

Geography 100 - Human Impacts on the Physical Environment

Section 2 (100% online)

Summer 2023

Instructor: Samantha Kaplan

Office: D-327 Science (I will only be in my office on Tuesdays and Thursdays)

Office Hours: By appointment.

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Textbook: Cunningham, W. and Cunningham, M., 2023, *Environmental Science, A Global Concern. Foundations & Applications, 16th Ed.* McGraw Hill, New York, 614 p.

<https://www.mheducation.com/highered/product/environmental-science-global-concern-cunningham-cunningham/M9781264647842.html>

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 4+ hours each day 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 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 course modules are organized by type (not subject matter) under the **Home** page of Canvas.
 - Assigned readings are listed on the **Class Schedule** under **Start Here!!** on the **Home** page.
 - Lab quizzes are posted with the lab assignments on the **Home page**, but also under the **Quizzes** tab.
 - 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
 - Online discussions about labs and lecture are under **Discussion**.

Directed Readings

- Students will complete assigned readings from the textbook and from various online sources.
- Assigned readings appear on the **Class Schedule** under **Start Here!!** on the **Home** page of Canvas.
- **Expect to spend 2 hours each day reading and reviewing.**

Video Lectures

- There will a 45 min video lecture posted each week day
- Lectures will be posted (typically) by mid-afternoon
- Videos will also include overview of the labs, exam review, and important announcements.
- Any slides presented will be posted 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 by 8:00 am each morning).

- There will be eleven (11) laboratory assignments consisting of online readings, movies, activities, and problem sets. Laboratory topics will parallel and compliment the lectures and reading assignments.
- **Laboratory assignments are not turned in! That is correct.** Your answers are used to complete an accompanying quiz.

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 45% of 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 2-3 hours each week 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 the readings, online lectures, and lab.
- The exams are non-cumulative, but questions may build on concepts from earlier in the course
- Exams will appear under **Quizzes** on Canvas and in the **Exams Module** on the **Home** page.
- 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 36% of your course grade. Each exam is worth 40 course 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 two (2) 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 will be worth 20 course points (actual scoring may differ) and together account for 18% of your grade.

Discussion Forum

- There is an optional online question and answer forum available on Canvas under **Discussions**. 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 ten best lab 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	40	80	36%
Lab Quizzes	10 (out of 11)	10	100	45%
Written Exercises	2	20	40	18%
Course Total			220	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

Class Schedule (check Canvas for updates)

Date	Topic	Reading	Lab Assigned	Quiz Due
M 12-Jun	Intro & Principles of Sustainability	Ch. 1, p. 9-16, 20-27; Ch. 9, p. 186-188; Kaufmann & Cleveland, p. 2-13 (pdf file)	Lab 1: Ecological Footprints	
T 13-Jun	Human Population Growth	Ch. 6, p. 116-123; Ch. 7, p. 132-150	Lab 2: Population	
W 14-Jun	Biogeochemical Cycles	Ch. 2, p. 33-43; Ch. 3, p. 48-58; 65-69	Lab 3: Carbon Cycle	Lab 1: Ecological Footprints
R 15-Jun	Earth's Energy Budget & Atmospheric Circulation	Ch. 15, p. 325-334; Ch. 3, p. 59 fig. 3.11; Kaufmann & Cleveland p. 56-60 (pdf)	Lab 4: Climate Models & Short Exercise 1	Lab 2: Population
F 16-Jun	Climate Change	Ch. 15, p. 334-349	Lab 5: Climate	Lab 3: Carbon Cycle
M 19-Jun	Air Pollution and Ozone	Ch. 16, p. 351-370	Lab 6: Air Pollution & Ozone	Lab 4: Climate Models
T 20-Jun	Biomes	Ch. 5, p. 99-106; Kaufmann & Cleveland p. 130 (pdf)	Lab 7: Biomes	Lab 5: Climate Change
W 21-Jun	EXAM 1			Lab 6: Air Pollution & Ozone
R 22-Jun	Biological Systems & Succession	Ch. 3, p. 60-64; Ch. 4, p.87-88, 90-95; Kaufmann & Cleveland p. 157-160 (pdf)	Lab 8: Deforestation	Short Exercise 1
F 23-Jun	Biodiversity	Ch. 5, p. 112-114; Ch. 6, p. 126-128; Ch. 11, p. 228-241; Ch 12, p. 252-253, 255-261	Lab 9: Soils; Short Exercise 2	Lab 7: Biomes
M 26-Jun	Soil Resources	Ch. 10, p. 198-210; Kaufmann & Cleveland p. 315-327 (pdf file); Soil Orders pdf file	Lab 10: Water	Lab 8: Deforestation
T 27-Jun	Water Resources & Pollution	Ch. 3, P. 65-66; Ch. 17, p. 377-391; Ch. 18, p. 401-410	Lab 11: Coal and Energy	Lab 9: Soils
W 28-Jun	Geological Systems	Ch. 14, p. 301-314; Ch. 19, p. 427-430		Lab 10: Water
R 29-Jun	Energy	Ch. 19, p. 430-432, 433-434, 437-439, 441; Ch. 20, p. 450-451, 457-461, 462-465		Lab 11: Coal and Energy
F 30-Jun	EXAM 2			Short Exercise 2