ENV 308 COURSE SYLLABUS
(Subject to revision)
Oakland University College of Arts and Sciences
Winter semester 2006

I. Course Overview

A. Basic Information

Program: Program in Environmental Science
Course Prefixes: ENV 308, Section 001 (CRN 15324)
Course Title: Introduction to Environmental Studies
Credit Hours: 4

Class meets Tuesdays and Thursdays, 1:00 PM – 2:47 PM in Room 168 Science and Engineering Building (SEB) except one lab in 340 HHS (see Time Schedule below).

B. Instructors’ Information

Name: Professor Dagmar Cronn, Ph.D.
Office: Room 285, Science and Engineering Building (SEB)
Mailbox: 264 SEB under name of Cronn.
Phones: Office: (248) 370-4064 Home: (248) 693-7845
E-mail Address: cronn@oakland.edu
Office FAX number: (248) 370-2321 (address to Cronn to assure delivery)
Mailing Address: Chemistry Department, 285 SEB
Oakland University, Rochester, MI 48309-4477

Office Hours: Before and after class or by appointment. Feel free to leave me a message at either phone number or on my e-mail. Please do not call me at home after 9:00 PM.

C. 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 knowledge exploration area. Prerequisite/Comment: Sophomore standing. This course includes a required web component.
D. Required Text

*Environmental Science* Tenth Edition (front cover shows a tortoise)
by G. Tyler Miller, Jr.
Thomson Brooks/Cole
Includes Interactive Concepts in Environmental Science CD

As Miller states, this is a science-based treatment of environmental subjects - an interdisciplinary study of how nature works and how nature is interconnected. The text provides the framework and perspectives for the course. Read the Preface (p. v-xvi) to understand the philosophy of the author and the design of the text.

II. 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
  - including how to evaluate media coverage of the course’s subject matters
III. Course Policies and Procedures

A. Cell phones are to be turned off during class period. You may not leave the classroom to answer phone calls and return.

B. Web Site

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

Instructions for accessing the site are available as a handout. Or you may use the online orientation site: http://www2.oakland.edu/elis/WSO_login.cfm. The web site address (URL) is: http://webct.oakland.edu

To login to WebCT, you will use your OU Grizzly ID (also known as your student number) and your six-digit SAIL PIN number as your password. (Your PIN number is most probably your birth date in the mmddyy format, unless you have previously changed your OU PIN number.) Warning: Your Grizzly ID and password are case sensitive. If you are unsure about your Grizzly ID and PIN, please contact the Registrar’s Office at registra@oakland.edu or (248) 370-3450.

The course syllabus is posted. The assignments are posted in the assignment area. Each graded item will appear in the “Grades” section of the site.

C. Grading

There will be three multiple-choice exams, one multiple-choice comprehensive final, three laboratory experiences, a short writing assignment and a component of the grade based on use of a Personal Response System during class periods. The due dates are shown in the Timetable. Picture ID is required to receive an exam. On exam days, all personal effects are to be left outside the room or at the front of the room. You may not leave the room and return during the exam. You may not have a cell phone on your person during an exam.

The graded work will be:

Three multiple-choice exams 43 points each (approximately)
Three experimental reports 20 points for two and 25 for the other (approximately)
Short writing assignment 20 points (approximately)
Personal Response System 43 points (approximately)
Multiple-choice final 43 points (approximately)

The maximum number of points that any student can accumulate towards the final grade will be approximately 300. I will grade using a sliding curve scale. Worst case: scores that are 90% or higher will receive a grade of 4.0; point totals between 75% and 90% will receive grades between 3.0 and 3.9; between 60% and 74%, 2.0 and 2.9; between 45% and
59%, 1.0 and 1.9. Recently, the maximum point scores were about 292 points out of 310 points maximum, the medians have been about 218 (a grade of 2.9), 175-181 points received a grade of 2.0, and the lowest passing grade was about 130; conversions this term may be similar. Personal grades are not available by e-mail but are available on the WebCT 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 questions. Each of the three exams should take you less than 60 minutes to complete. 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.

No make-up exams are given. Should you miss an exam for non-legitimate reasons, you will receive a grade of zero on the missed examination. If you miss an examination for a legitimate reason, we can negotiate. If you turn in written assignments late, there will be a grade penalty of 20% to 50% each day the assignment is late, depending on the assignment. See the individual grading rubrics for details of grade penalties.

Tentative plan for the exams:
- **Exam 1** includes chapters 1, 3, 4, 5, and 6 along with associated lecture material.
- **Exam 2** includes chapters 8, 11A, 16, 9, and 10 along with associated lecture material.
- **Exam 3** includes chapters 12, 13, 14A, 19, and 20, along with associated lecture material.
- **Final Exam** includes chapters 2, 14B, 15, and 11B, associated lecture material, plus material covered in the first three exams.

Some sections of some chapters may be omitted. See time schedule for omitted materials. Note that other topics are included in the text, but are omitted from this term’s course.

E. Laboratory Experiences

There will be three laboratory experiences based on a water theme, each worth approximately 20 - 25 points. See the specific assignment documents on WebCT for details

1. Chemical measurement: Measurement of the hardness of water samples by titration
2. Data analysis: Acid rain and acid snow data
3. Field project: Leaf pack experiment
F. Class Attendance

Each class period, there will be a couple of questions posed using a Personal Response System. You will provide responses to the questions using a transmitter that works similarly to a TV remote. Each question will be worth 1 point – ½ point for logging a response and ½ point for the correct answer.

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 WebCT 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

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 suspension or permanent dismissal. OU subscribes to a search service for identification of plagiarized material (TurnItIn.com). Your writing assignment may be submitted to this service. 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 G. Tyler Miller, Jr., *Environmental Science* 10th Edition

<table>
<thead>
<tr>
<th>Lecture Date</th>
<th>Chapter</th>
<th>Topics</th>
<th>Exam/Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 5 Thursday</td>
<td>1</td>
<td>Environmental problems, causes, and sustainability</td>
<td></td>
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<tr>
<td>Jan 10</td>
<td>3</td>
<td>Science, systems, matter, and energy</td>
<td>Acid Rain data analysis assigned</td>
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<tr>
<td>Jan 12</td>
<td>4*</td>
<td>Ecosystems and how they work</td>
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<tr>
<td>Jan 17</td>
<td>5</td>
<td>Evolution and biodiversity</td>
<td>Last day 100% tuition refund.</td>
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<tr>
<td>Jan 19</td>
<td>6*</td>
<td>Climate and biodiversity</td>
<td>Acid Rain Group Report due</td>
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<tr>
<td>Jan 24</td>
<td>(Continued)</td>
<td></td>
<td></td>
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<tr>
<td>Jan 26</td>
<td>8</td>
<td>Population dynamics</td>
<td>Exam 1</td>
</tr>
<tr>
<td>Jan 31</td>
<td>(Continued)</td>
<td></td>
<td>Individual Writing Assignment assigned</td>
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<tr>
<td>Feb 2</td>
<td>11A</td>
<td>Human population: growth and distribution</td>
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<tr>
<td>Feb 7</td>
<td>16*</td>
<td>Food resources</td>
<td></td>
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<tr>
<td>Feb 9</td>
<td>9</td>
<td>Environmental geology</td>
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<td>Feb 14</td>
<td>10</td>
<td>Risk, toxicology and human health</td>
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<tr>
<td>Feb 16</td>
<td>(Continued)</td>
<td></td>
<td>Individual Writing Assignment due</td>
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<tr>
<td>Feb 21</td>
<td>12</td>
<td>Air and air pollution</td>
<td>Exam 2</td>
</tr>
<tr>
<td>Feb 23</td>
<td>(Continued)</td>
<td></td>
<td></td>
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<tr>
<td>March 7</td>
<td>13</td>
<td>Climate change and ozone loss</td>
<td>Water experiment assigned</td>
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<tr>
<td>March 9</td>
<td>(Continued)</td>
<td></td>
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<tr>
<td>March 14 Tuesday</td>
<td>14A</td>
<td>Water resources</td>
<td>Leaf Pack Experiment assigned</td>
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<tr>
<td>March 16 Thursday</td>
<td></td>
<td>Class held in Laboratory Rooms 286 &amp; 290 Science and Engineering building</td>
<td>Group Water Pre-Lab due Water experiment conducted</td>
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<tr>
<td>March 21</td>
<td>19</td>
<td>Nonrenewable energy resources</td>
<td></td>
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<tr>
<td>Mar 23</td>
<td>(Continued)</td>
<td></td>
<td>Group Water Report due</td>
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<tr>
<td>Mar 28</td>
<td>20*</td>
<td>Energy efficiency &amp; renewable energy</td>
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<tr>
<td>Mar 30</td>
<td>2</td>
<td>Economics, politics, and worldviews</td>
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<tr>
<td>April 4</td>
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<td>Exam 3</td>
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<tr>
<td>April 6</td>
<td>14B*</td>
<td>(Continued)</td>
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<tr>
<td>April 11</td>
<td>15*</td>
<td>Solid and hazardous waste</td>
<td>Sort leaf pack in lab April 14, 15, 16 or 17</td>
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<tr>
<td>April 13</td>
<td>11B*</td>
<td>Human population: growth and distribution</td>
<td>Final Exam Group Leaf Pack report due</td>
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<tr>
<td>April 20 Thurs.</td>
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<td>3:30 pm – 6:30 pm 168 SEB</td>
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