SCI 350.01: Environmental Perspectives

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Science 350
Environmental Perspectives

Spring 2003
The University of Montana

Instructors Office Phone Office Hours
Fletcher Brown, Ph.D. 106 School of Ed 243-5287 Tuesday. 9-11/Wed 1:15-3:00

Textbook: Biosphere 2000, by Don Kaufman

Course Description: The goal of Science 350, Environmental Perspectives is to give students a conceptual understanding of the complexity of environmental science and gain experience in solving environmental issues. The course meets for two hours a week and includes discussions, lectures and activities involving the central themes in environmental science. One of the primary aims of the discussions and lectures is to provide students with an understanding of major ecological concepts and environmental issues necessary for responsible citizenship regarding the environment. In addition to discussions and lectures students will be involved in educational activities that model the content being discussed. Following these exploration activities groups become active participants in solving a local environmental issue. These action group projects give students hands-on experiences in the complexities of solving environmental problems involving the social/political components of environmental issues.

Objectives: Lecture/Discussion Meetings

1. To give the students experience with the basic concepts underlying introductory environmental science in an accurate, balanced, and interesting way.

2. To show how environmental and resource issues are fun, interesting, and important in our lives.

3. To show how population, pollution, and resource problems are interrelated and must be understood in an integrated manner on local, national, and global scales.

4. To give a realistic but hopeful view of how much has been done and what remains to be done in sustaining the Earth for humans and other species.

5. To develop skills in environmental problem solving; gathering, analyzing, synthesizing and interpreting information, and joint critical decision-making.

Objectives: Field Experiences

1. To place education content in a meaningful context.

2. To provide opportunities to apply acquired knowledge regarding environmental problems in an educational setting.

3. To substitute feelings of apathy and powerlessness with the feeling that one individual or group can make a difference.
## Lecture Syllabus

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### How the Biosphere Works: Ecological Principles and Applications

- 2/4: Ecological Principals and Application

### Understanding Human Populations Impact on the Environment

- 2/11: Human Population
- 2/18: Human Population
- 2/25: Energy Resources

### Environmental Resources: Protecting Biospheric Components

- 3/4: Biological Resources
- 3/11: Water Resources
- 3/18: Air /Soil Resources

### Managing & Preserving The Materials and Products of Human Society

- 4/1: Human Health
- 4/8: Waste: Toxic/Hazardous/Nuclear Resources

### Shaping Human Impacts on the Biosphere

- 4/15: Economics/Politics & Law
- 4/22: Environmental Education
- 4/29: Water Festival
- 5/6: Water Festival

### Quiz

- Quiz #1: 2/25
- Quiz #2: 4/8
- Quiz #3: 5/6
- Final Presentations: 5/12
Student Evaluation

Quizzes: You will be given three quizzes involving the discussion/lecture and text material. The quizzes will be short answer in nature. All quizzes are worth 50 points each totaling 150 pts. Quizzes will be given following each major unit studied in class and are commonly take-home tests.

Portfolio: You will be asked to develop a portfolio for class that involves the creation of lessons plans that you could use as an elementary teacher involving the content in the course. Each entry in the portfolio will include a description of the lesson plan and a reflection on why you chose the lesson plan and how it fits into a theme you have chosen for all entries. The portfolio will be worth 100 pts. Further details on the requirements for the portfolio will be given in class.

Community Service Project: During the last third of class you will be involved in helping implement the Watershed Festival, a three week environmental education experience for sixth graders in Missoula. This is a group project and you will share our work with the rest of the class during the class final time in May. This project is worth 50 pts.

Your final grade is based on 300 points and graded using the following scale.

300-270 = A  
269-240 = B  
239-210 = C  
209-180= D

** You are responsible to turn in assignments on the assigned dates. Late work will be reduced by 50% and no work will be given credit beyond one week after the due date.