

Geography 100 - Human Impacts on the Physical Environment

Section 2 (100% Online)

Spring 2020

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: Cunningham, W. and Cunningham, M., 2018, *Environmental Science, A Global Concern. Foundations & Applications, 14th Ed.* McGraw Hill, New York, 614 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.

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 (NS), 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.
- Explain major concepts, methods, or theories in the natural sciences to investigate the physical world.
- Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques.
- Describe the relevance of aspects of the natural sciences to their lives and society.
- Identify interactions between human society and the natural environment.
- Analyze the individual, social, cultural, and ecological factors that influence environmental sustainability.
- Evaluate competing claims that inform environmental debates.

Student Rights and Responsibilities:

- UWSP has guidelines regarding student rights and responsibilities in class and on campus. These are outlined on the Dean of Student's website and in the Student Handbook. Do review these resources if you have not already:
 - <https://www.uwsp.edu/dos/Pages/stu-conduct.aspx>
 - <https://www.uwsp.edu/dos/Pages/stu-academic.aspx>
 - <https://www.uwsp.edu/dos/Pages/handbook.aspx>
 - <https://www.uwsp.edu/dos/Documents/AcademicIntegrityBrochure.pdf>
 - <https://www.uwsp.edu/dos/Documents/UWSP14-Final2019.pdf>

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 Canvas
 - The syllabus, class schedule, reading outlines and lab assignments appear under the **Home** page of Canvas.
 - Assigned readings are listed on the **Class Schedule** under **General Course Materials** on the **Home** page.
 - Lab quizzes and exams are posted under **Quizzes**.
 - The **Announcements** section (**Course Home**) will be used for all course announcements. Please check the **Announcements** page daily for course updates and changes.
 - Scores on labs, quizzes and exams are available under **Grades** on Canvas
 - Online discussions about labs and lecture are under **Discussion**.

Directed 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 **Home** page of Canvas.
- Topical outlines appear under **Outlines** on the Home page of Canvas. This material will be posted according to the class schedule.
- **Expect to spend at least 2-4 hours a week reading and reviewing.**

Lab and Quizzes

- All lab assignments and materials are posted on the **Home** page and the **Assignments** page of Canvas 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.
- 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 are found on the Canvas **Quizzes** page
- Your lowest Quiz score will get dropped – only the best ten count towards your grade.
- Laboratory quizzes are worth 5 points each, for a total of 50 points, or about 43.5% of your grade
- **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 will appear under **Quizzes** and **Home** on Canvas
- Exams must be taken between 6:00 am and midnight on the assigned day as indicated on the class schedule. The mid-terms are 60 minutes in length, the final exam is 90 minutes.
- Midterm exams are worth 15 points each and together account for about 26% of your semester grade. Midterm exams are non-cumulative.
- The final exam is cumulative and worth 20 points, or about 17.4% of your semester grade.
- Make-up exams may be given only to those students with medical or personal emergencies who have prior approval from the instructor.

Other Exercises

- There will be five (5) additional short exercises throughout the semester. They will typically take the form of discussion-type questions requiring several sentences or a paragraph-long answer. Responses to the questions will be turned in on **Canvas** under **Assignments**.
- Exercises will get posted on Mondays along with labs and readings and be due on Wednesday of the following week.
- Answers to the discussion questions must be typed and use complete sentences, good grammar, and spelling.
- Each question set is worth three points and together account for 13% of your grade.

Discussion Forum

- There is an online question and answer forum available on Canvas. 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 and your eleven 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>
Midterm Exams	2	15	30	26.1%
Final Exam	1	20	20	17.4%
Lab Quizzes	10 (out of 11)	5	50	43.5%
Other Exercises	5	3	15	13%
Semester Total			115	100%

- **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.)
- **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

Tentative Schedule

<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Assignment Posted</u>	<u>Quiz/Assignment Due</u>	
Tues	21-Jan	Course Intro & Principles of Sustainability	Ch. 1, p. 9-15; Ch. 9, p. 186; Kaufmann & Cleveland, p. 2-13 (pdf file)	Short Exercise 1	
Mon	27-Jan	Sustainability contd.	Ch. 1, p. 18, 20-26; Ch. 6, p. 117	Lab 1 - Ecological Footprints	
Wed	29-Jan			Short Exercise 1	
Mon	3-Feb	Human Population Growth	Ch.6, p. 118-122; Ch. 7, p. 132-150	Lab 2 - Population	Lab Quiz 1
Mon	10-Feb	Scientific Principles & Systems Theory	Ch. 2, p. 33-43; Ch. 3, p. 49-58, 65-70	Lab 3 - Carbon Cycle	Lab Quiz 2
Mon	17-Feb	Biogeochemical Cycles	Ch. 3, p. 58-60; 65-70	Lab 4 - Climate Change	Lab Quiz 3
Mon	24-Feb	Earth's Energy Budget & Atmospheric Circulation	Ch. 15, p. 324-332; Ch. 3, p. 59 fig. 3.11; Kaufmann & Cleveland p. 56-60 (pdf)	Short Exercise 2	Lab Quiz 4
Wed	26-Feb	EXAM 1	Topics through week of Feb 17		
Mon	2-Mar	Climate Change	Ch. 15, p. 321-322, 332-347; Physical Geography.net (link is on Canvas)	Lab 5 - Climate Models	
Wed	4-Mar			Short Exercise 2	
Mon	9-Mar	Air Pollution and Ozone	Ch. 16, p. 350-369	Lab 6 - Ozone and air pollution Short Exercise 3	Lab Quiz 5
Mon	16-Mar	SPRING BREAK			

<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Assignment Posted</u>	<u>Quiz/Assignment Due</u>
Mon 23-Mar	Biomes	Ch. 5, p. 99-106; Kaufmann & Cleveland p. 130 (pdf)	Lab 7 - Biomes	Lab Quiz 6
Wed 25-Mar				Short Exercise 3
Mon 30-Mar	Biological Systems & Succession	Ch. 3, p. 63-65; Ch. 4, p.87-89, 92-95; Ch. 5, p. 112-114; Kaufmann & Cleveland p. 157-160 (pdf)	Lab 8 - Deforestation	Lab Quiz 7
Wed 1-Apr	EXAM 2	Topics from weeks of Feb 24 - Mar 23		
Mon 6-Apr	Biodiversity	Ch. 6, p. 125-128; Ch. 11, p. 227-240	Short Exercise 4	Lab Quiz 8
Mon 13-Apr	Soil	Ch. 10, p. 198-210; Kaufmann & Cleveland p. 315-327 (pdf file); Coon Creek power point; Soil Orders pdf file	Lab 9 - Soil Survey	
Wed 15-Apr				Short Exercise 4
Mon 20-Apr	Water Resources & Water Pollution	Ch. 3, P. 65-66; Ch. 17, p. 377-391; Ch. 18, p. 401-410	Lab 10 - Water	Lab Quiz 9
Mon 27-Apr	Geological Systems	Ch. 14, p. 301-314; Ch. 19, p. 427-430	Lab 11 - Coal and Energy	Lab Quiz 10
Mon 4-May	Energy	Ch. 19, p. 430-432, 433-434, 437-439, 441; Ch. 20, p. 450-451, 457-461, 462-465	Short Exercise 5	Lab Quiz 11
Wed 13-May	EXAM 3	Topics from week of Mar 30 - May 4 plus major concepts from earlier in the semester		Short Exercise 5