

Geography 100 - Human Impacts on the Physical Environment

Winterim Section 1

Jan 2 – Jan 19, 2018

Instructor: Dr. Samantha Kaplan

Office: D-327 Science Building

Office Hours: There are no formal office hours.

Office Telephone: 715-346-4149 (best to use email since I will not be in my office much)

Email: skaplan@uwsp.edu

Textbook: Friedland, A., Relyea, R. & Courard-Hauri, D., 2012, *Environmental Science, Foundations & Applications*. W. H. Freeman and Company, New York, 574 p.

Students with Disabilities: Students with learning and/or physical disabilities are encouraged to contact me right away to make sure necessary online accommodations are made.

Course Description: 3 Credits. Physical geographic principles and processes applied to understand selected human impacts on atmosphere, water, land, and biota. Includes detailed, interdisciplinary analysis of several environmental problems, including causes, consequences, and solutions.

This is a 100% distance learning (online) section of Geography 100. Expect to spend 14 hours each week working on course material.

Requirements Satisfied: GDR: Natural Science (NS), Environmental Literacy (EL)
GEP: Natural Science (NSC), Environmental Responsibility (ER)

Course Objective

A physical systems approach is used to help students understand the science behind environmental issues. By exploring the linkages among human, physical, and biological systems, students will learn about the root causes of environmental impacts and the social, political and technological hurdles that must be overcome to arrive at practical solutions.

Learning Outcomes

Because this course fulfills both a Natural Science GEP and the Environmental Responsibility GEP, there are a lot of learning outcomes! In this course a physical systems approach is used to help students learn about the science behind environmental issues. In order to fully appreciate the impact humans can have on the environment we must first understand the physical mechanisms of the natural world.

Upon completion of this course students will be able to:

- Demonstrate a fundamental knowledge about the workings of the atmosphere, biosphere, hydrosphere, and lithosphere.
- Recognize that earth systems are linked and if humans impact part or all of one of these systems, the repercussions affect all aspects of the environment.
- Identify the basic taxonomy and principles of the scientific method as it pertains to the natural, physical world.
- Infer relationships, make predictions and solve environmental problems based on an analysis of evidence or scientific information.
- Apply scientific concepts, quantitative techniques and methods to solving environmental problems and making decisions that affect the natural world.
- Recognize the relevance of environmental science to their lives and society.
- Identify the individual, social, cultural, and ecological factors that influence environmental sustainability.
- Evaluate competing scientific claims that inform environmental debates.

Student Rights and Responsibilities:

- UWSP has specific guidelines regarding student rights and responsibilities in class and on campus explained at <http://www.uwsp.edu/dos/Pages/Academic-Concerns%20for%20Students.aspx>

Course Materials

- **The course textbook is required and must be rented.** Please contact the bookstore immediately if you need a textbook shipped to you for the course.
- All of the course materials, except the textbook, are on D2L.
<http://www.uwsp.edu/d2l/Pages/default.aspx>
 - The syllabus, class schedule, reading outlines and lab assignments appear under **Content** in the D2L menu bar.
 - Assigned readings are listed on the **Class Schedule** under **General Course Materials** on the **Content** page.
 - Lab quizzes and exams are posted under **Quizzes**.
 - The **News** section (**Course Home**) will be used for all course announcements. Please check the **News** page daily for course updates and changes.
 - Scores on labs, quizzes and exams are available under **Grades** on D2L
 - Online discussions about labs and lecture are under **Discussion**.

Lecture (Readings)

- In lieu of formal lectures, students will complete assigned readings from the textbook and from various online sources.
- Topical outlines are provided to guide students in learning the most salient points from their readings.
- Assigned readings appear on the Class Schedule under General Course Materials on the **Content** page of D2L.
- Topical outlines appear under Lecture on the Content page of D2L. This material will be posted according to the class schedule.
- **Expect to spend at least two hours a day reading and reviewing this material**

Lab

- All lab assignments and materials are posted on the **Content** page of D2L according to the timetable on the class schedule.
- There will be eleven (11) laboratory assignments consisting of online readings, movies, activities, and problem sets. Laboratory topics will parallel and compliment the reading assignments.
- Lab assignments are turned in to the D2L **Dropbox**. Each lab assignment is worth 3 points (2.5% of your grade). They are not corrected, but checked for completeness and overall accuracy. I will make comments as necessary.
- Your lowest lab assignment grade will be dropped. If you forget to do a lab, this counts as your dropped assignment.

- Laboratory assignments account for 25% of your course grade (10 labs worth 2.5% each).

Quizzes

- Each lab assignment is followed by a 10-question open-book quiz covering the lab material. The quizzes form the bulk of your lab grade. Quizzes are found on the D2L **Quizzes** page.
- Your lowest quiz grade will be dropped. If you forget to take a quiz, this counts as your dropped quiz.
- Each lab quiz is worth 5 points
- Laboratory quizzes account for about 42% of your course grade (10 quizzes worth 4.2% each).
- Quizzes must be completed before midnight (11:59pm) of the due date. Start accordingly. **There are no opportunities to make-up a missed quiz!**
- **Expect to spend 2-3 hours a day working on lab assignments and quizzes.**

Exams

- There will be two (2) open-book online exams. Exams will be multiple-choice format and cover material from both the online lectures and lab. Exams are non-cumulative.
- Exams will appear under **Quizzes** on D2L
- Exams must be taken between 6:00 am and midnight on the assigned day as indicated on the class schedule. They will be 60 minutes in length.
- Exams account for 33% of your semester grade. Each exam is worth 20 points (roughly 16.5%).
- Make-up exams may be given only to those students with medical or personal emergencies who have prior approval from the instructor.

Discussion Forum

- There is an online question and answer forum available on D2L. If you have a question about subject material that is not urgent, please use the Q&A Forum to ask your question of fellow students.
- Questions posted on the forum will be answered at least once daily (probably more often) by the professor.
- If your question is urgent, or about course logistics or other personal matters, please use email.

Grades

- **Evaluation:** Your grade will be based on your performance on the two exams and your ten best lab and quiz scores. The point values assigned to each are as follows:

	<u>Number</u>	<u>Points Each</u>	<u>Points Possible</u>	<u>Percent</u>
Exams	2	20	40	33%
Labs	10	3	30	25%
Lab Quizzes	10	5	50	42%
Semester Total			120	100%

- **Final Letter Grades:** A student's final point total for the session will translate into letter grades as shown in the following table:

Percent	Letter Grade
≥93%	A
90-92.9%	A-
87-89.9%	B+
83-86.9%	B
80-82.9%	B-
77-79.9%	C+
73-76.9%	C
70-72.9%	C-
67-69.9%	D+
63-66.9%	D
≤62.9%	F

- **Incompletes:** Incompletes for the course are granted only in the event of a family emergency, extended illness, or other unusual or unanticipated circumstance. Students must arrange for an incomplete before the final exam.
- **Extra Credit:** There is none due to the compressed nature of the course. Sorry. Please do not ask.

Class Schedule

<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Lab Assigned</u>	<u>Lab Due</u>
T 2-Jan	Intro & Principles of Sustainability	Ch. 1 p. 3-5, 10-14, 19-21; Ch. 7 p. 191-193, 196-197; Ch. 10 p. 262-265; Ch. 20 p. 552-561; Kaufmann & Cleveland, p. 2-13 (pdf file)	Lab 1: Ecological Footprints	
W 3-Jan	Human Population Growth	Ch. 1 p. 10; Ch. 7 p. 179-193	Lab 2: Population	
R 4-Jan	Biogeochemical Cycles	Ch. 2 p. 28-29, 39-46; Ch. 3 p. 65-73	Lab 3: Carbon Cycle	Lab 1: Ecological Footprints
F 5-Jan	Atmospheric Circulation	Ch. 1 p. 9-10; Ch. 4 p. 87-99; Kaufmann & Cleveland p. 56-60	Lab 4: Climate Change	Lab 2: Population
S 6-Jan	Climate Change	Ch. 19 p. 517-540; Physical Geography.net (link is on reading outline and on D2L)	Lab 5: Climate Models	Lab 3: Carbon Cycle
Su 7-Jan	NO CLASS			
M 8-Jan	Air Pollution and Ozone	Ch. 2 p. 52-55; Ch. 15 p. 410-421, 424-427	Lab 6: Air Pollution & Ozone	Lab 4: Climate Change
T 9-Jan	EXAM 1			
W 10-Jan	Biomes	Ch. 4 p. 99-107; Kaufmann & Cleveland p. 130	Lab 7: Biomes	Lab 5: Climate Models
R 11-Jan	Biological Systems & Succession	Ch. 3 p. 58-64, 73-77; Ch. 6 p. 168-172; Kaufmann & Cleveland p. 157-160; Ecological Succession slides	Lab 8: Island Biogeography	Lab 6: Air Pollution & Ozone
F 12-Jan	Biodiversity	Ch. 1 p. 5-7; Ch. 5 p. 120-123, 136-139, 144-145; Ch. 11 p. 291-292; Ch 18 p. 496-506	Lab 9: Soils	Lab 7: Biomes
Sa 13-Jan	NO CLASS			
Su 14-Jan	NO CLASS			
M 15-Jan	NO CLASS			
T 16-Jan	Soil Resources	Ch. 8 p. 219-226; Kaufmann & Cleveland p. 315-327; Coon Creek power point; Soil Orders pdf file	Lab 10: Water	Lab 8: Island Biogeography
W 17-Jan	Water Resources & Water Pollution	Ch. 3 p. 66; Ch. 9 p. 236-253; Ch. 14 p. 382-398; Ch. 17 p. 478-479;	Lab 11: Coal and Energy	Lab 9: Soils
R 18-Jan	Geological Systems and Energy	Ch. 8 p. 206-219, 226-230; Ch. 12; Ch 13 p. 343-365		Lab 10: Water
F 19-Jan	EXAM 2			Lab 11: Coal and Energy