "Mining, Man, and the Environment" AGRN 4013 "Soil Interpretation for Multipurpose Utilization"

TABLE I
CONTINUED

CATEGORY	DESCRIPTION	COURSES INCLUDED
Problem-Solving Courses	Develop abilities that can be used to solve environmental problems or establish active policies on environmental issues. A student is expected to enter courses of this type with a clear overview of what problems exist and to have some attitude about how they can be solved. New, operational abilities are taught in courses at this level, and these, along with the existing abilities of the individual students, are used in practical, problem-solving situations. Courses at this level are regarded to be the most sophisticated.	ME 4050 "The Complexity of Socio-Technologic Problems"
Cognitive Courses	Provide information to the students that is useful in interpreting the historic, social, humanistic, or political facets of environmental problems or issues. Courses in this category could be taken at any time in the student's environmental education and are not considered as a level of sophistication as are the first three levels in this table.	HIST 3171-2 "American Environmental History" SOC 2012 "World Population Problems"

The committee also recommends that appropriate administrative action be taken to designate the ad hoc Committee on Environmental Courses as the official, advisory body for the CUS in matters relating to environmental courses. This recommendation is made in light of the fact that the committee, at present, has only ad hoc status.

Sequential Arrangement of Courses

The committee decided not to recommend that certain environmental courses be established as prerequisites to others. The reasoning was that a review of certain environmental information is usually necessary in courses classified as level two and level three before the instructor can make a particular application. However, the committee believed that faculty engaged in teaching environmental courses should be made aware of the content and philosophies of the various other environmental courses so that unnecessary duplication can be avoided. Future action of the committee will be directed toward encouraging an interchange of ideas and information, not only so that the teachers of environmental courses can become informed, but also so that those who advise students can have a better basis for recommending which environmental courses to take.

The committee also recommends that no student be prohibited from taking a course for credit solely because he has taken one or the other of the environmental courses offered on campus. At the present time, the courses are not structured campus-wide so that a sequence can be recommended, though such may be suggested at a future time. Consistent with our position stated in the previous paragraph, we of the committee do believe, however, that instructors of environmental courses be informed well enough about other courses on campus that they might modify their syllabi if it is apparent that a large percentage of their students have previously been exposed, in detail, to certain environmental topics included in their course. This approach, we learned, already has been taken by those teaching EUS 4013, "Man and Environment".

Additional Recommendations

The committee discussed several other areas related to the teaching of environmental courses and two recommendations arose: First, the committee recommends that it be notified if a department wishes to make significant changes in an existing syllabus and that the new syllabus be given to the committee at least by the beginning of the quarter that the change is to become effective. Such action is necessary if the committee is to be able to serve as an advisory body and is to investigate the future possibility of more formally structuring environmental education at VPI & SU.

Second, the committee recommends that procedures be instituted for insuring that professors who contribute to courses offered in departments other than their own formally be given the appropriate academic credit, as is done for those helping with ALS 200, especially in courses like ALS 200 where a significant percentage of teaching is by outside contributors.

IV. SUMMARY OF RECOMMENDATIONS

1. That no other awareness level course, described in Table I, be approved unless significant differences in that course and ALS 200 can be demonstrated to the satisfaction of the Committee on Environmental Courses.
2. That other courses oriented toward solving environmental problems, as described in Table I, be developed for undergraduate students, these courses stressing methods of data collection and analysis. At present, only one course ME 4050 fits that description.
3. That no course listed in Table I should be a prerequisite for others listed. Instead, faculty who teach these environmental courses should be encouraged to structure course syllabi to avoid unnecessary duplication. In this regard, interchange of ideas and information among faculty who teach environmental courses is encouraged.
4. That no student should be prohibited from taking any undergraduate, environmental course listed in Table I solely because he may have taken one of the other courses. Again, the cooperative efforts of the faculty in preventing significant duplication of subject matter is encouraged.
5. That the Committee on Environmental Courses be notified if a department wishes to make significant changes in an existing course syllabus.
6. That full implementation be given to procedures presently available for insuring that full academic credit be given to professors who contribute to teaching courses offered in departments other than their own.

V. FUTURE ACTION

1. The committee plans to make this report available to faculty involved in teaching or administering environmental courses at VPI&SU and to invite their participation in discussions regarding future action by the committee.
2. The committee will specifically address the issue of developing or structuring courses of study that could be considered "environmental concentrations" in a variety of major fields.
3. The committee will reconvene in the Fall Quarter, 1974.