

Geography 100 - Human Impacts on the Physical Environment

Section 3

Spring 2018

Instructor: Samantha Kaplan

Office: D-327 Science Building

Office Hours: Tuesdays and Thursdays 11:00 am - 12:00 pm and by appointment

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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 6-8 hours each week working on course material.

Requirements Satisfied: 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.**
- 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 2-4 hours a week reading and reviewing.**

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 twelve (12) laboratory assignments consisting of online readings, movies, activities, and problem sets. Laboratory topics will parallel and compliment the reading assignments.
- Your lowest lab assignment grade will be dropped. If you forget to do a lab, this counts as your dropped assignment.
- Lab assignments are turned in to the D2L **Dropbox**. Lab assignments are worth 3 points each. They are not corrected, but simply checked for completeness. I will make comments as necessary.
- Laboratory assignments account for 20% of your course grade.

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.
- Laboratory quizzes are worth 5 points each and account for 1/3 your course grade.

- 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 2-4 hours each week working on lab assignments and quizzes.**

Exams

- There will be three (3) open-book online exams. Exams will be multiple-choice format and cover material from both the online lectures and lab, although the focus will be the readings. 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 are worth 20 points each and account for 36.4% of your semester grade. Each exam is worth about 12% of your grade.
- Make-up exams may be given only to those students with medical or personal emergencies who have prior approval from the instructor.

Essay

- There will be a 4-page essay assignment based upon an environmental case study of your choosing.
- The essay is assigned early in the semester. A topic and proposed references are due several weeks later. A rough draft is due towards the end of the semester and the final draft is due the last week of classes.
- Essays are turned in to the D2L **Dropbox** by midnight of the due date.
- The essay is worth 17 points, or about 10% of your total grade.

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 three exams your eleven best lab and quiz scores, and the essay. The point values assigned to each are as follows:

	<u>Number</u>	<u>Points Each</u>	<u>Points Possible</u>	<u>Percent</u>
Exams	3	20	60	33.36%
Labs	11 (out of 12)	3	33	20.0%
Lab Quizzes	11 (out of 12)	5	55	33.33%
Essay	1	17	17	10.3%
Semester Total			165	100%

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

Points	Percent	Letter Grade
≥148.8	≥93%	A
144-148.7	90-92.9%	A-
139.2-143.9	87-89.9%	B+
132.8-139.1	83-86.9%	B
128-132.7	80-82.9%	B-
123.2-127.9	77-79.9%	C+
116.8-123.1	73-76.9%	C
112-116.7	70-72.9%	C-
107.2-111.9	67-69.9%	D+
100.8-107.1	63-66.9%	D
≤100.7	≤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 (unless in a hospital bed, ambulance, etc.).
- **Extra Credit:** To be announced. Please do not ask.

Class Schedule (subject to change)

<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Assignment Posted</u>	<u>Assignment Due</u>	
Mon	22-Jan	Course Intro & Principles of Sustainability	Kaufmann & Cleveland, p. 2-13 (pdf file)	Lab 1 - Ecological Footprints	
Mon	29-Jan	Sustainability contd.	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		
Mon	5-Feb	Human Population Growth	Ch. 1 p. 10; Ch. 7 p. 179-193	Lab 2 - Population	Lab & Quiz 1 due by 11:59 pm
Mon	12-Feb	Scientific Principles & Systems Theory	Ch. 2 p. 28-29, 39-46	Lab 3 - Carbon Cycle	Lab & Quiz 2 due by 11:59 pm
Mon	19-Feb	Biogeochemical Cycles	Ch. 3 p. 65-73	Work on essay topic	Lab & Quiz 3 due by 11:59 pm
Mon	26-Feb	Atmospheric Circulation	Ch. 1 p. 9-10; Ch. 4 p. 87-99; Kaufmann & Cleveland p. 56-60 (pdf file)	Lab 4 - Climate Change	Essay topic and references due
Wed	28-Feb	EXAM 1	Topics through week of Feb 19		
Mon	5-Mar	Climate Change	Ch. 19 p. 517-540; Physical Geography.net (link is on reading outline and on D2L)	Lab 5 - Climate Models	Lab & Quiz 4 due by 11:59 pm
Mon	12-Mar	Air Pollution and Ozone	Ch. 2 p. 52-55; Ch. 15 p. 410-421, 424-427	Lab 6 - Ozone and air pollution	Lab & Quiz 5 due by 11:59 pm
Mon	19-Mar	Biomes	Ch. 4 p. 99-107; Kaufmann & Cleveland p. 130 (pdf file)	Lab 7 - Biomes	Lab & Quiz 6 due by 11:59 pm
Mon	26-Mar	SPRING BREAK			
Mon	2-Apr	Biological Systems & Succession	Ch. 3 p. 58-64, 73-77; Ch. 6 p. 168-172; Kaufmann & Cleveland p. 157-160 (pdf file); Ecological Succession slides	Lab 8 - Biogeography	Lab & Quiz 7 due by 11:59 pm
Wed	4-Apr	Essay Draft Due			

<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Assignment Posted</u>	<u>Assignment Due</u>
Mon	9-Apr	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 - Soil Survey Lab & Quiz 8 due by 11:59 pm
Wed	11-Apr	EXAM 2	Topics from week of Feb 19 - Apr 2	
Mon	16-Apr	Soil	Ch. 8 p. 219-226; Kaufmann & Cleveland p. 315-327 (pdf file); Coon Creek power point; Soil Orders pdf file	Lab 10 - Soils and sustainable agriculture Lab & Quiz 9 due by 11:59 pm
Mon	23-Apr	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 - Water Lab & Quiz 10 due by 11:59 pm
Mon	30-Apr	Geological Systems	Ch. 8 p. 206-219, 226-230	Lab 12 - Coal and Energy Lab & Quiz 11 due by 11:59 pm
Mon	7-May	Energy	Ch. 12; Ch 13 p. 343-365	Lab & Quiz 12 due by 11:59 pm
Wed	9-May	Essay Due		
Mon	14-May	EXAM 3	Topics from week of Apr 9 - May 7	