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SCI 350.01: Environmental Perspectives

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Science 350
Environmental Perspectives

Fall 2007
The University of Montana

Instructors Office Phone Office Hours
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Textbook: Biosphere 2000, 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

<table>
<thead>
<tr>
<th>WEEK TOPIC</th>
<th>READING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How the Biosphere Works: Ecological Principles and Applications</strong></td>
<td></td>
</tr>
<tr>
<td>8/28</td>
<td>Introduction to Envir. Sci &amp; Course Overview</td>
</tr>
<tr>
<td>9/4</td>
<td>Ecological Principals and Application</td>
</tr>
<tr>
<td><strong>Understanding Human Populations Impact on the Environment</strong></td>
<td></td>
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<tr>
<td>9/11</td>
<td>Human Population</td>
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<tr>
<td>9/18</td>
<td>Human Population</td>
</tr>
<tr>
<td>9/25</td>
<td>Energy Resources</td>
</tr>
</tbody>
</table>

Quiz #1

**Environmental Resources: Protecting Biospheric Components**

| 10/2       | Biological Resources |
| 10/9       | Water Resources      |
| 10/16      | Air Resources        |
| 10/23      | Mineral/Soil Resources |

Quiz #2/Portfolio Lesson Check

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

| 10/30      | Human Health |
| 11/13      | Waste: Toxic/Hazardous/Nuclear Resources |

**Shaping Human Impacts on the Biosphere**

| 11/20      | Public Lands |
| 11/27      | Environmental Education |
| 12/4       | Environmental Education |

Quiz #3

| 12/11      | Final Presentations |
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 lesson 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.

EE Community Service Exploration: For this assignment you will explore and start the process of doing a community service environmental action project. This assignment has two parts. One part involves completing an interactive webpage that has you experience what students may go through in setting up an action project. The second part has you review examples of action projects. You will share your work with the rest of the class during the finals time period. 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.