Proposal Information

Type: Change Course

Title: Course Change for BIO 338

Date Started: 8/17/12 5:33 PM

Date Submitted: 8/28/12 10:02 AM

Date Completed: 12/14/12 4:43 PM

Author: Shaily Menon

Department: Biology Department

Log Number: 7842

General Education Goals

Issues course have a maximum capacity of 40 students.

Issues Course Goals - Sustainability

Explain how you will teach and measure the following student learning outcomes.

1. How the course relates to issues and questions regarding the Issue category.

A. Teach

This course belongs in the Issue category of Sustainability, which is sometimes defined as the 'capacity to endure' . The Sustainability Issue focuses on topics such as the environment, population, natural resources, economic development, social justice, and energy.

In this course, instructors will teach philosophical concepts in ethics, in general, and concepts in environmental ethics, in particular. Instructors will help students apply these concepts towards the exploration of approaches that are aimed at understanding sustainability issues, solving ongoing environmental problems, and developing a global environmental ethic.

B. Measure

Students will demonstrate their ability to describe different worldviews, value systems, and theories of environmental ethics through writing assignments and exams.

Students will demonstrate their ability to evaluate conflicting viewpoints in sustainability and environmental ethics through writing assignments and presentations.

Students will demonstrate their ability to locate, evaluate, interpret, and articulate information and viewpoints about sustainability and environmental ethics by writing essays, making a class presentation on a pro or con article about an environmental issue, participating in a group project, and evaluating the effectiveness of peer presentations.

Students will demonstrate their ability to investigate and clearly articulate approaches for understanding sustainability issues and solving ongoing environmental problems through their participation in an Environmental Issues and Global Ethic Group Project.

2. How complementary and competing perspectives covered in the course contribute to the ongoing discussion about the Issue category you selected above.

A. Teach

Environmental and sustainability issues have been the source of much ongoing controversy and opposing viewpoints, and instructors will teach students how to explore divergent viewpoints and to understand and critique their implications. Complementary and competing value systems and worldviews influence people s' relationship with the environment; therefore their exploration is an integral part of the course. Human relationship with the earth has changed over time with changes in our scientific and technological capabilities, with increasing knowledge about the effects of these changes, and as part of the evolution of human culture, philosophy, and ethics.

Yang (2006) posits that environmental ethics is extended, interdisciplinary, plural, global, and revolutionary. According to Yang, "...environmental ethics is global. Ecological crisis is a global issue. Environmental pollution does not respect national boundaries. No country can deal with this issue alone. To cope with the global environmental crisis, human beings must reach some value consensus and cooperate with each other at the personal, national, regional, multinational and global levels. Global environmental protection depends on global governance. An environmental ethic is, therefore, typically a global ethic with a global perspective."

The instructor will help students critique such a claim and explore its implications for understanding the scope and limitations of the causes and solutions for environmental issues and sustainability.

Yang, T. 2006. Towards an egalitarian global environmental ethics. Environmental Ethics and International Policy. UNESCO.

B. Measure

Students will demonstrate an understanding of different worldviews, value systems and theories of environmental ethics, and their implications for developing a global environmental ethic by successfully completing exams, engaging in discussions, writing essays and completing a group project.

Each of these three student learning outcomes has four related objectives, all of which need to be taught and assessed in your course. Although it is possible that you may teach more than one objective at a time, or assess more than one objective with one measure, please fill in each of the boxes below. (In other words, it is acceptable to use the same language in multiple boxes.)

Collaboration

Collaboration is two or more students working together and sharing the workload equitably as they progress toward shared learning objectives.

Collaboration Objective 1: Students contribute to the development of shared goals within the group.

A. Teach

The instructor will organize students into groups of between 3 and 5 students to work on an Environmental Issues and Global Ethic Group Project. The instructor will ensure that students within each group have a mix of expertise (see objective 2). Students in each group will work together to identify their topic and to determine how they will work as a team. The instructor will approve the project proposal and team contract developed by the group.

A few examples of activities that groups may undertake as part of their project are:

Importance of educating the public on key issues and ethical concepts (data, uncertainty, correlation with weather events, human health etc.)

Impact of peer persuasion on ethical considerations - persuasive essays, media (film, websites, blogs, tv and radio talk shows)

Analyzing media presentations about environmental issues and ethical implications (websites such as climatedepot.com, talk shows, blogs)

Role of efforts such as C2C and interest in starting C2C on the GVSU campus (C2C stands for Campus to Congress, to Capitol, to City Hall, and also for Campus to Corporation. C2C stands for young people gaining control of their future. C2C Fellows is the power network for young people with the wisdom, ambition, talent, and grace to change the future)

Value or role of technological solutions such as iPhone apps for offsetting carbon consumption by airplane travel

Role of social media in developing consensus for a global environmental ethic

Politics and ethics of EPA regulations and hormone imposters (endocrine disruptors)

Politics and ethics of energy independence and economic growth

Environmental issues and ethical discussions in the presidential elections

Analyzing climategate and its political, environmental and ethical ramifications

B. Measure

Each group will present for instructor approval, a 2-page project proposal which will describe their project goals, the proposed methodology to conduct the project and present the results, and how each group member will contribute to the project. Once the project proposal is revised based on instructor feedback and approved, it will serve as the team contract (see objective 3). Students will assess their contributions to the group project based on this contract.

Collaboration Objective 2: Students contribute their own knowledge and expertise to the group.

A. Teach

The instructor will provide examples of interdisciplinary approaches to the group project and will ensure that students within each group bring particular and varied experiences and knowledge to the group. The instructor will determine group composition based on the diversity of expertise and student interest in the topic.

B. Measure

Early in the semester, students will fill out index cards describing their expertise (based on prior coursework and extra-curricular experiences) and interests and a modified version of the "Getting to Know You" form (Oakley et al. 2004). This information will be used in group formation. The 2-page project proposal submitted by each group will list the experiences and knowledge each student brings to the group and how each student's contribution to the group will build on their experiences and knowledge. The instructor will provide formative feedback on the project proposal and team contract and will assess the revisions that incorporate the instructor feedback. Implementation of the group project and individual student contribution to the project will be determined based on the proposal and contract.

Oakley et al. 2004. Turning Student Groups into Effective Teams. Journal of Student Centered Teaching, 2:9-34.

Collaboration Objective 3: Students participate actively and responsibly in all group activities.

A. Teach

Learning to work effectively with diverse backgrounds, worldviews, and experiences is an integral part of the course goals and content of exploring approaches to develop a new global environmental ethic. The group projects are designed to be conducive to group work and too hard for a single student to do. The instructor will provide feedback on the group project proposal and team contract to ensure that the conditions are set for group members to participate actively and contribute to group activities.

B. Measure

Students in each group will identify opportunities and challenges in completing their project as well as potential solutions. The project proposal will serve as a team contract and will explicitly spell out the team expectations from each student. Each group will meet with the instructor during the project implementation stage to discuss how effectively the team is functioning and to brainstorm mechanisms to improve effectiveness. As part of the final project essay, students will include a section on the team work aspect of the project and how it informed their understanding of working together to develop a global environmental ethic.

Collaboration Objective 4: Students honestly assess their own contributions and the contributions of others.

A. Teach

Periodically taking stock of the goals laid out by the team and contributions of team members will help improve effectiveness of the groups. The instructor will clearly explain the purpose of the group project proposal and team contract, expectations from individual students and the group as a whole, and the assessment criteria by which the group work will be evaluated by self, peers and by the instructor.

B. Measure

Students will complete a mid-term course evaluation, which will include an assessment of the effectiveness of their group work and progress towards their project (team-rating). As part of the reflection on effectiveness of team work in the final project essay, students will assess their own contributions (self-rating) and that of their team mates (peer-rating).

Problem Solving

Problem Solving is the process of designing and evaluating strategies to answer open-ended questions or achieve desired goals.

Problem Solving Objective 1: Students construct clear and insightful problem statements that prioritize relevant contextual factors.

A. Teach

Students in this course will investigate and clearly articulate approaches for understanding sustainability issues and solving ongoing environmental problems.

The instructor will provide examples of effective and ineffective thesis statements through the choice of readings and their critique. The instructor will have students carry out a writing assignment prior to the group project, to demonstrate the development of an effective thesis statement and iterative revisions to improve it.

B. Measure

Through writing assignments and critique of persuasive essays students will demonstrate their ability to critique and generate effective thesis statements. In the the Environmental Issues and Global Ethic Group Project, each group will develop a clearly stated thesis or position statement that can be supported or challenged by evidence. These statements will be assessed by the instructor and by peers.

Problem Solving Objective 2: Students identify multiple approaches for solving the problem within the given context.

A. Teach

Taking an interdisciplinary problem-solving approach and incorporating implications of different world views and value systems is an integral part of the course. The instructor will provide case-studies and examples of effective problem solving that incorporated multiple approaches. Writing assignments and the group project will require students to incorporate multiple approaches for problem-solving.

B. Measure

An example of a writing assignment that assesses a student's ability to consider various approaches is one that requires them to describe the objections that people with different worldviews and value systems are likely to have to particular solutions for environmental sustainability or to particular ethical concepts that may be employed in developing a global environmental ethic. Student's ability to identify multiple approaches for problem-solving will be assessed through writing assignments, exam essays, and the group project.

Problem Solving Objective 3: Students design and fully explain proposed solutions that demonstrate deep comprehension of the problem.

A. Teach

The instructor will provide examples of complex problems in sustainability and environmental issues together with an analysis of the factors that make proposed solutions effective or ineffective. The instructor will guide groups in selecting a topic for their group project and working together to explore the scope of problem and proposed solutions The instructor will guide groups in their search for data and resources for their projects and explain ways to determine the credibility of various sources of information.

B. Measure

The Environmental Issues and Global Ethic Group Project (group proposal and presentation and individual essays) will be evaluated for project design and comprehension of the problem. For example, a group project related to endocrine disruptors would take into consideration evidence related to their impact on environmental and human health, public awareness about the issue, politics of regulation, economic impacts of reducing their use, and ethical considerations.

Problem Solving Objective 4: Students evaluate the feasibility of solutions considering aspects such as the historical context and ethical, legal, or practical impact of potential solutions.

A. Teach

Taking a historical context and ethical, legal, and practical perspectives is an integral part of the course, and the instructor will provide case-studies for students to demonstrate the application of these perspectives for examining environmental and sustainability issues.

B. Measure

Incorporation of historical context and ethical and practical perspectives will be considered in the assessment of the Environmental Issues and Global Ethic Group Project (group presentation and individual essays).

Integration

Integration is the process of synthesizing and applying existing knowledge, past experiences, and other perspectives to new, complex situations.

Integration Objective 1: Students draw conclusions from examples, facts, and/or theories from more than one field of study of perspective.

A. Teach

The instructor will encourage students to connect skills and knowledge from multiple sources and experiences. Students will apply ethical concepts learned in class and also from their own experiences and other classes to examine sustainability and environmental issues from more than one discipline.

B. Measure

In class writing assignments will assess students' ability to make connections among disparate concepts, fields and contexts. Students in each group will have different expertise and backgrounds and will employ these to make explicit contributions to the group project. These contributions will be considered in the assessment of the group project and the individual student work towards the project.

Integration Objective 2: Students must adapt and apply skills, abilities, theories, or methods to explore complex issues in original ways.

A. Teach

The instructor will guide students in identifying the role and contributions each of them will make to the Environmental Issues and Global Ethic Group Project that brings to bear their skills, abilities and expertise. The group projects will require integration of worldviews and ethical theories. Groups will be encouraged to complete and present their project work in creative and original ways.

B. Measure

The group project presentation will be evaluated for originality of the project and how clearly they group applies concepts learned in class and documents evidence citing sources and an assessment of the credibility of these sources, and how well it applies theory to practice.

Integration Objective 3: Students effectively communicate synthesized knowledge in ways that are inclusive of diverse audiences and perspectives.

A. Teach

Students will be taught how to locate, evaluate, and interpret information and viewpoints and to articulate them through effective speaking and writing. Students will be encouraged to consider the merits of diverse and even contradictory points of view.

B. Measure

Each student will critique a pro or con article on an environmental issue (Taking Sides) and will make a presentation to the class in which the student will describe the author's position and the context in which the author takes that position and supports it (either effectively or ineffectively).

Integration Objective 4: Students demonstrate self-reflection, building on prior experiences and responding to new and challenging contexts presented in the course.

A. Teach

As part of the class, the instructor will provide students the opportunity to learn to effectively articulate not only their own environmental ethic as a coherent narrative but also articulate the need for developing a new, global environmental ethic.

B. Measure

Each student will write an individual essay reflecting on their group project, including a self-reflection of their own environmental ethic and how it has evolved and argue for or against the need to develop a global environmental ethic.