

Introduction to Environmental Science (ESCI 1301)

Term: Fall 2025

Delivery Method: In-person

Meeting Days and Times: Tuesdays & Thursdays, 9:00 am – 10:20 am

Location: UGLC 346

Instructor Information

Instructor: Dr. Marguerite Mauritz (Dr. Mauritz, Dr. M)

Teaching Assistant: Fernanda Lugo (PhD, Environmental Science)

Instructor Email: memauritz@utep.edu | **TA Email:** flugo@miners.utep.edu

Office Location: Biology, B415

Office Hours: Tuesday and Thursday, 11-12pm in my office. Can be virtual, if needed. You can also ask me quick questions after class.

Appointments. Email me to set up. Please plan accordingly before deadlines – students must plan at least two business days ahead when requesting appointments.

Course Description

This class introduces core principles of environmental science and sustainability with a focus on interactions between ecosystems and humans. We will examine how ecosystems on earth form and function, human use and reliance on natural resources, and the role of human decisions and values in sustainable management. This class places a strong emphasis on active learning and a flipped classroom model. This means concepts will be introduced in pre-class reading and assignments, and class time will be used for discussions, activities, and delving further into concepts. We will learn as scientists do, via the scientific method and evidence-based reasoning, and use these tools for exploring complexity and decision-making at global to local levels.

Course Format and Flow

This course consists of 5 modules: **Introduction + Modules 1-3**. The Introduction module is one week, all other modules are four weeks long. Each week consists of two 80-minute in-person sessions.

Weeks 1 & 2: Introductory concepts, terminology, foundation activities, group exploration.

Weeks 3 & 4: Adding complexity with deep dive concepts, problem solving, applied thinking .

Progression through modules and in-class materials are **unlocked by completion of foundation materials before class**, ensuring preparation and engagement. Students must complete each module to access subsequent content.

Expectations before Class

Read and Watch

All materials assigned should be reviewed before coming to class – you can work ahead within a module.

Quizzes Answered

- All quizzes must score an 80% or better to unlock in-class packets.
- Can repeat quizzes until happy with your grade!

Reflection Question(s) Complete

- Before the first meeting day of the week, respond to your reflections question.
 - Prepares you for in-class discussions
 - Gives you a chance to share your thoughts and perspectives
 - Let's us see your beautiful mind at work!

Expectations in Class

Diagrams

- Identify vulnerabilities and impacts from different stakeholder perspectives
- Use evidence to support these claims

Graphs

- Interpret cause and effect relationships in data
- Predict outcomes based on trend evidence
- Describe a phenomenon using charts or graphs
- Suggest gaps or limitations based on the study design

- **Prepared for class**
- **Prepared to discover**
- **Prepared to share**

Case Studies and Decision Scenarios

- Background summaries
- Stakeholder analysis
- Proposed approach
- Needs/threats assessment
- Cost/benefit assessment
- Predicted outcomes

With rationale and stakeholder perspectives in mind.

Required Materials

The textbook (e-book version or paperback version) – *Environmental Science & Sustainability*, Sherman & Montgomery 2nd edition (\$78.95 - \$147.50 purchase via Norton & Norton)

The textbook can be purchased by accessing any of the linked eBook chapters through Blackboard, or at the Bookstore.

All content resources will be posted in **Blackboard**, including:

- Pre-class activities with weekly reading packets (background sections from textbook, figures, data)
- Links to articles and media
- In-class activities

For in class participation:

- an **internet-enabled device** (tablet, phone, laptop) to access material digitally and for participation in padlet
- something for **note-taking** (digital or notebook)
- **option to print** in-class materials ahead of time.

For free padlet registration, see instructions in Blackboard. Register with your UTEP email address and make sure your padlet username matches your UTEP username.

Course Objectives

Learning Outcomes: Concepts

- Sustainability
- Formation and function of ecosystems
- Conservation, protection, restoration
- Human dependence on environmental resources
- Anthropogenic impacts on life on earth.

Learning Outcomes: Skills

- Apply the scientific method through evidence-based inquiry and reasoning.
 - Improve proficiency in reading graphs, interpreting data, and using scientific diagrams.
 - Explain and critique complex interactions between humans and environment from biological and social perspectives.
 - Master the “language” (terminology) and explain basic principles of environmental science and sustainability.
 - Use AI tools ethically and critically in support of inquiry and communication
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UTEP Edge Advantages

This course emphasizes:

- **Problem-solving:** through scenarios, design thinking, and peer collaboration
 - **Critical thinking:** through data interpretation, prediction, and application
 - **Confidence:** via evidence-based discussion, and collaborative team science
 - **Communication:** in discussions, class reporting, and written reflections
 - **Social responsibility:** by exploring ecological and human dimensions of environmental science, ethics, and decision-making
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Assignments and Grading

Grades for this course will be based on completing and participating in activity sequences. Assignments that include quizzes will receive a point score and can be attempted as often as you want. Non-quiz activities will be marked complete/incomplete based on whether they meet the acceptable criteria below.

Category	Description	% of Class Grade	Due
Pre-class preparation	Complete all pre-class assessments on time with at least 80% or better score. These are required to unlock future materials.	70%	11:59 PM before class (M & W)
In-class	Participate in and complete all in-class materials to acceptable standard. Complete at least 80% of follow-up reflections	30%	11:59 PM Sunday of each week
Additional Points	Additional points can be scored in weeks between modules.	Extra credit	11:59 PM Sunday of each week

This grading structure emphasizes **consistent engagement, comprehension, and in-class participation**. There is built-in flexibility to accommodate occasional absences through online access to pre-class materials and modular progression.

To receive full credit for in-class activities answers must meet scholarly standards by:

- being relevant to the activity and topic
- including supporting reasoning and evidence to back claims or predictions (this could include a graph, data table, or evidence from works consulted)
- citing any works consulted.
- Partial credit will be awarded if the answer does not include supportive reasoning. A non-relevant or uncited answer will receive 0.

Late work for pre-class materials will receive half credit if they are completed before the next module starts. Keep in mind that pre-class materials are required to unlock pre-class material for the next module or week.



Attendance & Participation (30%)

Attendance is essential for success in this highly interactive course. Participation is tracked via contributions during polls, case studies, and other in-class activities.

Collaborative learning is a core aspect of the course. You are expected to come prepared and contribute meaningfully to team-based work.

Absences are automatically excused for missing 1/4 days during weeks 1&2 or weeks 3&4 of a module. Additional absences may be accommodated with appropriate documentation. Unexcused absences can be offset by gaining additional points during extra week activities between modules.

Course Communication

Emails. I read class emails during business hours on Monday - Friday and will do my best to respond on the next business day. Emails received on weekends or holidays will be responded to on the next University business day. Please include ESCI 1301 in the subject line, and feel free to send me a reminder if you don't hear within 2 business days.

Announcements. Students will receive information via in-class announcements and Blackboard. If I have a concern that applies to an individual or small group, you'll receive a message through Blackboard or an email. Per UTEP policy, I will only email with students through their official UTEP email.

Technology & Blackboard Access

You'll need:

- Blackboard access
- Padlet account
- Stable internet and access to a laptop or tablet

I encourage downloading Blackboard materials ahead of class. Technical issues are not an excuse for late or missing work. Contact UTEP Tech Support promptly if problems occur.

Use of Generative AI

This course incorporates guided use of AI tools like ChatGPT. **AI tools may only be used as directed.** All uses must be acknowledged and cited per provided guidelines. Students will be guided in composing effective prompts, shown ways of evaluating AI output for accuracy, and gain intellectual ownership through the process of deep revision of AI outputs. Keep in mind that AI-generated ideas are not your own and may hinder your ability to think critically and creatively about a problem. It is also important to remember that these technologies often “hallucinate” or produce materials and information that are inaccurate or incomplete—even providing false citations for use.

You are not allowed to submit any AI-generated work in this course as your own. If you use any information or materials created by AI technology, you are **required to cite it** like you would any other source. Consider how this will affect your credibility as a writer and scholar before doing so. Any direct use of AI-generated materials submitted as your own work will be treated as plagiarism and reported to the [Office of Community Standards](#).

Example citation format: > Name of AI Assistant. Date Accessed [DATE]. Prompt:“ Text of your prompt” Generated using [weblink of tool]. *Also include a short description of how the tool(s) was/were used for the assignment must be included. Eg: “Used in initial brainstorming” or “Used to paraphrase long sentences”*

Eg: OpenAI (2025-08-05. Prompt: “How does niche partitioning affect resource use in ecology?”. Generated using <https://chat.openai.com/>. *Used to get a definition of niche partitioning and understand the concept better to write my reflection.*

Some activities may prohibit AI use to develop your critical thinking or communication skills or to reflect your unique voice and perspectives. Respect those boundaries.

Academic Integrity

All submitted work must be in your own words and demonstrate unique synthesis of information. All work that is informed by resources (our textbook, primary literature, or other sources) should be appropriately cited.

You will often collaboratively generate work in class through group work. Contribution by group members (authors) should be accurately reflected in groupwork assignments.

Plagiarism or improper use of AI tools will be reported in accordance with UTEP policies.

Accommodations and Support

If you have a disability and need accommodations, please contact the **Center for Accommodations and Support Services (CASS)**:

- Phone: 915-747-5148
 - Email: cass@utep.edu
 - Website: <https://www.utep.edu/student-affairs/cass/>
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Let's make this semester one of scientific curiosity, collaboration, and growth!

Copyright Statement for Course Materials

All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. They may not be further disseminated.

University and Course Resources

- **Help Desk:** Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.
- **UTEP Library:** Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- **Military Student Success Center:** Assists personnel in any branch of service to reach their educational goals.
- **Center for Accommodations and Support Services:** Assists students with ADA-related accommodations for coursework, housing, and internships.
- **Counseling and Psychological Services:** Provides a confidential and supportive environment to discuss a wide range of challenges you may be facing including individual, couples, and group sessions as well as career and disability assessments.
- **Physical Health:** A healthy body is vital to your academic success. UTEP offers a range of resources to help maintain your physical well-being. The UTEP Student Health and Wellness Center provides medical services, preventative care, and vaccinations. The Student Recreation Center offers individual and group sport facilities.
- **Nutritional Health:** Nutrition plays a vital role in your well-being. Dining services provides a variety of meal options, catering to different dietary needs. If you face any sort of food insecurity, you can also access the UTEP Food Pantry.
- **Social Support:** Building and strengthening social networks is crucial to overall wellness. Student Organizations and Campus Events on Minetracker offer opportunities to pursue a passion, experiment with something new, start your own organization, and connect with others.