



Course Syllabus – SEMESTER **School of Science, Technology, Engineering and Mathematics**

Program Name: Environmental Science Concentration

Course Name: Introduction to Environmental Science

Course Number: ENV 101-XXX

Credits: 3

Contact Hours: 3 (3 Lecture)

Instructor's Name:

Office Location: N/A

Office Hours: N/A

Campus Phone: N/A

Mobile Phone:

School of STEM Office:

Campus E-mail:

This course provides an overview of environmental science concepts with a focus on the impact of human activities on the environment. Sustainable development and pollution prevention will be stressed as solutions to air and water pollution, soil conservation and food production, solid and hazardous waste, alternative energy, climate change and ozone depletion. Students will study current environmental issues from a scientific viewpoint as they relate to our culture, the economy and politics. Field trips to see environmental protection in action will supplement the course material.

Prerequisites/Co-Requisites: None

Current Textbooks, Materials, Equipment (software/hardware requirements):

Principles of Environmental Science; Inquiry and Applications, 10th edition; Cunningham, Cunningham and O'Reilly; 2023

The electronic version of this textbook is included in your course fees. You will be able to access it through Owens Blackboard. If you prefer a printed copy, you may purchase one for a reasonable price through the McGraw Hill website.

Course Objectives:

1. This course will illustrate a practical working knowledge of the scientific method.
2. This course will familiarize students with the roles of living things in ecosystems and the human relationship with the environment, including sustainability of the human population and impact on biodiversity and climate.
3. This course will enable students to recognize the cycling of matter and the flow of energy through ecosystems.
4. This course will teach students how to evaluate the sustainability of their lifestyle and consumer choices such as food, shelter, energy and consumer goods.
5. This course will explain how to recognize the main pollution and supply problems surrounding the earth's air, water and diverse biological resources.

Student Learning Outcomes:

1. Students will identify the roles of living things in ecosystems and services provided by nature that are beneficial to humans.
2. Students will critique articles about environmental issues with regards to their adherence to the scientific method as well as their relevance in today's society.
3. Students will explain the cycling of matter and the flow of energy through ecosystems.
4. Students will assess their lifestyle and consumer choices such as food, shelter, energy and consumer goods in terms of their environmental sustainability.
5. Students will identify the main pollution and supply problems with air, water and biological resources.

Attendance

Attendance and participation is expected and will be noted each week. Missing class not only detracts from your understanding and application of the material, but also limits our class discussion. Attendance above 85% (no more than 2 missed classes) will be considered if your final score is close to a grade cutoff.

Earning Points in this class:**Exams****There will be a midterm and a final exam.**

Exams will be a combination of multiple choice and short essay questions. Exams will consist of an in-class portion and an online portion. Both will be taken during class time.

Course Content in Blackboard is where assignments are found.**TextBook Assignments will be given weekly**

You can also ask questions about specific concepts you don't understand or are particularly interested in. **Other weekly assignments will be posted.**

****Class debates will be offered as time permits around major topics in the course.**

Paper and Presentation (150-points, 75 for 2-page paper and 75 for the presentation)

Each student will present a 5-minute minimum to 10-minute class presentation based on their research paper. These will be scheduled later in the semester. You should be prepared to summarize the article and take questions; you should prepare a PowerPoint or other style presentation to guide your discussion. Missed presentations may not be made up unless you inform me the day before AND there is sufficient class time to fit in your make up presentation

Final Exam

The final exam will be comprehensive over the entire semester.

Field trips (2 are planned)

We will try to schedule field trips as time and weather permit.

Grading Procedure:

Based on grades weighted by category:

A 90-100%

B 80-89.9%

C 70-79.9%

D 60-69.9%

F below 60%

General Information

For information on FERPA, Cheating and Plagiarism, Assessment of Student Learning Outcomes and Student Code of Conduct, please refer to the appropriate section of the current Owens Community College Catalog online.

Disability Resource Center:

If you have a disability or acquire one, you may be entitled to receive individualized services and/or accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to apply for services, please contact the Office of Disability Services in College Hall 116 at 567-661-7007 or email disability@owens.edu.

Student Mental Health Services

Student Mental Health Services (SMHS) are available at no charge to Owens' students. SMHS provides assistance with personal, educational, interpersonal, family, social, or psychological difficulties. If you feel you may benefit from this service, contact SMHS at 567.661.2107. If you have concerns about your safety or the safety of others, contact the Department of Public Safety immediately at 567.661.7575.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct:

All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

If you are unfamiliar with the Anti-Discrimination and Harassment Policy, it can be found at: <https://www.owens.edu/trustees/procedures/proc3358-11-4-17.pdf>

If you are unfamiliar with the Title IX/Sexual Misconduct Procedures and Guidelines, it can be found at: <https://www.owens.edu/trustees/procedures/proc3358-11-4-17-titleIX.pdf>

Student Code of Conduct:

All students are expected to follow Owens Community College's Student Code of Conduct. If you are unfamiliar with the code, it can be found at <https://www.owens.edu/conduct/>

Student Printing

Owens Community College uses Papercut for classroom and other academic printing. A student will receive a \$3.00 allotment which is equivalent to 100 black and white prints per semester (black and white prints are \$0.03, color prints are \$0.06). If additional funds are required, deposits may be made via the web using a debit or credit card (Mastercard, Visa, or Discover) by following the link in each user's Papercut portal. To get to the portal go to <https://papercut.owens.edu> and log in with your Owens' username and password. Note that though funds deposited by credit card are not refundable, they do carry over into future semesters.

Writing Center

For assistance in writing your assignments or discussions, you are encouraged to visit the **College Writing Centers** on the Toledo Campus, Founders Hall. Call 567.661.7351 for further details.

Specific Course Rules

1. Class **attendance and participation** are expected, and will be considered if your final grade falls close to a cutoff. You are also expected to engage in classroom conversations and be attentive and respectful of other students' comments and viewpoints.
2. In the event of an absence from class, it is the student's responsibility to check Blackboard and/or contact the instructor and turn in any assignments that were due (same due dates apply). Late assignments turned in at the next class will be penalized. Missed presentations due to an absence may not be made up unless approved and arranged with the instructor by 5 PM the day before the presentation.
3. Late assignments or article reviews will be accepted with a 15% late penalty up to a deadline arranged with the instructor. Contact the instructor asap if you miss an assignment due date to determine if/when it may be submitted.
4. **ALL** college-wide rules as presented in the STUDENT HANDBOOK will be enforced. Please note policies on **CHEATING and PLAGIARISM**. *Please Note: Cutting/pasting material from a website without properly quoting it is considered plagiarism. If I detect it (and I have software to do so), you will receive a zero for the assignment. Repeated violations will be reported and may result in failure of the class or dismissal from the College. Directly copying from an AI service such as ChatGPT without attribution is also considered plagiarism and will result in a zero score.*
5. Quizzes and exams will be given either in class or online at the discretion of the instructor. It is the responsibility of the student to understand what is expected and to do all work as assigned and by posted due dates.
6. Classroom attire will be casual and, if field trips are planned, clothing should be appropriate for the trip and anticipated activities. Specific clothing may be required on field trips (e.g., long pants and closed-toed shoes).

Course/Assignment Calendar

Subject to change by the instructor; changes will be communicated in class and email

Class	Topic
1	Introduction to the course and each other; Syllabus review Chapter 1 Understanding Our Environment Scientific Method – Observe / Hypothesis / Predict-Test / Gather Data / Interpret / Redo Tragedy of the Commons
2	Chapter 2 Environmental Systems: Matter, Energy and Life Systems – Feedback Loops Elements – Molecules – Ions Properties of Water Cells and nutrients (N, P)
3	Chapter 2, cont'd Energy and Living Systems – Thermodynamics Photosynthesis Food chains – food webs Biogeochemical Cycles – Water, Carbon, Nitrogen, Phosphorus
4	Chapter 3 Evolution, Species Interactions and Biological Communities Natural Selection – Adaptation Limiting Factors Habitat and Niche, Speciation Species Interaction Population Growth rates, Diversity, Abundance Primary Productivity, Succession
5	Chapter 5 Biomes and Biodiversity Terrestrial, Marine Freshwater Ecosystems - Lakes, Wetlands Biodiversity – importance of, threats to Protecting biodiversity, Endangered Species Act
6	Midterm Exam
7	Chapter 7 Food and Agriculture
8	<i>Chapter 11:</i> Water Resources The Lake Erie algae problem (case study) Water cycling and purification – surface and groundwater Water usage – water footprint Water abundance, supply and scarcity/conservation
9	Chapter 11, cont'd
10	Water Pollution Point and nonpoint sources Biological pollutants , BOD, nutrient pollution, eutrophication Inorganic and salt pollutants Sediment pollution Water pollution remediation (environment)

	Toxicology
11	Chapter 8 Environmental Health and Toxicology
12	Chapter 9 Climate
13	Chapter 10 Air Pollution
14	Chapter 13 Energy Sources, Efficiency and Sustainability
15	Chapter 14 Solid and Hazardous Waste
16	<i>Presentations and Review</i>
17	<i>Final Exam</i>