Course information:

Introduction to Environmental Studies
ENV 308, Section 001 (CRN 42849)
4 Credit Hours
Tuesday and Thursday, 3:00pm-4:47am
Room 164 Science and Engineering Building (SEB)

Professor:

Dr. Kimberly Hill Edwards
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Mailbox: 264 SEB under name Hill Edwards
Office phone: (248) 370-4064
E-mail Address: hilledwa@oakland.edu
Office Hours: At scheduled times or by appointment
  Monday, Tuesday 1:00pm – 2:30pm
  Wednesday 11:30am-12:30pm
  Thursday 10:00am – noon

Catalog Course Description:

Survey of a broad range of environmental issues from a scientific viewpoint. Basic ecological and thermodynamic principles with applications to air, water and land pollution; human demography and food supplies; alternative futures. Satisfies the university general education requirement in the natural science and technology exploration area.

Prerequisite/Comment: Sophomore standing. This course includes a required web component.

Required Text:


As stated, the textbook introduces a global concern into the field of environmental science, linking the science of our environmental change to the human dimensions of problem solving and decision-making. The text provides the framework and perspectives for the course. Read the preface (pages xiii-xiv) to understand the philosophy of the authors and the design of the text and the Learning to Learn section (pages 2-15).
Course Goals and Objectives:

ENV 308 satisfies the university general education requirement in the Natural Science and Technology (NST) Knowledge Exploration area. The learning outcomes for NST courses state that the student will demonstrate:

- Knowledge of major concepts from natural science or technology, including developing and testing of hypotheses; drawing conclusions; and reporting of findings through some laboratory experience or an effective substitute (*Laboratory experiences are met by either a limited number of interactive experiences, collecting and interpreting raw data, or other effective experiences such as a virtual laboratory*). Requires at least 3 laboratory experiences during the course
- How to evaluate sources of information in science or technology

In addition to the two general-education learning outcomes, this course also includes the crosscutting capacity of Effective Communication.

The course is a required course for the Bachelor of Science degree in Environmental Health. The course also meets the course requirement in the Secondary Teacher Education Program (STEP) for the earth science category.

You will also be able to:

- Describe how humans can live more sustainably on planet Earth
- Apply scientific principles and concepts to environmental issues
  - including experience how environmental scientists acquire and use data
- Relate population growth and poverty issues to effects on the environment
- Understand how economics and environmental issues affect each other
- Change your personal life habits to limit your own use of non-renewable and even renewable matter and energy resources in favor of use of perpetual resources
- Identify specific types and amounts of pollution and what can be done to limit pollution through refusing, reducing, reusing, and recycling
- Understand the human systems that determine approaches to environmental issues

Course Policies and Procedures

A. Cell Phones and Laptops

Cell phones are to be turned off during the class period. You may not leave the classroom to answer phone calls and return. Laptops may only be used for taking notes. Surfing the Internet, instant messaging, and watching movies is not permitted during class time.
B. Website

There is a website for this course. You will be required to use the site. Assignments will be available only on the website. You may use the "Discussion" board to post questions and to receive answers.

Instructions for accessing the site are online at the orientation site:
http://www2.oakland.edu/elis/WSO_login.cfm
The web site address (URL) is: https://moodle.oakland.edu/moodle/login/index.php

To login to Moodle, you will use your OU computer account (OUCA) username and password.

The course syllabus is posted. The assignments will be posted in the assignment area. Each graded item will appear in the “Grades” section of the site. You will be able to check your grades for each quiz, exam, and laboratory assignments on the Moodle site.

C. Assignments, Exams, and Grading

There will be three exams, two online quizzes, one comprehensive final, three laboratory experiences, and a journal. The due dates are shown in the Timetable. On exam days, all personal effects are to be left at the front of the room. You may not leave the room and return during the exam. You may not have a cell phone or any other electronic device on your person during an exam. Online quizzes will be available starting at 10:00am on the assigned day (Thursday) and will close at 8:00am the following Monday.

The graded work will be:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Three exams</td>
<td>50 points each (approximately)</td>
</tr>
<tr>
<td>Three experimental reports</td>
<td>30 points for two and 35 for the other (approximately)</td>
</tr>
<tr>
<td>Three online quizzes (in Moodle)</td>
<td>15 points each</td>
</tr>
<tr>
<td>Environmental Journal</td>
<td>90-120 points (15 points each)</td>
</tr>
<tr>
<td>Final exam</td>
<td>100 points (approximately)</td>
</tr>
</tbody>
</table>

The grading scale will then be 95% and above is a 4.0, 86-94% is 3.5 – 3.9, 76-85% is 3.0-3.4, 66-75% is 2.0-2.9, and 56-65% is a 1.0-1.9. Personal grades are not available by e-mail but are available on the Moodle site.

Written work will be graded on the basis of the science and environmental content of the work as well as on the quality of the writing, including spelling, grammar, punctuation, etc.
D. Examinations

Examinations are based on material covered in class and in the textbook. All exams will consist of multiple-choice and short answer questions. You should find these tests to be reasonably straightforward if you have understood the lecture material and have read and have understood the textual treatment of the topics covered.

Make-up exams will be given only under circumstances of excused absences. Should you miss an exam for non-legitimate reasons, you will receive a grade of zero on the missed examination. If you are too sick to take an exam, you MUST provide a doctor's note or other evidence that you visited a medical professional. If you miss an examination for a legitimate reason, a date and time for the make up exam must be scheduled as soon as possible. If you turn in written assignments late, there will be a grade penalty of 20% each day the assignment is late.

E. Laboratory Experiences

There will be three laboratory experiences, each worth approximately 30 - 35 points. The specific assignment documents will be placed on the Moodle website at least a week prior to the start of the assignment.

1. Field project: Leaf pack experiment
2. Chemical measurement: Measurement of the hardness of water samples by titration
3. Data analysis: Acid Rain

F. Class Attendance

It is imperative that you avoid missing classes. All of the content covered in class or in the assigned readings is important, and any of it could be the subject of an exam question. Many topics in the text (and thus on the exams) will not be specifically discussed in class unless questions are asked. Lectures will be used to focus and amplify selected text subjects, to provide examples and images, to discuss current events, and to answer questions. The figures and information in the text are used in class, and many students find it desirable to bring their texts to follow the lectures and make notes. The PowerPoint presentations will be made available on the Moodle site.

The usual course pace is about 15-20 pages per class day; see the schedule for details. You will need to keep up with the reading! For some students, this may be a lot of new descriptive and sometimes technical material. However, while the course matter is very extensive in breadth, most subjects are not treated in detail, and the content is not particularly difficult. No special scientific background is assumed, and no math beyond eighth grade algebra is used. Calculators are not used except for the experiments.
G. Academic Conduct

**Classroom Courtesy:** The instructor of this course has a strong commitment to the development and maintenance of an instructional climate that supports respect for everyone in the classroom. Your enrollment in this course requires that you will treat your fellow classmates and course instructor with respect. This includes being awake during class lectures and discussions as well as listening to and respecting opinions which differ from your own. The instructor reserves the right to adjust course grades for disrespectful behavior.

**Cheating:** The University’s regulations that relate to academic misconduct will be fully enforced. I insist on seeing your own work except for group reports. Any student suspected of cheating by copying on exams, changing answers on exams after they are scored, having another person take an exam, obtaining exam questions prior to the exam time, use of any previous student’s course work, plagiarism, giving or obtaining undeserved points on group work, or by other means will be referred to the Academic Conduct Committee. Students found guilty of academic misconduct face punishments as severe as suspension or permanent dismissal. Anyone found by the Academic Conduct Committee to be guilty of misconduct will also receive a 0.0 grade for the course from the instructor in addition to whatever sanction(s) the Committee decides.

H. Special Considerations

Students who may require special considerations should work with Disabilities Support Services and the instructor to arrange accommodation.
### IV. Timetable

Text references from Cunningham, et al., *Environmental Science 10*th* Edition*

<table>
<thead>
<tr>
<th>Lecture Date</th>
<th>Chap.</th>
<th>Topics</th>
<th>Exam/Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 10 Thursday</td>
<td>1</td>
<td>Understanding Our Environment</td>
<td>Leaf Pack experiment assigned; Deploy leaf packs</td>
</tr>
<tr>
<td>Sept 15 Tuesday</td>
<td>2</td>
<td>Science, Systems and Ethics</td>
<td></td>
</tr>
<tr>
<td>Sept 17 Thursday</td>
<td>3</td>
<td>Matter, Energy and Life</td>
<td></td>
</tr>
<tr>
<td>Sept 22 Tuesday</td>
<td>4</td>
<td>Evolution, Biological Communities and Species Interactions</td>
<td>Quiz 1 opens at 3:00pm</td>
</tr>
<tr>
<td>Sept 24 Thursday</td>
<td>6</td>
<td>Population Biology</td>
<td>Quiz 1 opens at 3:00pm</td>
</tr>
<tr>
<td>Sept 29 Tuesday</td>
<td>7</td>
<td>Human Populations</td>
<td></td>
</tr>
<tr>
<td>Oct 1 Thursday</td>
<td>Chap 1 – 4, 6 – 7</td>
<td></td>
<td>Exam 1</td>
</tr>
<tr>
<td>Oct 2-5 Friday - Monday</td>
<td></td>
<td>Sort macroinvertebrates from leaf packs in lab</td>
<td>By reservation</td>
</tr>
<tr>
<td>Oct 6 Tuesday</td>
<td>14</td>
<td>Geology and Earth Resources</td>
<td></td>
</tr>
<tr>
<td>Oct 8 Thursday</td>
<td>15</td>
<td>Air, Weather and Climate</td>
<td></td>
</tr>
<tr>
<td>Oct 13 Tuesday</td>
<td>16</td>
<td>Air Pollution</td>
<td>Group Leaf Pack report due</td>
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<td></td>
<td></td>
<td></td>
<td>Quiz 2 opens at 3:00pm</td>
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<tr>
<td>Oct 15 Thursday</td>
<td>17</td>
<td>Water Use and Management</td>
<td></td>
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<tr>
<td>Oct 20 Tuesday</td>
<td>18</td>
<td>Water Pollution</td>
<td></td>
</tr>
<tr>
<td>Oct 22 Thursday</td>
<td>Chap 14 - 18</td>
<td></td>
<td>Exam 2</td>
</tr>
<tr>
<td>Oct 27 Tuesday</td>
<td>9</td>
<td>Food and Agriculture</td>
<td></td>
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<tr>
<td>Oct 29 Thursday</td>
<td>10</td>
<td>Pest Control</td>
<td>Water experiment assigned</td>
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<tr>
<td>Nov 3 Tuesday</td>
<td>11</td>
<td>Biodiversity: Preserving Species</td>
<td></td>
</tr>
<tr>
<td>Nov 5 Thursday</td>
<td>Lab</td>
<td>First Half of Class will conduct water experiment. Room TBA. No class for other groups.</td>
<td>Group Water Pre-Lab due, Water experiment conducted; Quiz 3 opens at 3:00pm</td>
</tr>
<tr>
<td>Nov 10 Tuesday</td>
<td>12</td>
<td>Biodiversity: Preserving Landscapes</td>
<td></td>
</tr>
<tr>
<td>Nov 12 Thursday</td>
<td>Lab</td>
<td>Second Half of Class will conduct water experiment. Room TBA. No class for other groups.</td>
<td>Group Water Pre-Lab due, Water experiment conducted</td>
</tr>
<tr>
<td>Nov 17 Tuesday</td>
<td>19</td>
<td>Conventional Energy</td>
<td>Data Analysis Experiment Assigned</td>
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<tr>
<td>Nov 19 Thursday</td>
<td></td>
<td>Chapters 8 – 12, 19</td>
<td>Exam 3</td>
</tr>
<tr>
<td>Nov 24 Tuesday</td>
<td>20</td>
<td>Sustainable Energy</td>
<td>Group Water Report due;</td>
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<tr>
<td>Nov 26 Thursday</td>
<td></td>
<td>Thanksgiving Break – No Class</td>
<td></td>
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<tr>
<td>Dec 1 Tuesday</td>
<td></td>
<td>Biofuels</td>
<td>Data Analysis Report due</td>
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<tr>
<td>Dec 3 Thursday</td>
<td>21</td>
<td>Solid, Toxic and Hazardous Waste</td>
<td>Last class</td>
</tr>
<tr>
<td>Dec 8 Tuesday</td>
<td>12:00 pm – 3:00 pm</td>
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<td>Final</td>
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