

# Department of Geography and Environmental Science, Hunter College

## Introduction to Environmental Studies

Geology 10500

Spring 2021

Wednesdays, 10:10 a.m.-1:00 p.m.

**Instructor** Gisselle Mejía  
**Email** [gm824@hunter.cuny.edu](mailto:gm824@hunter.cuny.edu)  
**Office Hours** Wednesdays, 1:30-2:30pm

### Email policy

I encourage you to email me with any questions about the class. To respond in a timely fashion, it is important for you to identify yourself in the subject line of emails as follows:

**LAST NAME, FIRST NAME, GEOL 10500**

Emails sent with this format will be answered within 48 hours of receipt. Emails sent without this format may take longer to answer.



### 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, conservation 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

### 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

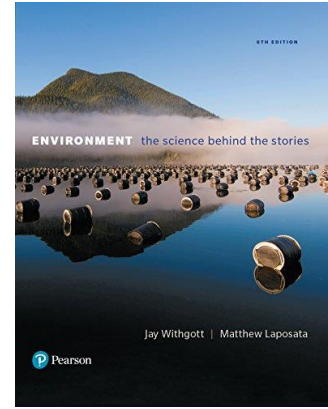
## Required Textbook:

Jay Withgott and Scott Brennan (2017) *Environment, The Science Behind the Stories*, San Francisco: Benjamin Cummings. ISBN-13: 9780321712738.

The lectures are based on the current (6<sup>th</sup>) edition of this text, an older edition may be less expensive, and the basic concepts do not change from the previous edition.

## Blackboard

Blackboard will be used as a communication and lecture tool for this course. All course lecture slides, announcements, quizzes, and important documents, including the syllabus and assignment instructions, will be posted and available for your reference. It is your responsibility to ensure that you have access to the course Blackboard site and to check it regularly for notifications and announcements.



## Course Policies

### Participation

Proactive engagement with the required readings, and participation in class discussions will count towards your participation grade and will impact your quality of learning and personal growth from this course. The course covers a lot of material over the semester, and the only way we will be productive as a class is if each individual completes the work expected of them. This means you should complete the assigned readings and assignments **PRIOR** to the class for which they are due.

At times we may discuss topics that have strong political or ethical views attached to them. A comfortable and respectful environment is to be maintained in our classroom. Individuals should feel free to express their viewpoints on topics, and we will each respect the views expressed by others. Offensive speech and inflammatory comments will not be tolerated. Keep in mind that while many opinions and solutions may exist for the topics we discuss, we will primarily be concerned with those that can be backed up with information and data obtained through use of the scientific method.

### Attendance

This course is held online, and **FULL TIME** attendance is required to receive credit at every class session. You should arrive to class sessions **on time**. If you have a legitimate reason for missing a session, **you should let me know as soon as possible and may be excused**. In addition, you should check Blackboard immediately for missed information so that you do not fall behind. We will be moving quickly in this course, and it is your responsibility to keep up.

### Extra Credit

I **do not** offer extra credit. By participating fully and thoughtfully in in-class discussions, completing the assigned readings and quizzes, 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.

### Classroom Electronics Use

Synchronous classroom sessions will be held on Blackboard Collaborate Ultra. Each week, a session will be created with the respective week number and topic title. It is your responsibility to sign into the correct session (links will not be shared). Please be aware that cameras and audio are required during class sessions and exams. **Class sessions will not be recorded**. For those who need special accommodations (e.g. recording classes) you must speak to the instructor and provide verification from the office of AccessABILITY.



# Grading Policies

Your final grade will be calculated as follows:

Participation and Attendance .....	10% of your total grade
Scientific article projects .....	20% of your total grade
Chapter quizzes .....	10% of your total grade
Midterm Exam.....	30% of your total grade
Final Exam .....	30% of your total grade

## Group Project-Synthesizing a Scientific Article

You will work with a small group (2-3 people) to prepare an oral presentation on a 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. Time will be allocated for students to meet and discuss their projects over the course of the semester, which requires your attendance to participate. Each presentation will be approximately 10 minutes long. In addition, each individual will submit a written summary report of the scientific article and a group evaluation of their group work. Further details will be provided after the semester begins.

## Chapter Quizzes and Exams:

Weekly quizzes will be assigned consisting of multiple-choice questions from the assigned readings and course lectures. Links to the quizzes will be posted on Blackboard. Quizzes must be submitted between the time the material is presented in class and the midnight before the next class. Quizzes will have a 1-hour limit and must be completed when the quiz is started. Questions will be randomized for each student, and students may only access the quiz one time. The answer key will only be available after the quiz link expires. **Late submissions will not be accepted.**

Exams will consist of short-answer and multiple-choice questions. All lectures, assigned readings and textbook chapters is fair game for the quizzes and exams. Therefore, your attendance, attentiveness, and participation at in-class lectures and discussions will be extremely important to your success in the course.

No late examinations will be accepted. However, if due to a valid medical emergency, you do miss an exam or assignment, you must contact me within 24 hours of the missed exam and present acceptable documentary evidence for your absence.

## Credit/No Credit Grading Option

Students who satisfy all of the course requirements (participation/attendance, quizzes, course project, exams) may be eligible to request to be graded under the Credit/No Credit system. I will accept the Credit/No Credit form according to the current university policy. The current college policy on credit/no credit grading may be reviewed at:

<https://hunter.cuny.edu/fof/credit-no-credit/>

## Incompletes

I do not give incompletes (IN) except under the most extraordinary and documented medical emergencies. Without a valid medical excuse, students will receive a grade of zero (0) on any test not taken or assignment missed. The Hunter College policy on Incomplete as a grade can be found at

<http://catalog.hunter.cuny.edu/content.php?catoid=32&navoid=7753&hl=incomplete&returnto=search..>

## Hunter College Policy on 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 the CUNY Policy on Academic Integrity and will pursue cases of

academic dishonesty according to the Hunter College Academic Integrity Procedures.

## 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 access and accommodations for its registered students. Hunter College students with disabilities and medical conditions are encouraged to register with 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) 650-3231.

## 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 relationships. 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 (212-267-7273) or their local police precinct, or 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](mailto:colleen.barry@hunter.cuny.edu) or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: <http://www.hunter.cuny.edu/hr/repository/updated-policies/Policy%20Against%20Sexual%20Harassment.pdf/view>

	<h3>Schedule*</h3> <p>*This schedule is tentative and subject to change by the instructor. Any changes will be announced in advance.</p>
Week 1: 02/03	<b>Course Introduction, (Text Ch. 1)</b> <u>Required Reading:</u> Textbook, Ch. 1; Wackernagel et al., 1999, National natural capital accounting with the ecological footprint concept.
Week 2: 02/10	<b>Earth's Physical Systems: Matter, Energy and Geology (Text Ch. 2)</b> <u>Required Reading:</u> Textbook, Ch. 2; Steffen et al. 2007, The Anthropocene
Week 3: 02/17	<b>Evolution, Biodiversity and Population Ecology (Text Ch. 3); Species Interactions and Community Ecology (Text Ch. 4)</b> <u>Required Reading:</u> Textbook, Ch. 3; Textbook, Ch. 4; Pace et al., 2010, Recovery of native zooplankton associated with increased mortality of an invasive mussel

Week 4: 02/24	<b>Environmental Systems and Ecosystem Ecology (Text Ch. 5)</b> <u>Required Reading:</u> Textbook, Ch. 5; Vitousek et al., 1997, Human alteration of the global nitrogen cycle
Week 5: 03/03	<b>Ethics, Economics and Sustainable Development (Text Ch. 6); Environmental Policy-making (Text Ch. 7)</b> <u>Required Reading:</u> Textbook, Ch. 6; Textbook Ch. 7; Cobb et al., 1995, If the GDP is up, why is America down?
Week 6: 03/10	<b>Human Population (Text Ch. 8)</b> <u>Required Reading:</u> Textbook, Ch. 8; Hooke et al., 2012, Land Transformations by Humans
<b>Week 7: 03/17</b>	<b>Midterm Exam (1 hour)</b> <b>Soil and Agriculture (Text Ch. 9)</b> <u>Required Reading:</u> Textbook, Ch. 9; Montgomery, 2007, Soil Erosion and Sustainability
Week 8: 03/24	<b>Biotechnology and the future of food (Text Ch. 10); Biodiversity and Conservation Biology (Text Ch. 11)</b> <u>Required Reading:</u> Textbook Ch.10 and Ch. 11
Week 9: 04/07	<b>Forests and Forest Management (Text Ch. 12); Freshwater Systems and Resources (Text Ch. 15)</b> <u>Required Reading:</u> Textbook Ch.12 and 15
Week 10: 04/14	<b>Marine and Coastal Systems and Resources (Text Ch. 16)</b> <u>Required Reading:</u> Textbook Ch. 16
Week 11: 04/21	<b>Atmospheric Science (Text Ch. 17)</b> <u>Required Reading:</u> Textbook, Ch. 17
Week 12: 04/28	<b>Global Climate Change (Text Ch. 18)</b> <u>Required Reading:</u> Textbook, Ch. 18
Week 13: 05/05	<b>Applied Environmental Studies Assignment Presentations</b>
Week 14: 05/12	<b>Applied Environmental Studies Assignment Presentations</b>
<b>Final: 05/19</b>	<b>Final Exam (2 hours)</b> 9:00 - 11:00 am