

# GEOGRAPHY 100: Human Impacts on the Physical Environment

## Section 2 Spring 2018

**Professor:** Samantha Kaplan

**Office:** D-327 Science Building

**Office Hours:** Tuesdays & Thursday 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 accommodations are made.

**Course Description:** 3 Credits with lab. 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.

**Requirements Satisfied:** GEP: Natural Science (NSc), Environmental Responsibility (ER)

### 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>

### 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 problems based on an analysis of evidence or scientific information.
- Apply scientific concepts, quantitative techniques and methods to solving problems and making decisions.
- Describe the relevance of some aspect of the natural science to their lives and society.
- Recognize areas of interaction between human society and the natural environment.
- Identify the individual, social, cultural, and ecological factors that influence environmental sustainability.
- Evaluate competing scientific claims that inform environmental debates.

### Course Materials

- **The course textbook is required and must be rented.**
- All of the course materials, except the textbook, are on D2L.  
<https://uwsp.courses.wisconsin.edu/>
  - The syllabus, class schedule, lecture PowerPoints and lab assignments appear under **Content** in the D2L menu bar.
  - Assigned readings appear on the **Class Schedule** under **General Course Materials** on the **Content** page of D2L
  - Lab quizzes are posted under **Quizzes** on D2L.
  - 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 quizzes and exams are available under **Grades** on D2L.

### Classroom Policies

- No talking, texting, emailing, web-surfing, or listening to music during lecture. This is disruptive and discourteous to your classmates and to the professor. Phones and other electronic devices must be turned off. Laptops or tablets may only be used for note-taking, and only with prior approval. Any student found violating these rules will be asked to leave the lecture hall.
- Attendance is expected at all lecture sessions. Students who routinely miss classes will be at a disadvantage in the course and will miss out on extra credit opportunities.

- I do not post lecture notes on-line and I do not share my lecture notes with students. Please do not ask. If you miss class, it is your responsibility to get the notes from a classmate.
- Lecture Power Points are made available online after class (NOT BEFORE). I do not post Power Points ahead of time because I believe it is important for students to develop critical listening and note-taking skills. Slides will usually be posted later the same day, but always prior to the next lecture.

### Lecture and Homework

- In addition to two weekly lecture sessions, students will complete assigned readings from the textbook and from various online sources.
- Assigned readings appear on the Class Schedule under General Course Materials on the **Content** page of D2L.

### Lab

- The Laboratory portion of this course involves two hours of partial distance learning (online work) outside of class.
- 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 readings, movies, activities, and problem sets. Laboratory topics will parallel and compliment lecture material.
- Laboratory assignments are not turned in. That is correct! There will be a 10-question open-book online quiz covering the lab material. You will need your lab responses to answer the quiz questions.
- Quizzes must be completed before midnight (11:59pm) of the due date. Start accordingly. There are no opportunities to make-up a missed quiz!
- Quizzes will appear under **Quizzes** on D2L
- Your lowest two Quiz scores will get dropped – only the best ten count towards your grade.
- Laboratory quizzes account for 50% of your grade (10 quizzes worth 5% each), and laboratory materials will feature prominently in the exams. All lab assignments and materials are posted on the **Content** page of D2L according to the timetable on the class schedule.

### Exams

- There will be three exams: two mid-terms and the final. Exams will be multiple-choice format and cover material from both lecture and lab.
- The first two exams are non-cumulative and worth 15% each. The final exam is cumulative and worth 20% of your grade. Exams account for 50% of your semester grade.
- Students must bring a #2 pencil to the exams to fill in the computer-graded answer sheets.

- Make-up exams may be given only to those students with medical or personal emergencies who have prior approval from the instructor.

## Grades

- **Evaluation:** Your grade will be based on your performance on the three exams and your ten best 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>
Midterm Exams:	2	15	30	30%
Final Exam:	1	20	20	20%
Quizzes:	10	5	50	50%
Semester Total:			<b>100</b>	<b>100%</b>

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

Points	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 circumstances. Students must arrange for an incomplete before the final exam.

## Extra Credit

There are no extra credit assignments. There will be in-class exercises on several occasions throughout the semester that can add to your total grade. Missing an in-class exercise does not harm your grade, but there are no make-ups, even with excused absences.

## Schedule (tentative – check D2L for updates)

<u>Date</u>	<u>Lecture Topic</u>	<u>Textbook Reading</u>	<u>Lab Posted</u>	<u>Quiz Due</u>
T	23-Jan	Intro - Physical and Env't. Geog.		
R	25-Jan	Principles of Sustainability	Kaufmann & Cleveland, p. 2-13 (pdf file)	Lab 1: Ecological Footprints
	30-Jan	Principles of Sustainability cont'd	Ch. 1 p. 10; Ch. 7 p. 179-193	
R	1-Feb	Human Population Growth	Ch. 1 p. 3-5, 10-14, 19-21; Ch. 10 p. 262-265	Lab 2: Population Quiz 1
T	6-Feb	Human Population + systems theory	Ch. 20 p. 550-552, 561-562; Ch. 2 p. 28-29, 39-46	
R	8-Feb	Biogeochemical Cycles: Carbon	Ch. 2 p. 29-34; Ch. 3 p. 65-69	Lab 3: Carbon Cycle Quiz 2
T	13-Feb	Biogeochemical Cycles: Nitrogen & Phosphorus	Ch. 3 p. 69-73	
R	15-Feb	Solar Radiation & Earth's Energy Budget	Ch. 1 p. 9-10; Ch. 4 p. 87-91; Kaufmann & Cleveland p. 56-60 (pdf)	Quiz 3
T	20-Feb	Atmospheric Circulation	Ch. 4 p. 91-94	Lab 4: Climate Change
R	22-Feb	<b>No class meeting</b>		
T	27-Feb	Winds & Ocean Circulation	Ch. 4 p. 95-99	Quiz 4
R	<b>1-Mar</b>	<b>EXAM 1</b>		
T	6-Mar	Natural Causes of Climate Change	Ch. 19 p. 517-522, 527-532; Physical Geography.net (link is on D2L)	Lab 5: Climate Models
R	8-Mar	<b>No class meeting</b>		
T	13-Mar	Greenhouse Gases	Ch. 19 p. 522-526	
R	15-Mar	Humans and Future Climate	Ch. 19 p. 532-540	Lab 6: Ozone Quiz 5
T	20-Mar	Ozone & Air Pollution	Ch. 2 p. 52-55; Ch. 15 p. 410-421, 424-427	
R	22-Mar	Defining Biomes	Ch. 4 p. 99-101, Kaufmann & Cleveland p. 130 (pdf)	Lab 7: Biomes Quiz 6
T	27-Mar	SPRING BREAK		
R	29-Mar	SPRING BREAK		
T	3-Apr	Global Biomes	Ch. 4 p. 101-107	Lab 8: Island Biogeography Quiz 7
R	5-Apr	Biological Systems	Ch. 3 p. 58-64	

<u>Date</u>	<u>Lecture Topic</u>	<u>Textbook Reading</u>	<u>Lab Posted</u>	<u>Quiz Due</u>
<b>T</b>	<b>10-Apr EXAM 2</b>			
R	12-Apr Ecosystems & Succession	Ch. 3 p. 73-77; Ch. 6 p. 168-172; Kaufmann & Cleveland p. 157-160 (pdf)	Lab 9: Sustainable agriculture	Quiz 8
T	17-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		
R	19-Apr Soil Formation & Properties	Ch. 8 p. 219-225; Kaufmann & Cleveland p. 315-320	Lab 10: Soils	Quiz 9
T	24-Apr Soil Erosion & Desertification	Ch. 8 p. 225-226; Kaufmann & Cleveland p. 320-327		
R	26-Apr Hydrologic Cycle & Water Resources	Ch. 3 p. 66; Ch. 9 p. 236-241	Lab 11: Water	Quiz 10
T	1-May Water Use	Ch. 9 p. 242-253		
R	3-May Water Pollution	Ch. 14 p. 382-398; Ch. 17 p. 478-479	Lab 12: Coal & Energy	Quiz 11
T	8-May Geological Cycle and Mineral Resources	Ch. 8 p. 206-219, 226-230; Ch. 12		
R	10-May Energy Resources	Ch 13 p. 343-365		Quiz 12
<b>R</b>	<b>17-May FINAL EXAM</b>	<b>2:45 - 4:45 PM</b>		