

GEOL-10500-01
Introduction to Environmental Studies
Mode of instruction: In-person -Web-Enhanced
Mondays and Thursdays 2.30 pm to 3.45 pm
Hunter West, Room 309
Spring 2025

Instructor: Dr. Shruti Philips

Office: HC North, Room 1041

Office Hours: *Mondays from 1.30 to 2.30 pm or by appointment*

E-mail: sph0001@hunter.cuny.edu (communications to me must have GEOL 105 in the subject line and you must sign your full name as it appears in CUNYFirst.)

Department of Geography Office: Rm 1006 HN, Phone: 212-772-5265

Course Description

This course explores important environmental issues facing society today and investigates the science behind those issues. We will study earth's physical systems to understand global climate change, pollution, the use of natural resources, alternative energies and sustainable agriculture. We will also study the fundamentals of evolution and population ecology to understand biodiversity, Human population and the impacts of human activities on different habitats. Finally, we will examine the connections between the biological and physical sciences and environmental politics, environmental economics and environmental ethics and how they each figure in solving environmental problems.

(3 credits; satisfies GER 2E, non-laboratory science; Flexible Core-Scientific World)

Course Learning Objectives:

You can expect to finish the course with a basic understanding of:

- The fundamental principles of the physical and biological sciences that govern ecosystems.
- The production and uses of energy, mineral and agricultural resources and their related issues of sustainability
- The main sources of environmental pollution and their local and global implications for human and nonhuman life
- The promises and limitations of science and technology for addressing environmental problems.
- The complex relationship between science, technology, politics, economics and ethics regarding environmental issues and their potential solutions

Specific learning outcomes:

At the end of the course the successful student is expected to be able to:

- Describe the various methods of observation and testing involved in scientific inquiry.

- Compare renewable and nonrenewable resources and explain the importance of natural resources and ecosystem services.
- Discuss population growth, resource consumption, and their consequences.
- Understand how human activities can affect major biogeochemical cycles and the environmental consequences of the effects.
- Explain how human actions are contributing to the loss of global biodiversity.
- Analyze the causes and impacts of soil erosion and land degradation and discuss potential pathways toward sustainable agriculture.
- Discuss how planning, participation and design can develop more livable, sustainable and resilient cities.
- Explain the goals of environmental health and identify major environmental health hazards.
- Assess problems of water supply and water pollution.
- Describe the environmental impacts associated with the extraction and production of fossil fuels.
- Summarize how global warming can alter precipitation patterns, the frequency and intensity of extreme weather, sea levels and ocean acidity.
- explain how energy conservation plays a role in addressing energy challenges.

Additional Learning Objectives

GEOL 10500 is designed as a first-year, non-lab science course. As such, in addition to learning the basic concepts of environmental science, you will learn:

- How science works
- Quantitative and qualitative reasoning skills
- How to interpret graphs and tables
- Critical thinking skills
- How to locate and read scientific materials

Required Reading:

Modified Mastering Environmental Science with Pearson eText for

Jay Withgott and Matthew Laposata , *Environment, The Science Behind the Stories*, ISBN: 0138278768— with access to Pearson’s MyLab and Mastering, Custom edition. Price- \$60.00.

- **Note:** You must have access to ‘**Mastering Environmental Science**’ to complete weekly homework assignments.
- **Log into Brightspace to find detailed instructions on how to purchase the e-textbook with access to Mastering Environmental science.**

Course Structure:

This course will be taught in-person on the Hunter College campus. The **Hunter College Brightspace** site will have a “**Weekly coursework module**” page. For each topic there will be folder labelled by topic containing recommended reading, additional articles, and

associated assignment and/or other materials. Students are expected to check the site regularly and keep up with the material. M

Important: Students should check their Hunter e-mail regularly for messages from the instructor!

Assessment and Grading Policy:

There will be **two midterm** exams given during the semester and **a final** exam at the end of the semester. Exams are based on lectures, assigned readings, and text material.

Three Exams (2 Midterms +1 Final)	50%
Mastering Assignments	35%
Case studies/Group project	10%
Attendance	5%

The **Final exam** will be **cumulative**, but the two midterm exams will **not** be cumulative. All exams will be comprised of **multiple-choice** questions. Some material we cover in class may **not** be covered in the textbook. Anything that is discussed in class is fair game for the exams; therefore, your **attendance, attentiveness, and participation** at in-class lectures and consistent work on **Mastering assignments** will be extremely important to your success in the course.

Your grades will be assigned based on the CUNY grading policy that can be found in the online undergraduate catalog that can be found at <http://catalog.hunter.cuny.edu/>.

Extra Credit:

I do not offer extra credit. By participating fully and thoughtfully in in-class discussions, completing the assigned readings and assignments, and consistently attending lectures, you can expect to see positive outcomes both in your overall learning in this course as well as in your final course grade.

Group Project :

You will work with a small group (3 people, MAX = 4 people) to prepare an oral presentation on a topic or scientific article relevant to the syllabus. A range of topics will be provided for students to choose from, and group arrangement will be determined by the instructor in consultation with the students. Students in each group should set a time to meet at least twice during the development of the project and to prepare the presentation. Each presentation will be **approximately 10 minutes** long. More details are provided on Brightspace.

Exam Policy:

- **No 'make up'** will be given if you miss a midterm exam. If you miss one midterm exam, your final exam grade will count twice.
- If you **miss the final exam** a makeup will be given only if you inform me within 72 hours of the day/time of the final exam **and** present me with checkable documentary evidence of the reason for your absence--a doctor's note, a bill from the hospital, a note from the funeral home etc. For an **IN** to be awarded you must contact me about making up the exam and fill out the '*Contract to Resolve an Incomplete Grade*' form **within 72 hours**

of the day/time of the final exam. An unresolved IN becomes an FIN at the end of the following semester.

- **Pass/No Credit Option:**

You have the option to request a grade of Pass/No Credit for this course. To receive this grade, you must submit the request for a Pass/No Credit grade by completing the form linked to the registrar's website

(<https://hunter.cuny.edu/students/registration/register-for-classes/credit-no-credit/#instructions>). The decision is irrevocable. To qualify for a Pass/No Credit grade, you must complete all the requirements for the course, including attendance, assignments, exams, and the final exam/project. To Pass, you must earn at least a D.

- If you stop attending, stop submitting assignments, and/or do not take the final exam, you receive a grade of **WU (Unofficial Withdrawal)**, which cannot be converted to Pass/No Credit, and may affect your financial aid status.
- As per CUNY, an **Unofficial Withdraw (WU)** is assigned to students who **attended a minimum of one class**. It is important to understand the definition of a WU and the difference between this grade and an F grade. The conditions for assigning the WU grade include:
 1. A student's enrollment has been verified by the course instructor, and
 2. The student has severed all ties with the course at any time before the final exam week and, consequently, has failed to complete enough course work -- as specified in the course syllabus -- to earn a letter grade, and
 3. The student has not officially withdrawn from the course by completing the process for a W grade, or planned to receive an INC.

Attendance: Students are urged to attend *all* classes. ***There is a direct correlation between good grades and good attendance.*** All students are responsible for work covered in their absence and must be sure to check Brightspace for updates. Attendance will be taken regularly.

Classroom Policy: Once in the classroom, your phones must be silent and put away. You are not permitted to use **laptops or phones** in the classroom. All slides will be available on Brightspace for you to look over at home. While in class, you should pay attention and take notes in a notebook. Walking in and out of the classroom during the lecture is disruptive and should be kept at a minimum. Use the restroom before class so you do not have to walk out during class. There should be no eating during class.

Tips for getting good grades: ***The more time you put in, the better your grade will be.***

- Attend class and take detailed notes.
- Read the assigned material in the text (or other) before coming to class.
- Re-write your notes as soon as possible after class. This will allow you to fill in the details still fresh in your memory and prepare questions for the next class meeting.
- Test yourself by answering the questions in the book and in class.
- Carefully study the diagrams and charts in the book and in the lectures.

Academic Integrity: Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. See the following report by the Hunter College Senate for more details:
<http://www.hunter.cuny.edu/senate/assets/Documents/Hunter%20College%20Policy%20on%20Academic%20Integrity.pdf>

Since ChatGPT and other AI programs are not your own work, this is my policy concerning using AI for completing your work:

- Artificial intelligence-based technologies, such as ChatGPT, must **not** be used to generate responses for your assignments.
- Unauthorized use of artificial intelligence software or word mixing software to write your paper or disguise plagiarized work is considered unauthorized assistance in this course.
- Use of an AI text generator when an assignment does not explicitly call or allow for it without proper attribution or authorization is plagiarism.

Diversity and Inclusion:

I am committed to fostering an intellectual environment that is enriched and enhanced by diversity in all dimensions, including race, ethnicity and national origins, gender and gender identity, sexuality, class and religion. All people have the right to be addressed and referred to in accordance with their personal identity. In this class, we will have the chance to indicate the name that we prefer to be called and, if we choose, to identify pronouns with which we would like to be addressed. I will do my best to address and refer to all students accordingly and support classmates in doing so as well.

ADA Policy: In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations.

For further information and assistance, please call:
(212)772-4857 or (212)650-3230.

Hunter College Policy on Sexual Misconduct

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College affirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationship. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or

- their local police precinct, on contacting the College's Public Safety Office (212-772-4444)
- b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.
 - c. CUNY Policy on Sexual Misconduct Link: Policy on Sexual Misconduct can be found at <http://www.hunter.cuny.edu/diversityandcompliance/title-ix>

Tentative Syllabus for Spring 2025. Any changes to the syllabus will be posted on Brightspace.

Dates	Lecture Topic	Chapter
M 1/27	Introduction: Science and sustainability	1
Th 1/30	Science and sustainability	
M 2/3	Matter, Energy and Geology	2
Th 2/6	Matter, Energy and Geology	
M 2/10	Environmental Systems and Ecosystem Ecology	5
Th 2/13	Environmental Systems and Ecosystem Ecology	
T 2/18 (M. sch.)	Environmental Policy	7
Th 2/20	Environmental Policy Mastering assignments due	
M 2/24	MIDTERM-1	1,2,5,7
Th 2/27	The underpinnings of Agriculture	9
M 3/3	The underpinnings of Agriculture	9
Th 3/6	NO CLASS	
M/10	Making Agriculture Sustainable;	10
Th 3/13	The Urban Environment	13
M 3/17	The Urban Environment	
Th 3/20	Environmental Health and Toxicology	14
M 3/24	MIDTERM-2 Mastering assignments due	9,10,13,14
Th 3/27	Group Presentations	
M 3/31	NO CLASS	
Th 4/3	Group Presentations	
M 4/7	Group Presentations	
Th. 4/10	Group Presentations	
SPRING BREAK		
M 4/21	Freshwater systems	15
Th 4/24	Freshwater systems	
M 4/28	Marine and Coastal Systems and Resources	16
Th 5/1	Marine and Coastal Systems and Resources	
M 5/5	Atmospheric Science, Air Quality, and Pollution;	17
Th 5/8	Atmospheric Science, Air Quality, and Pollution;	
M 5/12	Fossil Fuels and Conventional Energy Alternatives	19,20,
Th 5/15	New Energy Alternatives Mastering Assignments due	21
TBA	FINAL EXAM	15,16,17,19,20,21