

FEB 16 2001

CURRICULUM PROPOSAL FORM 2000-2001

NON-GENERAL EDUCATION PROCESS A

*DEADLINES: Deadline dates for 2000/2001 submissions: Regular proposals: October 20, 2000 to be implemented in Fall 2001; Short-Term proposals: December 8, 2000 to be implemented in Fall, 2001; Regular proposals February 16, 2001 to be implemented in Spring, 2002; March 23, 2000 for short-term courses to be implemented in Spring 2002.

PROPOSAL TITLE: Environmental Issues and Actions

SPONSOR(S): Alison A. Mathias, Ph.D., Casey Patterson, Carl Schuman, Ed.D.

DEPARTMENT: Elementary/Early Childhood Education

COLLEGE: Education

IF LAS CHECK ONE: ___ History/Humanities ___ Math/Sciences ___ Social/Behavioral Sciences

Check one: ___ Undergraduate Graduate

THE ATTACHED NON-GEN-ED PROPOSAL IS BEST DESCRIBED BY THE ITEM(S) CHECKED.

- New non-gen-ed course
___ Short-term non-gen-ed course
___ Minor curricular changes (fewer than three) to:
___ existing non-gen-ed course
___ non-gen-ed degree requirements
___ major
___ minor, specialization, concentration, track, certificate program

DEPARTMENT

(Signature indicates approval)

Approved by Department Chair

Dept. Curriculum Chair / Date

Dept. Chairperson / Date

ACADEMIC DEAN

Approved

Not Approved ___

Comments:

Dean's Signature/Date

Signature: [Handwritten Signature] Date: 2/16/01

COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) 4/12/01 Approved Not Approved

Comments:

Unanimous approval with minor changes
Signature of College Chair/Date: Jathy Stuski 4/12/01

UNIVERSITY CURRICULUM COMMITTEE

Date Received/Processed 5/22/01

Comments:

Curriculum Chair Signature [Signature] Date Announced At Senate 5/22/01

EXECUTIVE VICE PRESIDENT/PROVOST

Approved Not Approved If no, reasons are as follows:

Student Credit Hours _____ Faculty Load Hours _____ Equalized Credit Hours _____

Official Copy & Approval Sheet Filed (Date): _____ Executive VP/Provost Signature/Date C. L. Huson 6/5/01

REGISTRAR

Date Approved Course Description Received _____ Hegis Taxonomy & Course Number Assigned _____

Registrar Signature/Date [Signature] 4/8/01

JUSTIFICATION FORWARD

Senate Curriculum Committee Chairperson

Academic Dean(s) 8/13/01

Department Chairpersons

Registrar

____ Sponsor(s)

Course Proposal

1) Course Details:

- A) **Course title:** Environmental Issues and Actions
- B) **Sponsors:** Austin A. Winther, Ph.D., Elementary/Early Childhood Education; Gary Patterson, Elementary/Early Childhood Education; Carl Calliari, Chair, Department of Elementary/Early Childhood Education
- C) **Credit Hours:** 3
- D) **Course Level:** Graduate
- E) **Prerequisites:** Meets requirements for admission to the graduate Environmental Education and Conservation Program and/or instructor approval.
- F) **Suggested time and scale of implementation:** to be offered Spring 2002, and every spring term even number years.
- G) **Course effect:** This is new course in the graduate program in Environmental Education and Conservation. The hours for the course are already structured into the program. This is a new course intended to place additional emphasis on the social dimensions of environmental issues and citizenship action. It strengthens the alignment of course offerings with established international goals of environmental education (see attached syllabus pages 4 and 5). This course does not replace or duplicate any existing graduate course.
- H) **Adequacy of present staff, resources, space needs and other additional requirements for implementation:** Present faculty are prepared to teach the course. Existing classrooms and internet access will be adequate for the course.
- I) **Recommended Library Resources:** No new resources are required.
- J) **Short-term Evaluations:** This is a new course; none are available.

2) Rational:

It has long been recognized that environmental education must address not only the scientific dimensions of environmental issues, but the social dimensions of the issue as well. Such issues arise because of scientific understanding of environmental impact of social activities. If the issues are to be resolved in a positive manner, however, not only scientific, but also social concerns must be addressed. Concerned citizens should consider the values of all the parties involved in the issue and the social, economic, political, and personal consequences of any actions or remedies they consider. In addition, in order to bring about a positive resolution to environmental issues, citizens must be knowledgeable

and skilled in the use of citizen action in a democratic and responsible way. This course will focus on the analysis of the social as well as the scientific aspects of environmental issues and on citizenship action in a democratic society.

Previously these aspects of environmental issues have been dealt with in seminars and research classes, but it is felt that a course devoted to them is appropriate.

As can be seen from the table that begins on page 1 of the syllabus this course will address some aspect of all the goals of the College of Education. The activities in this course will specifically address several of the goals of the Graduate School. The students will carry out applied research which addresses the goals of scholarship and rigorous intellectual effort. The model used in the course has gained worldwide recognition as an effective tool in environmental education. As such, it exemplifies the goal of good practice in education. There is heavy emphasis throughout the course on participation in a democratic society. Thus it will contribute directly to the goal related to building a dynamic democratic society. The course will address the goals of Rowan University as a whole by promoting a learning community and by directly promoting civic responsibility.

3. Essence of the Course

- a. Objectives: Objectives for the course are listed in the table starting on page 1 of the syllabus.
- b. Topical Outline: The topical outline is given in the syllabus starting on page 3.
- c. Evaluation of the students: evaluation of the students is described on page 2 of the syllabus.
- d. Evaluation of the course: Course evaluations will be done at the end of the course by collecting anonymous questionnaires from the students on their attainment of goals of the course. Qualitative data will be collected from the students as well.

4. Results of consultations

The sponsors are aware of no other courses in environmental education offered at the graduate level at Rowan University. Therefore no other consultations have been sought.

Course Syllabus
Environmental Issues and Actions
0896.506

Course Description:

This course focuses on environmental issues and addresses the knowledge and skills needed by instructors to successfully implement issue instruction in the classrooms and in non-formal settings. Participants will develop skills associated with issue analysis, issue investigation, information collection and processing, and citizenship participation. Relevant research will be reviewed. Additional instruction will focus on implementing issue instruction in both classroom and non-formal settings.

Goals of the College of Education

By the successful completion of a graduate program in the College of Education at Rowan, candidates will be able to:

1. Be an effective ADVOCATE for education in a democracy.
2. Design and implement effective and appropriate ASSESSMENT models and strategies.
3. Demonstrate and utilize COLLABORATIVE approaches to problem solving.
4. Utilize effective COMMUNICATION skills with all constituent groups.
5. Design and implement cutting-edge CURRICULUM as appropriate.
6. Demonstrate a strong commitment and professional understanding to meeting the educational needs of DIVERSE populations.
7. Demonstrate ETHICAL practices in professional activities and relationships.
8. Enhance professional knowledge and practice through the application of effective and appropriate RESEARCH skills.
9. Select and integrate appropriate TECHNOLOGY to enhance the educational endeavor.
10. Demonstrate the application of sound and current THEORY in professional practice.

Course Objectives:

The course objectives and the corresponding goal of the College are given below

Objective	Goals Met
Upon the completion of the course activities, students will be able to . . .	
1. conceptualize and analyze a variety of critically important environmental issues.	1,3,4,10
2. identify local and regional environmental issues	1,3,4,8,10

3. identify and explain the relationships that exist between scientific knowledge and environmental issues and be able to apply those relationships to both local and regional issues.	1,3,4,8,10
4. demonstrate the skills needed to investigate science-related social issues, to evaluate the scientific and societal impacts of these issues, to make sound decisions regarding the solutions of these issues, and to participate in a citizenship capacity in the remediation of these issues.	1,3,4,7,8,9,10
5. identify an issue of concern to them in their own regions, and apply the issue investigation/evaluation process to that issue.	1,4,8
6. summarize relevant research on issue investigation and student outcomes such as citizenship behavior and academic achievement	8, 10
7. identify methodology appropriate to implementing issue instruction.	1,2,3,4,5,6,7,8,9,10
8. supplement resources pertaining to local, regional, national, and international environmental issues.	3,4,5

Instructional Materials:

Investigating and Evaluating Environmental Issues and Actions (Teacher's Edition). 1996. Hungerford, et al. Published by Stipes Publishing Co., 10-12 Chester Street, Champaign, IL.

Course Activities:

1. Lecture/discussion.
2. Assigned readings and other assignments.
3. Collaboration in large and small group activities.
4. Proficiency in issue analysis and compilation of issue notebook, presenting four in-depth issue analyses w/accompanying photocopied articles.
5. Planning and completion of an investigation of a local or regional environmental issue (generating research questions, designing research plan, developing instrument, collecting data, interpreting data, generating data-based conclusions, inferences and recommendations, presenting findings to class). This activity is to be carried out as a small group assignment.
6. Written and oral presentation of issue investigation.

Grading System:

Points will be assigned to each of the above activities. Each student will be evaluated regarding his/her performance in each of the activity areas, and assigned a grade accordingly. Both instructor assessment and peer assessment will be utilized. The following scale will be utilized in the assignment of grades: 100% - 90% attainment = A; 89% - 80% attainment = B; 79% - 70% attainment = C; 69% - 60% attainment = D; 59% or lower attainment = F. A grade of

"Incomplete" will be assigned only where a student has a valid reason for inability to complete the course.

Course Outline:

- I) The Environment
 - A) The natural environment
 - B) Society as a community of individuals
 - C) Functions and institutions of society
 - D) Environmental Interactions

- II) Environmental issues
 - A) Environmental interactions
 - B) Events, problems and issues
 - C) Environmental issues and societal change
 - D) Beliefs, values and issues

- III) Issue analysis
 - A) Issue question/statement
 - B) Players (stakeholders)
 - C) Positions
 - D) Beliefs
 - E) Values
 - F) Analyzing issue information from written and video sources
 - G) Issue analysis notebook

- IV) Investigating Environmental Issues
 - A) Identifying Environmental Issues
 - 1) Environmental Issues in General
 - 2) Local
 - 3) Regional
 - 4) National
 - 5) International
 - B) Identifying and developing research questions
 - C) Locating and collecting issue information from secondary sources
 - 1) Library/computer search skills
 - 2) Comparing information sources
 - 3) Writing for information
 - 4) Locating and interviewing resource people
 - 5) Evaluating sources of information
 - D) Primary sources
 - 1) Types of instruments
 - (a) Physical surveys
 - (b) Questionnaires
 - (c) Opinionnaires
 - 2) Sampling techniques
 - (a) Random samples

- (b) Systematic samples
 - (c) Samples of convenience
- E) Interpreting and Presenting Data
 - 1) Organizing data
 - 2) Narratives
 - 3) Tables
 - 4) Graphs
 - 5) Conclusions
 - 6) Inferences
 - 7) Recommendations
- V) Helping Resolve Environmental Issues
 - A) You and action
 - B) Individual vs. group action
 - C) Levels of citizen participation
 - D) Methods of action
 - 1) Persuasion
 - 2) Consumer action
 - 3) Political action
 - 4) Physical action (ecomangement)
 - 5) Legal action
 - E) Guidelines for decision-making - The Action Analysis Criteria
 - F) The ethics of teaching and action
- VI) Environmental Issues in the Classroom
 - A) Analyzing the skills involved in issue instruction.
 - B) Issue instruction and national/state standards (science, language arts/reading, and social studies).
 - C) Issue instruction and other aspects of education reform (authentic instruction, authentic learning and authentic assessment; cooperative learning, engaged learning.
 - D) Examples of teachers using issue instruction in their classrooms.
- VII) Review of Relevant Research
 - A) Variables affecting environmental behavior
 - B) Academic achievement
 - C) Impact of issue instruction
- VIII) Implementation Planning
 - A) Choice of curricular materials
 - B) Implementation strategies
 - C) Resources for implementation
 - D) Impediments to implementation
 - E) Implementation plan

If students are to become responsible citizens who understand and act effectively on environmental issues, they should first understand, at least nominally, the scientific principles

involved in the issues. They must also understand the positions, beliefs, and values of the people involved in the issues. They should be able to investigate the issues within their community in order to make sound decisions regarding the solution of particular issues. Finally, if they are to play a positive role in the constructive resolution of the issue, they must be able to develop sound action plans, and at the same time, communicate and work with people who hold values and positions different from their own.

Goals of Environmental Education

The model of environmental education implemented in this course is best understood in terms of goals developed by Hungerford, Peyton, and Wilke (1980). These goals are based on Harvey's work (1977) as well as the Belgrade Charter (1976) and the 1977 Tbilisi Intergovernmental Conference Report (UNESCO, 1978). They include a superordinate goal and four subordinate-level goals.

The Superordinate Goal: ... to aid citizens in becoming environmentally knowledgeable and, above all, skilled and dedicated citizens who are willing to work, individually and collectively, toward achieving and / or maintaining a dynamic equilibrium between the quality of life and the quality of the environment (Hungerford, Peyton, & Wilke, 1980, p. 43).

Related to this overall goal for environmental education are four major levels of subgoals that were developed to lead the learner toward the superordinate goal:

Goal Level I: The Ecological Foundations Level Instruction at this level seeks to provide learners with sufficient ecological knowledge to permit him/her to eventually make ecologically sound decisions with respect to environmental issues.

Goal Level II: The Conceptual Awareness Level This level of instruction seeks to guide the development of a conceptual awareness of how individual and collective actions may influence the relationship between quality of life and the quality of the environment and, also, how these actions result in environmental issues which may be resolved through investigation, evaluation, values clarification, decision making, and finally citizenship action.

Goal Level III: The Investigation and Evaluation Level Education at this level provides for the development of the knowledge and skills necessary to permit learners to investigate environmental issues and evaluate alternative solutions for solving these issues. Similarly, values are clarified with respect to issues and alternative solutions.

Goal Level IV: Action Skills Level-Training and Application Education at this level seeks to guide the development of those skills necessary for learners to take positive environmental action for the purpose of achieving and/or

maintaining a dynamic equilibrium between the quality of life and the quality of the environment (Hungerford & Volk, 1990, p. 13).

The Instructional Model

The course uses an instructional format where skills are introduced to the students, practiced by the students, and finally applied by the students. Transfer of these skills to new and unique situations is expected and is observed. What follows is a brief description of the instructional sequence that occurs within the issue investigation and action training instruction.

The course first introduces the ideas of environment and environmental interaction, as students gain an understanding that all human activities are interrelated with the environment and have either a positive or negative impact on the environment. In the first phase of this approach, students are taught to identify environmental problems and issues. A problem is any situation in which something valuable is at risk. An issue arises when two or more parties, called players, disagree about the solution to a problem. In an environmental problem or issue, some part of the environment is at risk, but so also may be jobs, homes, health, cultural or recreational resources, or other things of value. Issues may arise when two players have different knowledge of an issue. However, it is just as likely that two players differ on an issue because of different beliefs and values.

Students are taught to identify an issue and to analyze it in terms of the issue itself, the players, their positions, their beliefs, and their values. To practice these skills, students read and analyze articles related to ongoing environmental issues from newspapers and magazines. In addition, videotapes related to issues may be viewed and analyzed. Cooperative learning is encouraged throughout.

Students are then taught investigation skills so that they can conduct their own investigations of issues that affect their communities. These skills include locating and accessing pertinent secondary information (use of libraries, data banks, experts); identifying variables related to issues; generating appropriate research questions to guide the investigation; identifying appropriate populations and samples; developing data collection instruments (surveys, questionnaires, opinionnaires); and data collection, tabulation, and interpretation. The students practice these skills individually and in groups.

The next phase of the course asks students to apply the skills they have learned to the investigation of an issue. Working in small groups (usually limited to three members), the students are required to identify an issue of interest and to conduct a library/computer search of relevant material. This task leads the student to become knowledgeable about the scientific underpinnings of the issue, so that they understand the environmental implications of the issue, and of the proposed solutions. Here, the students also determine the economic, political and cultural aspects of the issue. In addition, the students are asked to identify the players in the issue, as well as their positions, beliefs, and values. They must determine the scientific validity of the claims of each player. The students must also decide, on the basis of the available scientific information and their own values, what their position is on the issue.

The students then formulate research questions in order to investigate the issue within their own community. The most common variables incorporated into the student investigations include knowledge of the issue and/or solutions, beliefs about the issue and/or solutions, actions taken with respect to the issue and/or solutions, and intention to act on the issue and/or solutions. Research questions are then formulated which will guide the investigation and lead to recommendations about the issue and its alternative solutions.

The students decide on a population to sample and on an appropriate sampling method. These decisions are made on the basis of their research questions. They then develop an instrument to gather the data they will need to answer their research questions. They may gather data through directly observing physical situations or behavior, by asking factual questions concerning behavior or demographics, or by polling concerning opinions and knowledge. Often a combination of these approaches is used.

After the data collection, students tabulate and interpret their findings. This process involves constructing data tables and graphs to understand and report their data. It also includes drawing conclusions and making inferences and recommendations based on their data.

The final phase, citizenship action, is the formulation of an action plan on the basis of the background research and the survey results. Students are guided to consider individual as well as group actions. They consider five types of actions: persuasion, consumer action, political action, legal action, and ecomanagement.

In addition to the type of action to take, students decide which level of action—local, state, or national—is most appropriate for their issue. The students formulate specific action plans and, using a decision-making screen, evaluate their plans to determine the potential effectiveness of their proposed actions. The decision-making screen asks them to consider: 1) whether or not they have evidence which supports citizen action on the issue; 2) the political, legal, economic, social and ecological consequences; 3) their personal values relative to the action and the values of others in their community; and 4) procedural and logistic concerns.

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- Action Analysis Criteria
- Fourteen important questions to ask before proceeding with a citizen action:
1. Is there sufficient evidence to warrant action on this issue?
 2. Are there alternative actions available for use? What are they?
 3. Is the action chosen the most effective one available?
 4. Are there legal consequences of this action? If so, what are they?
 5. Will there be social consequences of this action? If so, what are they?
 6. Will there be economic consequences of this action? If so, what are they?

7. What are the ecological consequences of this action?
 8. Do my personal values support this action?
 9. Do I understand the beliefs and values of others involved in this issue?
 10. Do I understand the procedures necessary to take this action?
 11. Do I have the skills needed to complete this action?
 12. Do I have the courage to take this action?
 13. Do I have the time needed to complete this action?
 14. Do I have all the other resources needed to make this action effective?
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As a summative activity students usually present an oral report to their class and prepare a written report on their issue. These reports include background information, the learners' research finding, and an action plan on their issue.

A series of textual materials has been developed to implement the model described. The first of these, *Investigating and Evaluating Environmental Issues and Actions* (Hungerford, Litherland, Peyton, Ramsey, & Volk, 1992), focuses exclusively on environmental issues. *Science-Technology-Society: Investigating and evaluating STS issues and solutions* (Hungerford, Volk, & Ramsey, 1990) deals with the broader spectrum of science-related social issues in general, but still has a strong environmental education component. In addition, several extended case studies have been developed (Ramsey, Hungerford, & Volk, 1989; Culen & Simpson, 1988).

The Research Base

The instructional model just described is meant to address the superordinate goal and subgoals presented earlier. A number of research studies have been conducted addressing several related questions: To what extent does the instruction described lead to responsible environmental citizenship action? What variables seem to be most correlated with such behavior? Which of these variables seem most directly influenced by instruction of this kind? What follows is a brief summary of some of these research findings.

Ramsey conducted a quasi-experimental study of intact eighth grade science classes (Ramsey, Hungerford, & Tomera, 1981). He found that students who used the issue investigation and action training approach surpassed other groups on (1) knowledge of citizenship action, (2) knowledge of categories of action, (3) overt citizenship behavior, and (4) categories of citizenship behavior participated in. In a follow-up to this study, Klinger (1980) found that students who received issue investigation and citizenship action training knew more about citizenship action and took significantly more actions in an effort to resolve issues than students who received only issue investigation training.

Sia sought to identify key variables linked to pro-environmental behavior, and to compare these predictor variables in samples taken from members of an environmental organization and a non-environmental organization (Sia, Hungerford, & Tomera, 1985). The eight predictor variables were environmental sensitivity, perceived knowledge of environmental action strategies, perceived skill in using environmental action strategies, psychological sex role classification, individual locus of control, group locus of control attitude toward pollution, and attitude toward technology. All the predictor variables except attitude toward technology were found to be statistically significantly correlated with overt pro-environmental behavior. Three key variables, perceived skill in using environmental action strategies, level of environmental sensitivity, and perceived knowledge of environmental action strategies, were found to be major predictors of overt responsible environmental behavior.

More recent studies have built on these earlier results. Ramsey (1993) found that issue investigation and action training had a positive impact on perceived action knowledge, perceived action skills, group locus of control, action knowledge and student behavior with respect to the environment among eighth grade students. Cullen (1994) and Cullen and Volk (2000) found positive effects among 7th and 8th grade students enrolled in issue investigation and action training on perceived action skills, individual locus of control, action knowledge, and student behaviors, compared to students not enrolled in the program. Bluhm and others (1995) found a positive effect on the variables perceived action knowledge, perceived action skills, and student behaviors with respect to environmental issues among 6th graders who had received the instruction. Finally, Jamaluddin (1990) found a positive impact on perceived action skills, individual locus of control, group locus of control, and student behaviors among college undergraduate elementary education majors who were enrolled in a course where the skills were taught.

References

- Belgrade Charter. (1976). *Connect, UNESCO-UNEP Environmental Education Newsletter*, 1(1), 1-2.
- Bluhm, W., Hungerford, H., McBeth, W., & Volk, T. (1995). "The middle school report: A final report on the development and pilot assessment of the middle school environmental literacy instrument" [Unpublished Rep.]. Southern Illinois University at Carbondale.
- Culen, G. (1994). *The effects of an extended case study on environmental behavior and associated variables in 7th and 8th grade students*. Unpublished doctoral dissertation, Southern Illinois University at Carbondale.
- Culen, G., & Volk, T. (2000). The effects of an extended case study on environmental behavior and associated variables in 7th and 8th grade students. *Journal of Environmental Education*, 31(2), 9-15.
- Harvey, G. (1977). Environmental education: A delineation of substantive structure. *Dissertation Abstracts International*, 38, 611A-612A.
- Hungerford, H. R., Peyton, R. B., & Wilke, R. J. (1980, Spring). Goals for curriculum development in environmental education. *Journal of Environmental Education*, 11(3), 42-47.
- Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *Journal of Environmental Education*, 21(3), 8-21.
- Jamaluddin, S. (1990). The effects of an STS (Science-Technology-Society) issue investigation course on citizenship behavior and associate variables in preservice elementary teachers. Unpublished doctoral dissertation, : Southern Illinois University at Carbondale.
- Ramsey, J. (1993). The effects of issue investigation and action training on environmental behavior. *Journal of Environmental Education*, 24(3), 31-36.
- Ramsey, J., Hungerford, H. R., & Tomera, A. N. (1981, Fall). The effects of environmental action and environmental case study instruction on the overt environmental behavior of eighth-grade students. *Journal of Environmental Education*, 13(1), 24-29.
- Sia, A. P., Hungerford, H. R., & Tomera, A. N. (1985/86, Winter). Selected predictors of responsible environmental behavior: An analysis. *Journal of Environmental Education*, 17(2), 31-40.
- UNESCO. (1978, January). The Tbilisi declaration. *Connect, UNESCO-UNEP Environmental Education Newsletter*, III(1), 1-8.

Catalogue Course Description:

This course focuses on environmental issues and addresses the knowledge and skills needed by instructors to successfully implement issue instruction in the classrooms and in non-formal settings. Participants will develop skills associated with issue analysis, issue investigation, information collection and processing, and citizenship participation. Relevant research will be reviewed. Additional instruction will focus on implementing issue instruction in both classroom and non-formal settings.



Dean of The Graduate School

February 20, 2001

Dr. Austin A. Winther
Elementary/Early Childhood Education
Robinson Hall
Rowan University
201 Mullica Hill Road
Glassboro, NJ 08028

Dear Dr. Winther:

I am writing in support of the proposal for a new graduate course entitled, "Environmental Issues and Actions." I believe this course will be an excellent addition to the M.A. program in Environmental Education and Conservation.

As proposed, the course appears to address important issues involving the relationship between the environment and social and political concerns. I believe that the course will provide an excellent learning opportunity for graduate students in the M.A. program in Environmental Education and Conservation.

I am particularly impressed with the manner in which you have demonstrated the relationship between the course objectives and the goals of the College of Education. I think it is important to show how any course is grounded in the theoretical framework. In addition, the course activities and course outline demonstrate a comprehensive approach to the content of this course.

I congratulate the course development committee on the thoroughness of its work. I look forward to working with you on implementing this course and enhancing the M.A. program in Environmental Education and Conservation.

Sincerely,

S. Jay Kuder, Ed.D.
Interim Dean of The Graduate School

SJK/klh