Course Description

use this for Proposing New Courses or GE/USCP Courses

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Department: Honors
College:

Proposer: David Conn
E-mail: dconn@calpoly.edu
Date: 04-01-04

Experimental: ☐ Begin Date: Spring 2005

I. Summary Description

1. Course Prefix, Number, Title:
   HNRS 375 Technology & the Environment: A Seminar on Contemporary Issues

2. Catalog Description (substantive, but no more than 40 words of content description)
   Interdisciplinary exploration of significant environmental issues (local, regional, national, or global) where technology is a major cause and/or offers a possible solution, with a focus on the development and implementation of public policy.

3. Total Course Units: 4
   Number of units per mode of instruction:
   Lec  Lab  Act  Sem 4  Supv
   If course has fewer than 4 units and is not an exception, provide a compelling reason.

4. Grading Type: Regular ☒ Credit/NC ☐

5. Distance Education (DE): No ☒ Yes ☐ If yes, % taught via DDL. (see DDL Policy, under construction.)

6. General Education (GE): No ☐ Yes ☒ If yes, GE Area: D5

7. United States Cultural Pluralism (USCP): No ☐ Yes ☒ If yes, refer to USCP criteria.

8. Service Learning (SL): Proposed SL course? No ☐ Yes ☒ (Criteria under construction.)

9. Prerequisite/Co-requisites: (note: 300-400 level courses must have prerequisite)
   Completion of GE Area A and two courses from Areas D1, D2, D3. Honors Program membership or nomination by CRP Head.

10. Crosslisted Course: No ☐ Yes ☒ If yes, indicate other course prefix and number: CRP 375

11. Repeatable? Is the course repeatable for multiple credit? No ☐ Yes ☒ If yes, maximum # units:
    Is the course repeatable in the same term? No ☒ Yes ☐

12. Variable Course Content (Subtopics with Different Titles): No ☒ Yes ☐
13. Replacement Course: *(meets prior course requirement & repeats)*

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   If yes, indicate prior course prefix, number, title and units:

14. Course Classification Number(s) C/S#: 04

II. **Explanation**

A. **Proposed for Major, Minor, Support, Certificate or Credential Program(s)?**

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<th>Major, required (if yes, specify): No</th>
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<th>major, elective (if yes, specify): No</th>
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<th>concentration (if yes, specify): No</th>
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<th>specialization (if yes, specify): No</th>
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<th>Support for other programs (if yes, specify): No</th>
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<th>Certificate programs (if yes, specify): No</th>
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<th>Credential programs (if yes, specify): No</th>
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B. **Need**

   Briefly explain the need for this new course, and describe how it fits into the programs checked above and their missions and strategic plans.

   This course was developed in response to a request from students for offerings that address contemporary issues and provide more opportunities for open-ended discussion than is typical in most existing Cal Poly courses. It provides an upper division GE option for Honors Program students as well as selected CRP non-Honors Program students (nominated by the CRP department head, on a space available basis). A candidate for inclusion in Area D5, it draws in an interdisciplinary manner on knowledge acquired in foundation courses in Area D, e.g., the human motivations and behavior that govern the use of technology and its relationship to the environment.

C. **Prerequisites**

   Briefly explain the reason for any prerequisites or co-requisites for the course.

   GE Area D5 courses are writing intensive and the completion of GE Area A is required. D5 courses build upon the knowledge that student learned in a minimum of two of the lower division Area D courses. Lower-division foundation courses in Area D/E provide students with a basic understanding of humans, their institutions, and their social achievements in both contemporary and historical contexts.

III. **Syllabus**

   **Note:**
   - Excerpts from materials already prepared for accrediting agencies may be used in this section.
   - It is understood that the syllabus will be updated and modified as needed.
For courses with multiple sections, faculty and/or subtopics, describe the consistent principles or key elements that will inform all sections regardless of the subtopic or faculty who will teach the course by providing a representative sample of a syllabus.

A. Learning Outcomes
What should students know or be able to do after taking this course?
The learning outcomes for this course are consistent with the educational objectives specified for GE Area D5, which require that courses are integrative (and possibly interdisciplinary) and that students should come away with an enhanced ability to

E1 apply knowledge and understanding acquired in lower-division coursework in the area to the advanced study of a subject or to new, but related, areas of inquiry – the course draws extensively on (and adds to) knowledge about human motivations and behavior, both individually and collectively, and relevant institutions, e.g., in addressing pollution issues such as groundwater contamination or global warming, it considers economic, legal, political, and other perspectives on why pollution arises, what might motivate humans to change their behavior, and the institutional framework within which this happens.

E2 respond in depth to the kinds of issues approached in lower-division study in the area – the course is designed specifically to promote in-depth discussion of this kind. The students are expected to prepare thoroughly for in-class presentations and discussions that are deliberately open-ended, with enough time to explore multiple facets of each issue, e.g., in examining the controversy over the Yucca Mountain nuclear waste repository, the students might choose to pursue an in-depth discussion on society's responsibilities to future generations and the implications for today's decision-making (including the question of whether we can rely on existing institutions to provide safeguards for hundreds of years into the future).

E3 appreciate the implications of knowledge in a focused area of study – one of the roles of the instructor in this course is to ensure that students understand and come to appreciate how knowledge can be brought to bear on efforts to define and solve complex societal issues, e.g., it is new knowledge to many students that “e-waste” (waste from electronic components such as computer screens) is potentially very hazardous, and there are important lessons to be learned, for example, from studying policy, institutions, and legislation in Europe where the notion of “extended producer responsibility” is already quite widely accepted.

E4 appreciate the way in which relationships between one area of study and another provide perspective on knowledge – the students in this course learn about the varying perspectives held by the different disciplines and the fact that many advances in knowledge occur at the interstices; more often than not, it takes an interdisciplinary approach to generate the knowledge that is needed to solve “real-life” environmental problems, e.g., our present understanding of the concept of “risk” (which has come to underlie much contemporary policy-making in the environmental area) would be even more incomplete without contributions from psychologists, sociologists, economists, and others.

In addition, the D5 criteria are satisfied, in that the course is at the 300 level and:

C1 draws upon and utilizes the perspective of one or more of the multiple fields in the social and behavioral sciences and human life development -- e.g., if the students choose to explore issues relating to the control of urban air pollution, they would be expected to consider these issues from at least two or more social/behavioral science perspectives, such as economics (willingness to pay for cleaner air), psychology (perception of risk of health damage), political science (interplay of federal, state, and local institutions), law (regulatory enforcement).
C2 makes an explicit connection between the perspectives of two or more of the Foundation Courses in Area D/E – e.g., in discussing concerns about environmental justice, connections are drawn between perspectives in such courses as Race, Culture, Politics in the U.S. (ES 112), Survey of Economics (ECON 201), Introduction to Cultural Geography (GEOG 150), and General Psychology (PSY 201 or 202).

C3 serves as a Writing Intensive course in GE – this course meets the criteria for a writing-intensive course (minimum 3000 words of writing; more than 50% of grade based on writing; feedback on writing from the instructor, including opportunity to have draft of term paper reviewed and commented upon prior to submission for final grading).

C4 include consideration, both past and present, of the social, economic, political, legal, and commercial institutions and behavior that are inextricably interwoven in either the US or international contexts – e.g., if the students choose to explore issues relating to our supposed “running out of” energy/materials resources and the apparent need for conservation, they would have to consider the institutions and behaviors, both individual and collective, which have led to and still characterize our “high consumption” society in the U.S., with comparisons between countries in the Northern and Southern hemispheres.

C5 cover the social, political, legal, and economic forces that influence the creation, development, evolution, and implementation of practical public policies in the American or international contexts – this course has as a primary focal point consideration of the development, evolution, and implementation of practical public policies addressing environmental concerns. The focus on policy serves to ground the discussion in each segment so that, despite giving the students more opportunity to “wander” than is typical in most courses, it leads ultimately to outcomes (i.e., conclusions and recommendations) that are relatively concrete and specific.

Specifically, after taking this course, students will have:

An enhanced awareness of the range of significant environmental issues (local, regional, national, or global) where technology is a major cause and/or offers a possible solution (E1, E3)

An enhanced understanding of

- the scientific underpinnings of selected environmental issues and of relevant technologies (E3, E4)
- the decision-making contexts within which these issues arise and solutions are selected and implemented (E1, E2, E3, E4, C1, C2, C4, C5)
- relevant political, economic, social, legal, and technological factors (E1, E2, E3, E4, C1, C2, C4, C5)
- associated ethical issues (E1, E2, C1)

An enhanced ability to

- access and evaluate information
- apply critical thinking skills
- integrate technological and humanistic areas of study
communicate orally and in writing (C3)

work in small groups, developing and delivering presentations to a larger audience

participate as citizens in the ongoing process of identifying, prioritizing, and addressing significant environmental issues.

Depending on the specific issues selected by the students for examination, the course will build on such lower division Area D/E topics and concepts as the following:

Basic interpersonal relationships (social, economic, political, and legal)
Interplay between individual welfare and community welfare
Individual action versus collective action
Functioning of social institutions (political, economic, legal, etc.)
Historical perspectives (how an understanding of history contributes to the design and implementation of effective solutions, and avoidance of repeated mistakes)
Human impacts on the environment
Interconnectedness of the planet, its natural resources, and its population
Issues of gender, ethnicity, and racial diversity, both domestic and international (environmental justice)
Importance of empirical information and appropriate methodologies (application of knowledge to action; issues of validity; normative versus positive; etc.)

The course will be interdisciplinary in approach, reflecting the fact that such a perspective is essential to the understanding of both the causes of, and the solutions to, virtually all significant environmental issues, domestic and international. For the most part, the course will draw on the social sciences (including economics, political science, sociology, etc.) as well as the physical and life sciences; professional fields such as planning, law, and engineering will also be drawn upon.

B. Course Content
Provide a week-by-week outline (readings, discussion topics, lab experiments, activities, assignments, etc.)

Supplementary readings: Students will consult with a wide variety of in-library and on-line resources, depending on the topics chosen for detailed study. A course-pack of resources for this class, including relevant bibliographic data-bases, links to appropriate websites, etc., is provided on the Cal Poly library website.

Week 1: Introductions; discussion of selected environmental issue; discussion of personal environmental perspectives; session on information identification and retrieval (with library specialist)

Week 2: Discussion based on chapters 1 and 2 of Rosenbaum; assignment of team responsibilities for class presentations in weeks 5-7
class presentations in weeks 5-7

Week 3: Discussion based on chapters 3 and 4 of Rosenbaum; presentation by instructor on selected topic in manner illustrating key features to be expected in ensuing student presentations

Week 4: Discussion based on Rosenbaum chapters 6 and 7; proposals for term papers due

Week 5: Discussion based on Rosenbaum Chapter 10; team presentation(s) and discussion

Week 6: Team presentations and discussion

Week 7: Team presentations and discussion; draft term papers due

Week 8: Individual presentations and discussion

Week 9: Individual presentations and discussion

Week 10: Individual presentations and discussion

Week 11: (Exam Week) Term papers due no later than 5pm on ______

C. Assessment Methodologies
List and describe the assessment methodologies that will be used to determine the extent to which students have achieved the learning outcomes listed in Section III.

Term paper (50% of grade): Each student will write a term paper of no less than 3000 words on a significant environmental issue of his/her choosing, subject to prior approval by the instructor. The paper should take the form of an analysis of the chosen issue (as might be prepared for a legislative committee) and should include findings, conclusions, and recommendations regarding the issue and possible ways of addressing it. Although there may be overlap (e.g., connections may be drawn), the paper must cover substantially different ground than that covered in the class presentations and discussions during the previous weeks (e.g., by adopting a different focus, exploring a related but different sub-issue, etc.). Alternatively, the topic may be unrelated to those previously discussed in class.

Students must submit proposed titles and brief outlines to the instructor no later than the fourth week of class. Following revisions as necessary, written approval to proceed will be given by the instructor. Students must submit draft papers no later than the seventh week of class. These will be reviewed (but not graded) and returned with the instructor's comments and suggestions, normally within a week. Final papers will be due no later than 5pm on ___
students will be asked to submit brief answers to questions associated with readings from Rosenbaum.

Summaries of class discussions associated with team presentations (10% of grade). Following each class session during weeks 5-7, students will be expected within one week to submit brief personal reactions to the presentation(s) and discussion, e.g., identifying and addressing key issues.

Note: Written answers to questions and summaries of class discussions will both be graded “adequate” or “inadequate”. Students will start out with the maximum possible number of points in these categories (10 each) and will lose points for inadequate submissions.

Participation (10% of grade). For the proposed course format to be effective, regular attendance by all enrollees is essential. Students will start out with the maximum possible number of points in this category (10) and will lose points for non-attendance, except under extraordinary circumstances (e.g., documented illness).

IV. Consultation

A. Attach signed concurrence memos from any other departments that will be affected by the new course or its prerequisites. not applicable

B. List all courses that already cover any significant part of the planned subject matter of this course either within the department or from other departments. Explain why duplication of subject matter is necessary. Attach signed concurrence memos from any other departments with which there will be significant duplication. not applicable

V. Resources (in consultation with the College Dean/Associate Dean)

A. Explain the impact of this new course on allocation of current/new resources.

   **Equipment** *(List new equipment needed, and amount and source of funds.)*
   none

   **Supplies** *(List new supplies needed, who will need to purchase the supplies [i.e., students, department], and amount and source of funds.)*
   no special supplies will be required

   **Facilities** *(List type of teaching environment needed.)*
   Seminar/lecture classroom

   **Faculty** *(List faculty members who will initially teach the course, and explain how the time needed for them to teach this course will be made available.)*
   David Conn will teach this course with no additional subsidy required.

   **Library or Information Technology** *(List new periodicals required for initiation and conduct of the course, and number of new volumes of books required; estimate the costs involved. List computer facilities and software needed, and amount and source of funds.)*
   The required newspapers and magazines are available in the Library and on the web.

B. For Department and College Planning Purposes:

   Estimated number of students in one section of this course? 25
Estimated number of sections offered: each quarter: each year: 1

VI. Approval Signatures

Department Head/Chair:

College Curriculum Chair:

College Dean:

(This signature is the Dean's guarantee that s/he will provide any additional resources needed to support this course.)

Vice Provost for Academic Programs:

For questions and concerns contact Mary Whiteford at 756-2246
Last modified October 15, 2001