

CONSERVATION OF NATURAL RESOURCES

ENVT/GEOS 104, Spring 2009

GENERAL COURSE INFORMATION

INSTRUCTOR:

Dr. Jill Whitman

Office: Rieke Science 140
phone 535-8720
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Office hours: MWF 9-10:00 am, TR 2-3 pm

I will be available many other times during the week. My office door is usually open and you are welcome to stop in with questions or concerns. You can also make an appointment to reserve a time. If I have to change my office hours, I will inform the class of the change or post a note on my office door.

Cori Jo Jahnsen is the Teaching Assistant for this class. She can be contacted at cjahnsen@plu.edu

Luke Weinbrecht is the Geoscience tutor through the Academic Assistance. Contact him at x7518 or Library 124. He will hold "open lab" help sessions in Rieke 109 on Tuesday 7:30-8:30 pm and on Thursday 6:00-7:00 pm. Individual appointments can also be scheduled for Tuesday 11:00 am-12:00 pm.

CLASS MEETINGS:

Lecture: Monday, Wednesday, Friday 12:30-1:35 PM, Rieke 109

Labs: Monday **OR** Wednesday 1:45-3:30 PM, Rieke 109
You must participate in one of the laboratory sessions.
There will be field trips during lab time

REQUIRED TEXTS AND SUPPLIES:

Botkin, D.B. and Keller, E.A., 2007. *Environmental Sciences: Earth as a Living Planet*, 6th edition.

Additional reading assignments from other sources will be posted on the Sakai course website, at <https://sakai.plu.edu> or will be distributed during class.

Calculator and *colored pencils* as some lecture and lab activities will use them

NOTE: I will be using the Sakai course website to make available copies of assignments, to post additional readings, to provide links to relevant web sites, and to post announcements. Thus it is **critical** that you check your email and the course website **regularly**.

ABOUT THIS COURSE:

We will examine the interactions between humans and the rest of the natural world from an environmental science perspective. We will use the scientific method, scientific evidence, and scientific theories to assess the environmental impact of human activities, both as individuals and as communities. We will evaluate strategies to reduce this impact by considering scientific, economic political and social factors. The course is structured around four major questions:

- *How do we, individually and collectively, fit into the global ecosystem?*
- *How do we feed the world's population?*
- *How do we supply clean drinking water for the world's population?*
- *How do we meet the world's energy needs?*

We will wrestle with these complex and difficult questions throughout the semester, examining how to meet these goals without seriously impairing the natural systems. Inherent in each of these larger questions are many levels of additional questions. As we discuss these environmental issues, we explore the information that we need to know to begin to answer these questions and we will emphasize the role that science plays.

This course has two purposes: (1) to increase your interest in and knowledge about the environment so that you may be a life-long student and steward of the global environment and (2) to actively involve you in the process of science so that you may critically evaluate and appreciate the applications of science throughout your life. This course is designed for two primary audiences: students completing one of the science General University Requirements (GUR's) and students exploring the Environmental Studies program. There is no prerequisite.

CLASS GOALS & OBJECTIVES:

This class will prepare you to:

- Practice the scientific method including skills of questioning, observation, description, data collection, data interpretation, synthesis, and communication.
- Apply the fundamental principles of geologic and environmental sciences through comprehensive examination of environmental issues.
- Assess the environmental impacts of human activities and evaluate strategies designed to minimize these impacts.
- Employ quantitative and qualitative analytical tools such as maps and graphs to evaluate and discuss environmental issues.
- Engage in collaborative activities around environmental issues with your peers.
- Communicate scientific findings and interpretation clearly and concisely.

ORGANIZATION OF THE COURSE:

We will begin by examining some of the fundamental principles and themes of the course, in order to set the stage for our later investigations. We will then move on to exploring the environmental issues inherent in the four main questions.

For you, the consequence of this is that we will not always follow the book in the order in which the chapters appear. On the syllabus, the chapter(s) is indicated that is pertinent for each topic. You need to think of your book as a resource that you can use at any time, checking the index, glossary, and appendices to find information to supplement your assigned reading or to clarify material that you are studying. You will also have occasional additional reading assignments from sources other than your text.

EXPECTATIONS:

What I expect from students:

- Attend (*on time*) each class and lab. If you have a planned absence, please inform me in advance. Take responsibility for tracking down any missed material, in the event of absence.
- Be prepared for class and lab, having completed any assigned work *before* the class period. Bring your text and other distributed materials to each class.
- Take thorough and well organized notes and ask thoughtful questions, both those asking for clarification as well as those wishing to pursue a topic in greater depth.
- Be an alert, attentive, and eager participant in class and in group activities.
- Have an attitude conducive to learning and respectful of all others in the class. As people often have different perspectives, values, concerns and levels of understanding of environmental issues, it is most important to maintain civility during class discussions.
- Seek help when needed, from classmates, teaching assistant, peer tutor, or come to my office.
- Work independently and submit your own work, unless I specify otherwise.
- Accept responsibility for your success in this class.

What you can expect from me:

- Clear communication of course information.
- Availability for additional assistance during office hours, through email, and other arranged times as necessary.
- Timely return of student work.
- Respectful treatment of each member of our class.
- Fair assessment of student work.

SPECIAL NOTES:

- Academic dishonesty will result in a failing grade for the class. Academic dishonesty includes, but is not limited to, actions such as turning in another person's work as your own or cheating during an exam. This class provides many opportunities for collaborative work; however, everything that you turn in must be your own expression of your understanding of the material. Please view PLU's Academic Integrity Policy at <http://www.plu.edu/academics/integ.html>
- This course is on the honor system. On each exam you will be asked to sign the statement "I have neither given nor received aid on this exam."
- Late assignments will not receive full credit. **No** assignments may be turned in after the graded ones are returned to the class. There is no extra credit option for this course.
- Make-up exams and incomplete grades will be given only with a written medical excuse.
- Additional readings and other assignments or changes in the schedule may be made as appropriate during the course of the semester.
- Please turn off all cell phones or other personal electronics during class. They may **not** be used during exams.
- Please do not leave during the class period (especially during lecture), as it is very disruptive to others in the classroom.
- You are responsible for notifying me if you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated. Please make an appointment to discuss these or other important matters with me as soon as possible. If you have any questions concerning the services available for special needs at PLU, please call Counseling and Testing Center at x7206.
- The last day to drop a class is February 19 and the last day to officially withdraw is April 24.

GRADING POLICY:

Lecture: (50%)

We will have a quiz, 2 exams and a final, all of which will be closed book exams. The format of the exams will be short and medium answer, including definitions, matching, map, and problem solving questions. The exams will cover both lecture and laboratory material and the point values for each question will be indicated. The exams will be graded on a curve based upon the class performance as well as the performance of past classes, as appropriate.

Laboratory: (20%)

Each week you will have a written laboratory assignment, which is due the next lab meeting time. Labs will be graded on a score of 0-5.

Grade	Expectations
5	Excellent work: exemplary effort, mastery of the material, shows insight & applications, integration of material into new situations
4	Very good work: correct completion of the lab exercise, some integration, clear communication, few minor errors
3	Good work: mostly complete or some errors, no integration
2	Fair work: major mistakes or gaps, communication problems
1	Poor work: a minimal effort, lots missing, many wrong answers
0	No work: nothing submitted

Lifestyle project: (15%)

In this project you will evaluate the impact of your lifestyle on the environment and potential changes you can make to it. Your grade will depend upon your data/record keeping, a journal and a final paper. Criteria will be provided.

Other written assignments: (10%)

There will be several written assignments, in class and pre-class. Some will be group efforts and others will be individual. Most assignments will be graded on the 5-point scale of the labs. Some will be graded on a credit/no credit basis.

Participation and attendance: (5%)

Participation is based on attendance and in-class participation. For the full grade you are expected to have no unexcused absences, submit all assignments on time, ask good questions, and be an engaged participant in all class and laboratory activities.

In general, the final grades at the end of the semester will reflect the student's effort and demonstration of their understanding, application, and communication of the terms and concepts during the course. Scores may be curved and, if appropriate, compared with previous classes.

A - demonstrate a superior competency of the material, excellent application and integration of material, all assignments completed

B - demonstrate a solid understanding and application of the terms and concepts with some integration and application, all assignments completed

C - complete the material, but demonstrate lack of understanding & application, most assignments completed

D - poor mastery of the material, many missing assignments

E - no mastery of material, many missing assignments

SCHEDULE

Week	Topic/Assignments	Lab Topic	Chapter
Feb 6	Introduction		1,2
9	Ecological Footprint	Maps	
11	Sustainability		
13	Population, Systems		3,4
16	PRESIDENT'S HOLIDAY	No Lab	
18			
20	Ecosystems		5,6
23	QUIZ	Ecosystems	
25	Productivity, Energy flow		9
27			
Mar 2	Food, Agriculture	PLU Grounds	11, 12
4			
6			
9		PLU Water	
11	EXAM #1		
13	Water		21, 22
16		Hydrograph	
18			
20			
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23-27	SPRING BREAK		
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30	More Water	Campus tour	15
Apr 1			
3			
6	Waste	Recycling	30
8	Lifestyle Project paper due		
10	EASTER BREAK		
13		TBA	
15			
17	EXAM #2		
20	Energy	Energy debate preparation	17, 18
21	EARTH DAY – Dr. Coll Thrush, 7:30 pm		
22			
24			
27	More Energy	<i>Being Caribou</i>	19, 20
29			
May 1	ACADEMIC FESTIVAL		
4	Climate change, Air pollution	Climate change	23, 24
6			
8			
11	Urban Areas	Energy debate	29
13			
15	The Future		
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18	FINAL EXAM 1:00-2:50 pm		

PLEASE NOTE: *this schedule subject to change – check Sakai for updates!*