

**NATURAL SCIENCES DEPARTMENT
HOSTOS COMMUNITY COLLEGE
of THE CITY UNIVERSITY OF NEW YORK**

ENV 120 SEC XXX ENVIRONMENTAL SCIENCE II CODE: XXXX

| | |
|---------------------|---|
| Meeting Times: | Lecture: DATE TIME ROOM |
| Lecture Instructor: | Name: |
| Office Hours: | DATE TIME ROOM EMAIL: xxxx@hostos.cuny.edu |

CREDITS: 3 credits, 3-hr lecture
Flexible Core: Scientific World

PREREQUISITES: ENV 110, ENV 111

COREQUISITES: ENV 122 (1 credit, 2-hour lab)

REQUIRED MATERIALS: Zero-cost course: same ENV110 course book:

REQUIRED MATERIALS:

Textbook:

W. Cunningham & M. Cunningham, Principles of Environmental Science, 8th Ed (without card access) Rent, Used, e-text or loose-leaf version **ISBN: 9780078036071 ISBN10: 0078036070**

Or

W. Cunningham & M. Cunningham, Principles of Environmental Science, 7th Ed (without card access) Rent, Used, e-text or loose-leaf version **ISBN: 9780073532516 ISBN10: 0073532517**

Online Bookstore access:

<https://hostos.textbookx.com/institutional/index.php?action=browse#books/1861058/>

COURSE DESCRIPTION:

This course uses general scientific principles of biology, ecology, earth science, and physical science in describing the environment, and how human activities affect the environment. Students will explore the interactions between organisms and their environments, and impact from humans. Specific topics will include biodiversity; forests, wildlife, and urban habitats; food and agriculture; public health; conservation and sustainability. This course is intended for non-science majors, and is the second semester of a two-course sequence. Offered in English and in Spanish

STUDENT LEARNING OUTCOMES:

Flexible Core Learning Outcomes for Scientific World

Students will:

- Gather, interpret, and assess information from a variety of sources and points of view (SW1)
- Evaluate evidence and arguments critically or analytically to reach the learning outcomes (SW2)
- Produce well-reasoned written or oral arguments using evidence to support conclusions (SW3)
- Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the scientific world, including, but not limited to: computer science, history of science, life and physical sciences, linguistics, logic, mathematics, psychology, statistics, and technology-related studies (SW4)
- Demonstrate how tools of science, mathematics, technology, or formal analysis can be used to analyze problems and develop solutions (SW5)
- Understand the scientific principles underlying matters of policy or public concern in which science plays a critical role with respect to modern development (SW6)

Discipline-Specific Learning Outcomes

At the end of this course, students will be able to:

- Learn about the principles of natural selection and adaptation and understand the intricate nature of relationships among organisms that comprise the ecosystems (DLO1)
- Understand growth and regulation of populations, and contrast natural and human population growth patterns (DLO2)
- Understand the natural forces that generate and maintain the biodiversity and the relationship between species diversity and community stability, and learn about the major human-cause threats to biodiversity (DLO3)
- Understand the activities that threaten forests, the challenges to forest conservation and how to preserve them (DLO4)
- Explain the development of modern industrial agriculture, including the use of irrigation, fertilizers, and pesticides, and the environmental consequences of modern farming methods (DLO5)
- Identify the three major categories of human health risk and list the major historical and emerging infectious diseases, and describe what makes some chemicals dangerous and the acceptable risk levels (DLO6)
- Address urban issues of nature and humans and describe the principles of smart growth and new urbanism, and describe sustainable development and its importance (DLO7)
- Describe some of the important U.S. and international environmental laws and conventions (DLO8)

Assessment Tools:**Discipline Learning Outcomes: DLO1-8****Scientific World Learning Outcomes: SW1-6****Assessed Scientific World Learning Outcomes: SW1****Discipline Learning Outcomes: DLO1-8****Assessment Tool:** Assignment: *Gathering and Interpreting Information from the Web*

The web is an excellent resource for data and this activity will help students gain the confidence and skills to access the data in a meaningful way. This activity also provides practice for the students to manipulate the data. The students will be required to take two information literacy workshops to learn how to gather, retrieve and evaluate information to support their points of views with peer-reviewed information from various sources. The students will be assigned to complete one variation from the following: Ecosystem Provinces, Air Pollution, Water Resources, Forests and Rangelands. For each variation, they have to find specific information that answers several discussion questions. The students will be required to submit a written 2-page report summarizing their findings.

Assessed Scientific World Learning outcomes: SW2**Discipline Learning Outcomes: DLO1-8****Assessment Tool:** Participation in Class Discussion and a Written Reflection after Case Study Discussions: The case studies are an integral component of the course.

The instructor will select case studies revolving around environmental issues discussed in class from the following site: <http://sciencecases.lib.buffalo.edu/cs/collection/>. Each student will be expected to comment the case study prompts posted by the professor in the blackboard and/or comment other student postings. Case studies will be discussed in the blackboard before discussing it in class.

Students will be required to participate in each case study discussion in the classroom. Each case study is related to the course material, and includes questions that the students should be able to answer after covering the topic(s) in class. The students will be expected to submit a 2-page paper summarizing the case study and presenting their opinion.

Assessed Scientific World Learning outcomes: SW3**Discipline Learning Outcomes: DLO1-8****Assessment Tool:** Earth Day/Science Day Project: The Natural Sciences Department celebrates Earth Day during spring semester and Science Day during the fall. This scientific event includes lectures by faculty, visiting scholars, activists, writers, as well as faculty-led student presentations on various issues central to Science and the Environment. Students will be required to participate in this event by contributing a poster or a short talk. These posters or talks will focus on the same topic related to Environmental Science. More about these projects will be distributed throughout the semester. For example, why is this assignment useful to the student as a scholar? Participating in a college-wide forum of ideas will give students practice presenting their knowledge in a professional setting.**Assessed Scientific World Learning outcomes: SW4****Discipline Learning Outcomes: DLO1-8****Assessment Tool:** Lecture Exams: Different types of Bloom taxonomy-classified questions such as short answer, written and multiple choice questions will be used to assess the above described learning outcomes.**Assessed Scientific World Learning outcomes: SW5**

Discipline Learning Outcomes: DLO1-8

Assessment Tool: Final Exam: The final exam will be based on problem solving/analytical questions and a case study similar to the ones discussed during the semester.

Assessed Scientific World Learning outcomes: SW6**Discipline Learning Outcomes: DLO1-7**

Assessment Tool: Earth Day/Science Day Presentation and Final Exam: Students will prepare a presentation on a topic related to scientific and public policy aspects of environmental pollution. Students will be able to choose the topic to develop this assignment and discuss the topic approval with the instructor. Specific guidelines will be provided separately. After revision and feedback from the professor, students will continue working on this paper as part of their project for “Earth day” (Spring semester) or “Science Day” (Fall semester). Specific guidelines will be provided separately.

GRADE DISTRIBUTION:

The overall course grade will be computed using the following general distribution:

| Lecture | 100% |
|-------------------------|------|
| - Three In-Class Exams | 45% |
| - Final Cumulative Exam | 15% |
| - Homework | 10% |
| - Assignment | 10% |
| - Class Project | 5% |
| - Case Studies | 15% |

There will be three in-class examinations, graded homework problems, one assignment, creative art project and two case studies. The final comprehensive examination will be given during the final examination period.

Assignments, Case Studies and Homework:

In this course, we will analyze 2 environmental cases studies that aim to introduce you to various earth and environmental issues and help you understand how humans interact, affect and are influenced by our environment. Participation in case studies is part of your grade, and it cannot be made up in the case of absences, even excused ones (illness, academic trips, etc.).

There will be weekly homework assignments through the Connect website. The homework problems are due on the date indicated on the website. The Assignment(s) should be submitted through Blackboard or in person. The due date for the assignment will be determined by your instructor. Late assignments and homeworks will be reduced by 10% and will be accepted only up to 1 week after the due date. You are responsible for completing all the required assignments. If you do not turn an assignment within one week of its due date, you will receive a 0 for that grade. NO exceptions.

Creative Art Project:

For this project, you are asked to develop an original piece of art or literature that integrates at least one major theme of environmental science. This is a chance to be creative, expressive, and artistic. Examples include painted, sketched, quilted, or sculpted art, photography, poems, songs, plays, and short stories. You may work in a group of up to 3 students but you must receive a prior permission from your course instructor. Each person in the group is responsible for understanding all components of the project, therefore, the group must work together and plan well enough in advance to give each member an opportunity to thoroughly review the final project. The final project will be co-graded by your fellow classmates and the instructor.

GRADING POLICY:

The grade of Incomplete (I) is given in regular courses upon request of the student for personal emergencies that are verifiable. The faculty member has the responsibility to provide Inc grade only to those students who are passing the course. The student has the responsibility to take the initiative in completing the work, and is expected to make up the incomplete during the first semester in residence after receiving the grade of Incomplete. If the student does not make up the incomplete during the following semester after receiving it, the faculty member may give an F grade without further consultation with the student. If after the end of the first semester the Inc remains on the record it will be designated as an F and will be computed in the student's GPA.

| Grade | | GPA Value | Grade | | GPA Value |
|-------|---------|-----------|-------|-----------|-----------|
| A | 93-100% | 4.0 | C+ | 77-79% | 2.3 |
| A- | 90-92% | 3.7 | C | 70-76% | 2 |
| B+ | 87-89% | 3.3 | D | 60-69% | 1 |
| B | 83-86% | 3 | F | below 60% | 0 |
| B- | 80-82% | 2.7 | | | |

ACADEMIC INTEGRITY:

Hostos Community College believes that developing student's abilities to think through issues and problems by themselves is central to the educational process. Since the Hostos College degree signifies that the student knows the material s/he has studied, and the practice of academic dishonesty results in grades or scores that do not reflect how much or how well the student has learned, understood, or mastered the material, the College will investigate any form of academic dishonesty brought to its attention. If the charge of academic dishonesty is proved, the College will impose sanctions. The three most common forms of academic dishonesty are cheating, plagiarism, and bribery.

In the collegiate setting, cheating is defined as the purposeful misrepresentation of another's work as one's own. Faculty and students alike are responsible for upholding the integrity of this institution by not participating either directly or indirectly in act of cheating and by discouraging others from doing so. Plagiarism is a form of cheating which occurs when persons, even if unintentionally, fail to acknowledge appropriately the sources for the ideas, language, concepts, inventions, etc. referred to in their own work. Thus, any attempt to claim another's intellectual or artistic work as one's own constitutes an act of plagiarism. In the collegiate setting, bribery involves the offering, promising, or

giving of items of value, such as money or gifts, to a person in a position of authority, such as a teacher, administrator, or staff member, so as to influence his/her judgment or conduct in favor of the student. The offering of sexual favors in exchange for a grade, test score, or other academic favor, shall be considered attempted bribery. The matter of sexual favors, either requested or offered, in exchange for a grade, test score or other academic favor, shall also be handled as per the Sexual Harassment procedures of the College.

If you are suspected of plagiarism or cheating or if you attempt to bribe or influence your professor, you will be immediately reported to the college's Academic Integrity Officer. You will be unable to drop the class. The penalties range from an F with a score of 0 for an assignment to Failure for the entire term to expulsion from The City University of New York.

Students are expected to attend all class meeting in the courses for which they are registered. Classes begin at the times indicated in the official schedule of classes. Arrival in class after the scheduled starting time constitutes lateness.

The maximum number of absences is limited to 15% of the number of scheduled class hours per semester and a student absent more than the indicated 15% is deemed excessively absent. Attendance is monitored from the first official day of classes. In the case of excessive absences or lateness, the instructor has the right to lower the grade, assign a failing grade, or assign additional written work or readings.

Absences due to late registration, change of program, or extenuating circumstances will be considered on an individual basis by the instructor. Each department and program may specify in writing a different attendance policy. Instructors are required to keep an official record of student attendance and inform each class of the College's or department attendance policy.

COURSE CONTENT

| Week # | Topic | Chapter # | Homework |
|--------|--|-----------|---|
| 1 | Introduction to Environmental Science (Review) | 1 | |
| 2 | Species Interactions and Biological Communities | 3 | End of Chapter Problems |
| 3 | Human Populations | 4 | End of Chapter Problems |
| 4 | Exam 1 (Ch 1, 3 and 4) | | |
| 5 | Biomes and Biodiversity Assignment “Gathering and Interpreting Information from the Web” | 5 | End of Chapter Problems |
| 6 | Case Study 1 – “ <i>Are We too Clean? Biodiversity Within the Human Body</i> ” Documentary - “ <i>Living Organisms Inside Your Body</i> ” | | Link To Case Study Link to Documentary |
| 7 | Environmental Conservation: Forests, Grasslands, Parks and Nature Preserves | 6 | End of Chapter Problems |
| 8 | Exam 2 (Ch 5 and 6) | | |
| 9 | Food and Agriculture | 7 | End of Chapter Problems |
| 10 | Environmental Health and Toxicology | 8 | End of Chapter Problems |
| 11 | Case Study 2 - “ <i>Katrina's Troubled Waters: The Rescue Worker's Dilemma</i> ” Documentary – “ <i>Unacceptable Levels</i> ” | | Link To Case Study Link to the Documentary |
| 12 | Economics and Urbanization | 15 | End of Chapter Problems |
| 13 | Exam 3 (Ch 7, 8 and 15) | | |
| 14 | Environmental Policy and Sustainability | 16 | End of Chapter Problems |
| 15 | Final Exam | | |