Principles of Environmental Science

ESC 150 – Wesleyan College

Syllabus

Summer 2023, May 29 - June 30

Professor Contact Information

Professor: TBA

Office Hours: by appointment

Contact Information: TBA

Text/ISBN: *Environment: the Science Behind the Stories*, 5th ed (2014). (Jay Withgott & Matthew Laposata, ISBN 9780321897428), Pearson/ Benjamin Cummings.

Policies and Procedures

Course Goals
To appreciate that the Earth and its living systems sustain humankind, and to understand how the industrial and agricultural activities of human societies modify biogeochemical cycles and transform natural ecosystems, often to the detriment of ourselves and other species.

Prerequisite
None

Credit Hours
4

Course Objectives
By the end of this course, students will be able to
1. Use empirical evidence to analyze or explain natural phenomena
2. Interpret graphic representations of data
3. Make informed decisions about scientific issues underlying matters of public policy

Participation and Grading
Your grade in this course will be determined by your performance in the following categories:

Assignments	Percentage
Quizzes	30%
Exams	30%
Labs	25%
Discussion	15%
Total	**100%**

Grading Scale:
The grading scale in the class will be as follows:

A=90-100%
B=80-89%
C=70-79%
D=60-69%
F=59% And Below

You may track your running point total throughout the term via our course site. Please be aware, however, that the course grade you see in the site will reflect only assignments and activities you have already completed and that your professor has graded.

Academic Integrity
Wesleyan's College expects student to show integrity in all of their work. Cheating, plagiarism, unauthorized collaboration, inventing or falsifying information, turning in work for more than one class without authorization, or helping someone else are all violations of the Honor Code and are not tolerated. Any of these forms of cheating will not be tolerated and will be grounds for a grade of zero on the exam or assignment and a grade of F for the course, in addition to any penalties imposed by the Provost.

Potential Changes to Course Schedule
The following week-to-week schedule is a general plan for the course. Deviations may be necessary and will be announced in advance via announcement and/or e-mail. Students should check their course site announcements and emails at least once every twenty-four hours throughout the term to watch for updates regarding this course.

Course Schedule

Week 1
Course introduction
The tragedy of the commons; environmental ethics;
environmental policies;
environmental economics (externalities and the free rider problem);
Human population growth;
major stages in human economies (hunter-gatherer, traditional agriculture, industrial agriculture);

Week 2

soils and sustainability;
food, agriculture, and the Green Revolution;
Biodiversity and conservation;
ecosystem services and benefits of biodiversity;
reasons for biodiversity loss;

Week 3

forest fragmentation and the design of nature preserves;
The fundamentals of chemistry;
environmental toxicology and water pollution;
point-source vs. non-point source pollution;
toxins;

Week 4

bio-magnification.
The Atmosphere: structure and processes;
atmospheric pollution;
primary vs. secondary air pollutants;
types of air pollution.

Week 5

Energy and the laws of thermodynamics;
fossil fuels and the industrial revolution;
global climate change;
Alternative and renewable energy: solar, wind, hydroelectricity, nuclear, geothermal, and bioenergy;
Sustainability and the future.

Civility in the Academic Community

Students, faculty, and staff are expected to treat one another with respect in all interactions both during class meetings and on the Moodle course site. Rude, disruptive and/or disrespectful behaviors as determined by a faculty member interfere with other students' rights and with the professor's ability to teach. Therefore, any student exhibiting unacceptable behaviors during a class meeting or Moodle collaborative activity will be asked to leave and will be counted absent for that class period or activity. Failure to cooperate with this process will result in disciplinary action that may include withdrawal from the class or dismissal from the College. Violations will be reported to the Provost.

Disabilities Statement

Wesleyan College is committed to equal education, full participation and access to facilities for all students. Any student who requires reasonable academic accommodations, use of auxiliary aids or facility access for a class must first register with Disability Resources by contacting Jill Amos, Director of Disability and Advocacy Services, jamos@wesleyancollege.edu or (478) 757-5219. If reasonable accommodations are established, students should request Accommodation Letters from Disability Resources then schedule an appointment to meet with the professor to determine how the accommodations will be implemented for each class as early in the semester as possible. Accommodations require advance notice to implement and will not be retroactively administered for the semester. Accommodations that decrease the integrity of a course will not be approved.

Privacy in Teaching & Learning Spaces

In order to promote an environment in which ideas may be freely expressed, the interior offices; in-person and virtual classrooms; and Moodle course sites at Wesleyan are private spaces. The unauthorized creation of photographic images, audio recordings, or video recordings of students or faculty in these spaces is considered to be disruptive behavior which may result in a student's removal from class according to the professor's discretion. The distribution of unauthorized images or recordings, or of class meeting recordings shared by a professor for instructional purposes, without the express written permission of the College is strictly prohibited and is subject to disciplinary action by the Provost of the College.