



# Fundamentals of Environmental Science

ES 103 - Fall 2025

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Instructor	Dr. John R. Taylor
E-mail	taylorjr@suu.edu
Course Meeting Days and Time	Tuesday & Thursday 11:00-12:15 pm in the MuR
Office Hours	Email for Appointment (Generally MW 12:30-2:00 pm; TR 3:30-4:30 pm)
Office Phone	N/A
Office Location	Harlaxton Manor
Course Mode	In-Person
Experiential Learning Trip Fees	\$80

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## Catalog Description:

Introduces interdisciplinary nature of problems relating to the human environment, including social, political, and economic aspects.

## Credit Hour Policy Statement:

### Standard Lecture:

This class meets the federal credit hour policy of 1 hour of class with an expected 2 hours of additional student work outside of class each week for approximately 15 weeks for each hour of credit, or a total of 45-75 total hours for each credit.

## General Education Requirements:

This course meets the General Education requirements for Outcome 8 Overlay D Social Responsibility-Environmental.

## Course Learning Objectives:

### **Explain Environmental Systems and Processes:**

Students will be able to describe the fundamental physical, chemical, and biological processes that shape Earth's environmental systems, including energy flow, the cycling of matter, and ecosystem dynamics.

### **Identify Environmental Issues:**

Students will identify and analyze key global and local environmental challenges, such as climate change, biodiversity loss, pollution, and resource depletion, and understand their causes and consequences.

# HARLAXTON



### **Evaluate Human-Environment Interactions:**

Students will assess the impacts of human activities on natural systems, including the role of population growth, consumption patterns, and technological advancements, and explore sustainable solutions.

### **Interpret Environmental Data:**

Students will develop skills in interpreting environmental data and scientific studies, applying critical thinking to evaluate evidence and develop informed conclusions about environmental problems and policies.

### **Methods of Instructions:**

A combination of in-class discussion, group work, in-class activities, lectures, and viewing various media. We will also be visiting natural areas within easy driving distance from Harlaxton. All visits will occur within our appointed class time. Be mindful of weather conditions and dress accordingly.

### **Textbooks and Required Reading:**

- Textbook readings are free and will be provided in class.
- Leopold, Aldo. A Sand County Almanac. New York: Oxford University Press—any addition will work

### **Course Schedule:**

#### **WEEK 1**

Reading: Chapter 1—What is Science

Discussion: The Nature of Science

Activity: What is Science Survey—The Myths of Science

Activity: Where Are You At?

#### **WEEK 2**

Discussion: What is Environmental Science

Discussion: Forces, Matter, and Energy (A Primer)

SKILL: The Journey to My Tree (Nature Journaling-descriptions)

Reading in Sand County Almanac: January

#### **WEEK 3**

Quiz: Chapter 1—Bring completed to class

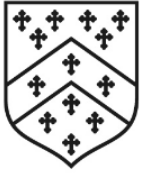
Reading: Chapter 2--Food

SKILL: Art & Writing (Nature Journaling on the small scale)

Reading: February

#### **WEEK 4**

Discussion: Continued Exploration of Chemistry of Life



SKILL: Nature Journaling (Metadata and quantitative data)

Reading: March

### **WEEK 5**

Discussion: Producers, Photosynthesis, and Plants

Discussion: Plants and Fungi

SKILL: Stomata (Microscopy)

Reading: April

### **WEEK 6**

Discussion: Cellular Respiration

SKILL: Tracking and Documenting Presence

Reading May

### **WEEK 7**

Reading: Chapter 3—Air, Land, and Water

Discussion: Atmosphere

SKILL: Mapping (UTM, Lat/Long, Township & Range, GPS)

Reading: June

### **WEEK 8      MID-TERM BREAK   No Classes**

### **WEEK 9**

Discussion: All About Water (the water cycle)

Reading: July

### **WEEK 10**

Discussion: Weather & Climate

SKILL: Breaking down Climate Data

Reading: August

### **WEEK 11**

Discussion: Land

Discussion: Carbon and Nitrogen cycles

Reading: September

### **WEEK 12**

Quiz: Chapter 3-Bring completed to class



Reading: Chapter 4—Natural Change

Discussion: Sun, Moon, and Stars

Reading: October

### **WEEK 13**

Discussion: Seasons and Cycles

Discussion: Episodic Changes/special changes

Reading: November

### **WEEK 14**

Discussion: Migrations

Discussion: Evolutionary Forces

Activity 10: Hardy Weinberg (Big Populations)

Reading: December

### **WEEK 15**

Quiz: Chapter 4—Bring completed to class

Harlaxton Geographic Screening

Get Involved: Due

*Information contained in this syllabus, other than the grading, late assignments, make-up work, and attendance policies, may be subject to change with advance notice, as deemed appropriate by the instructor.*

## **Grading Criteria:**

### **ASSIGNMENTS, ACTIVITIES, & MOVIES (25% of Grade)**

Each UNIT will consist of in-class assignments, activities, and even assigned movies to watch. In-class activities cannot be made up and you will miss those points.

### **HARLAXTON GEOGRAPHIC CHANNEL (40% of Grade)**

Harlaxton Geographic Channel will be our culminating event for the course. This formal affair will be our class and any friends at Harlaxton you'd like to invite to view your documentary film of a wild area surrounding Harlaxton. You'll be assigned to a small group. Your group will adopt a tract of land, at least 10 acres. You will spend significant amounts of time here exploring and observing every square inch of it. Take a chair, binoculars, pen and pencil, mobile phone, etc., watching the sunrises, sunsets, rainstorms, and more! You will document the animals and plants that call this place home. You will submit a list of plants and animals you saw (with scientific



names, if possible) at the end of the semester. Document how humans have influenced the area. Take pictures, record videos, draw, whatever you can think of to help us experience your tract of land. Then, create a 5-7 minute movie as if it were a nature show on National Geographic. Be creative! Leave us thinking that you discovered the greatest 10 acres ever found! We'll watch these movies as part of our final.

### **SKILLS SESSIONS & FIELD TRIPS (25% of Grade)**

During SEVEN of the classes we'll learn specific observation/investigation/and communication methods (journaling, digital photography, movie making, GPS/GIS, and art skills. The hope is that you will use these features as a way to complete your Harlaxton Geo project. Additionally, THREE of our classes will involve Field Trips to nearby nature preserves and outdoor areas. These cannot be made up, so plan on attending and doing the associated assignments that correspond with them.

### **GET INVOLVED (10% of Grade)**

You're living at Harlaxton Manor, hopefully spending a semester abroad exploring. Make one of those explorations to something that is science (especially biologically) based. A museum? An aquarium? Get creative and get involved in something new and science-y. Write a short paper describing what you did and a reflection of what you learned.

Make sure to plan ahead with other obligations to attend one of these Get Involved Assignments.

**A=93%, A- =90%, B+ =87%, B=84%, B- =80%, C+ =77%, C = 74%, C- =70%, D+ =67%, D =64%, D- =60%**

### **Withdrawal and Attendance policies:**

Harlaxton College expects regular class attendance by all students. Students are considered sufficiently mature to appreciate the necessity of regular and punctual attendance, to accept this personal responsibility and to accept the consequences of failure to attend. When absences occur due to emergency or medical reasons, students are expected to notify their instructors of the absence prior to class or to seek the assistance of the College nurse or a member of the Student Experience Team for help in notifying instructors.

Instructors have the authority to grant excused absences for medical, psychological, or personal reasons upon review of appropriate documentation and professional recommendation supporting such a request. In the event of long-term illness, reasonable accommodations will be made to allow a student to complete a course. In these cases, the Dean will need to approve the long term nature of the accommodation.

The Dean of Harlaxton College has the authority to grant excused absences for medical, psychological, or personal reasons.



Each instructor is expected to maintain an attendance policy in keeping with the nature of the Harlaxton program and may consider it in evaluating performance in their courses.

### **Policy Governing Unexcused Absences:**

Harlaxton College operates an attendance policy that is binding on all faculty and students. The number of unexcused absences that are allowed before incurring a penalty is related to the number of times a class meets each week. For courses which meet three times a week, students are allowed a maximum of three unexcused absences during the semester without attracting penalty points. For courses meeting twice a week two such absences are permitted, and for courses meeting once a week a single absence is allowed. More than two unexcused absences will attract a grade penalty of third-letter grade penalty (A- would drop to a B+, and so forth, for each additional absence).

### **Policy Governing Excused Absences.**

- Excused absences are not given to facilitate student travel independent of College-sponsored travel.
- Students may be permitted to miss class because of participation in academic field trips.
- Instructors must co-ordinate and confirm academic fieldtrips with the Dean, prior to the commencement of the Semester to ensure their inclusion in the Semester timetable.
- Where authorization for an academic fieldtrip is requested after the commencement of the semester, the request must be submitted to the Dean.

The following information is required:

- Purpose and brief description of the official Harlaxton event or academic fieldtrip.
- Dates, location, and times (as applicable).
- Alphabetical list of students involved [Last Name/First Name] along with their student identification number.

If approval is granted:

- Instructors affected will be notified at least one week prior to the class period during which absence is anticipated, or as soon as possible.
- Missed class time due to student participation is to be considered an excused absence.
- The grade of a student may not be lowered in any class due to excused absences.
- It is the student's responsibility - to take the initiative by consulting with their instructors before the absence occurs, and - to do what is required by the instructor to make up all missed assignments and/or examinations.
- Instructors are required to assist students in these occasional situations of excused absences.

### **Honor Code:**

All students at the University of Evansville agree to the University honor code: *I will neither give nor receive unauthorized aid, nor will I tolerate an environment that condones the use of unauthorized aid.*



**AI may be used only with prior permission or direction by the instructor.**

- All work submitted in this course must be your own.
- The use of generative AI composition tools, such as those offered by ChatGPT, Google Gemini etc. is prohibited in this course except for specific assignments and subject to the instructor's guidelines.
- Work generated by such tools without proper attribution is plagiarism and, thereby, a breach of the University's Plagiarism and Academic Honesty policy.

### **Disability Policy:**

It is the policy and practice of the University of Evansville to make reasonable accommodations for students with properly documented disabilities. Students should contact Disability Services within the Office of Counseling Services by calling 812-488-2663 to seek services or accommodations for disabilities. Written notification to faculty from Disability Services is required for academic accommodations.

The University of Evansville Disability Services office will share the request for academic accommodations with the Academic Support team at Harlaxton College. Staff members at Harlaxton will meet individually with students to discuss needs and provide additional information related to examinations or other assessments.

Students from partner institutions should provide the appropriate letter of accommodation from their institution to the Academic Support team at Harlaxton College.



### **Non-Discrimination Statement**

The University of Evansville expects all members of its community to treat each other with respect and civility. Harassing behaviors directed towards any member of our community will not be tolerated. As part of its commitment to non-discrimination, the University specifically prohibits harassment based on any other characteristics set forth in its nondiscrimination statement as follows: including race, color, gender, gender identity and expression, sexual orientation, creed or religion, national origin, age, disability, veteran status and all federally protected groups/classes. Any form of harassment undermines the mission of the University and negatively impacts the University community as a whole.

### **Prohibited Conduct and Confidentiality**

The University of Evansville is committed to fostering an atmosphere free from harassment and discrimination. This commitment includes identifying problems that may lead to sexual harassment and misconduct, as well as other forms of harassment and discrimination, by creating an atmosphere in which the entire University community is sensitive to preventing prohibited conduct. Additionally, the University is committed to providing support and resources to individuals who have experienced prohibited conduct. This commitment includes effectively responding when a student, visitor, guest or program participant is the victim of prohibited conduct.

All campus employees, students, and guests are required to abide by the Title IX and Other Sexual Harassment and Misconduct Policy, the Harassment and Discrimination Policy, and the Consensual Sexual or Romantic Relationships Between Employees and Students Policy. Violation of these policies could result in disciplinary action, up to and including expulsion for students and termination for employees.

Faculty members at the University of Evansville are considered “Responsible Employees” under the applicable federal guidelines and the University’s policies. This means that I am unable to offer you confidentiality if you report any incidence of prohibited conduct to me as defined by Title IX statute. If I am made aware of a violation, I am required to report any known information to the Office of Institutional Equity.

You may choose to report the violation yourself the following ways:

Email: · Annie Sills, Assistant Director of Institutional Equity and Title IX Coordinator:

[cs175@evansville.edu](mailto:cs175@evansville.edu) ·

Keith Gehlhausen, Executive Director of HR and Institutional Equity: [kg77@evansville.edu](mailto:kg77@evansville.edu) ·

Title IX: [titleix@evansville.edu](mailto:titleix@evansville.edu)

Phone: 812-288-5261

Online: <https://www.evansville.edu/safety/report.cfm>

You may also choose to speak with a Confidential Resource. Confidential Resources are required to maintain confidentiality and cannot report violations to the Office of Institutional Equity:

**University of Evansville**





- Counseling Services: [counselingservices@evansville.edu](mailto:counselingservices@evansville.edu), 812-488-2633
- Health Center Professionals: [healthcenter@evansville.edu](mailto:healthcenter@evansville.edu), 812-488-2033
- University Chaplain: [chaplain@evansville.edu](mailto:chaplain@evansville.edu), 812-488-5262

### **Harlaxton College**

- College Nurse: Lesley Selby, RGN, +44 01476 403027, [lseyby@harlaxton.ac.uk](mailto:lseyby@harlaxton.ac.uk)
- Counselling Services: [counselling@harlaxton.ac.uk](mailto:counselling@harlaxton.ac.uk)