

Geography 100 - Human Impacts on the Physical Environment

Section 1

Spring 2022

Instructor: Samantha Kaplan

Office: D-327 Science

Office Hours: In person: 12-1pm and 3:15-4:14 pm on Tuesdays & Thursday. Zoom by appointment.

Main Office Telephone: 715-346-2883 (this is not my direct line)

Email: skaplan@uwsp.edu

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 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 50% distance learning (online) section of Geography 100. Expect to spend 3-4 hours each week working on lab 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 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 **Start Here!!** 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 quizzes, exercises and exams are available under **Grades** on Canvas

Lab

- All lab assignments and materials are posted on the **Home** page and the **Assignments** page of Canvas according to the class schedule (typically Monday morning).
- 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. Your answers are used to complete an accompanying quiz.
- Laboratory topics will be introduced each week during the Monday Zoom session

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 in the **Lab Quizzes Module** of the **Home** page and on the Canvas **Quizzes** page.
- Your lowest quiz grade will be dropped. Your best ten (10) count towards your final grade. If you forget to take a quiz, this counts as your dropped quiz.
- Each lab quiz is worth 10 points.
- Laboratory quizzes account for about 43% of your course grade (or just over 4% 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 each week working on lab assignments and quizzes.**

Exams

- There will be three (3) exams. Exams will be multiple-choice format and cover material from the readings, online lectures, and lab.

- The first two exams are non-cumulative, but the final exam will cover major topics from earlier in the semester
- Exams account for 40% of your course grade. Each midterm exam is worth 30 points, the final exam is worth 40 points.
- 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 four (4) short written exercises. They will take the form of discussion-type questions requiring several short paragraph answers. Responses to the questions will be turned in on **Canvas** under **Assignments**.
- Exercises will get posted, and are due according to the class schedule.
- Answers to the discussion questions must be typed and use complete sentences, good grammar, and spelling.
- Each question set is worth 12.5 points and together account for 20% of your grade.

Grades

- **Evaluation:** Your grade will be based on your performance on the three exams, your eleven best lab and quiz scores, and your completion of the written exercises. 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	30	60	24%
Final Exam	1	40	40	16%
Lab Quizzes	10 (out of 11)	10	100	40%
Short Exercises	4	12.5	50	20%
Course Total			250	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.).

- **Extra Credit:** Maybe. If so, to be announced.
- **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

Schedule

<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Assignment Posted</u>	<u>Quiz Due</u>
Tues 25-Jan	Course Introduction			
Thurs 27-Jan	Sustainable Development	Ch. 1, p. 9-15	Short Exercise 1	
Tues 1-Feb	Ecological Footprints	Ch. 1, p. 18, 20-26; Ch. 6, p. 117; Ch. 9, p. 186; Kaufmann & Cleveland, p. 2-13 (pdf file)	Lab 1: Ecological Footprints	
Thurs 3-Feb	Principles of Sustainability			
Tues 8-Feb	Human Population Growth	Ch. 6, p. 118-122; Ch. 7, p. 132-150	Lab 2: Population	Quiz 1: Ecological Footprints
Thurs 10-Feb				Short Exercise 1
Tues 15-Feb	Biogeochemical Cycles	Ch. 2, p. 33-43; Ch. 3, p. 49-60; 65-70	Lab 3: Carbon Cycle	Quiz 2: Population
Thurs 17-Feb				
Tues 22-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)	Lab 4: Climate Change	Quiz 3: Carbon Cycle
Thurs 24-Feb				
Tues 1-Mar	Climate Change Causes	Ch. 15, p. 321-322; Physical Geography.net (link is on Canvas)	Short Exercise 2	Quiz 4: Climate Change
Thurs 3-Mar	EXAM 1			
Tues 8-Mar	Climate Change Consequences	Ch. 15, p. 332-347	Lab 5: Climate Models	
Thurs 10-Mar				
Tues 15-Mar	Air Pollution and Ozone	Ch. 16, p. 350-369	Lab 6: Air Pollution & Ozone	Quiz 5: Climate Models
Thurs 17-Mar			Short Exercise 3	Short Exercise 2
Tues 22-Mar	SPRING BREAK			
Thurs 24-Mar	SPRING BREAK			
Tues 29-Mar	Biomes	Ch. 5, p. 99-106; Kaufmann & Cleveland p. 130 (pdf)	Lab 7: Biomes	Quiz 6: Air Pollution & Ozone
Thurs 31-Mar				
Tues 5-Apr	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	Quiz 7: Biomes
Thurs 7-Apr	Biodiversity	Ch. 6, p. 125-128; Ch. 11, p. 227-240		Short Exercise 3

Tues	12-Apr	Soil Resources	Ch. 10, p. 198-210; Soil Orders pdf	Lab 9: Soils	Quiz 8: Deforestation
Thurs	14-Apr	EXAM 2			
Tues	19-Apr	Soil Impacts	Kaufmann & Cleveland p. 315-327 (pdf file); Coon Creek power point;		
Thurs	21-Apr	Water Resources	Ch. 3, P. 65-66; Ch. 17, p. 377-391	Short Exercise 4	
Tues	26-Apr	Water Pollution	Ch. 18, p. 401-410	Lab 10: Water	Quiz 9: Soils
Thurs	28-Apr				
Tues	3-May	Geological Systems	Ch. 14, p. 301-314; Ch. 19, p. 427-430	Lab 11: Coal and Energy Short Exercise 5	Lab 10: Water
Thurs	5-May				Short Exercise 4
Tues	10-May	Energy	Ch. 19, p. 430-432, 433-434, 437-439, 441; Ch. 20, p. 450-451, 457-461, 462-465		Quiz 11: Coal and Energy
Thurs	12-May	Wrap up & exam review			
Tues	17-May	EXAM 3			Short Exercise 5