

BIOL 1132.402: ENVIRONMENTAL SCIENCE

INSTRUCTORS

First half: Samuel James Ogden, Jr.

Office Location: Life Sciences Building A246 room B

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Office Hours: Monday and Wednesday in person 10:00 to 10:45 AM; Zoom office hour 12:30-1:30 PM Wednesday until March 7

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Second Half: Dr. Jaime E. Jimenez, PhD.

Office Location: Environmental Science (EESAT) 310V

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Office Hours: Monday and Wednesday 12:00-12:30 PM

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Classroom: Only asynchronous class lecture meetings, but we will meet via Zoom. Each week, I]we will review what is expected; **logging into Canvas and doing the work is considered attendance.**

Meeting time: Zoom meeting (recorded) 12:30 to 1:30 PM Monday for the first half

Communication Expectations

Please contact us through UNT Eagle Connect (not through Canvas) and allow 24 hours for a response. We cannot discuss grades via email because of FERPA, but we are happy to do so in person.

Course Description

This is an interdisciplinary study of Environmental Science on basic concepts, including critical scientific thought, biodiversity, resource management, pollution, global climate change, resource consumption, and population growth. Emphasis will be given to how these concepts affect and are affected by human society.

Lecture will be an all Zoom and Canvas class. I have podcasts of lectures available should you miss a lecture or have other commitments

The laboratory is a separate class and meets in person; it must be taken simultaneously with this course. Only this course, i.e., the lecture, is online.

Course Structure

There are 16 weeks of content that we will move through. We will open up the new PowerPoints and chapters each week. Each week there will be quizzes and assignments that must be completed on UNT Canvas. Please complete the assignments on a weekly basis. This is structured this way because of the lab schedule.

For each chapter, there will be a 10 point quiz administered via CANVAS, and a ten point active reading assignment on the McGraw Hill website using their SmartBooks. We may add on additional Activity Discussions as the class continues.

Course Objectives

1. Identify the scientific method and its underlying concepts and principles. (CLO 1)
2. Recognize the role of energy, matter, and the environment. (CLO 2)
3. Explain how land use planning affects to the environment. (CLO 3)
4. Identify the role of population and our sustainable use of natural resources. (CLO 4)
5. Explain soil science, sustainable agriculture, and modern farming practices. (CLO 5)
6. Recognize pest management and its role in the environment. (CLO 6)
7. Relate water management, air quality, environmental regulations, solid waste management, and the role of renewable and non-renewable resources. (CLO 7)
8. Describe biodiversity, different ecosystems and ecological communities and how they interact, and the role of climate change and sustainability. (CLO 8)
9. Discuss Air Quality Issues; describe categories of air pollutants, the nature of smog, acid rain, ozone depletion, control of air pollution and the role of air pollution in the developing world. Also discuss indoor air pollution and noise pollution (CLO 9)
10. Discuss solid waste management, kinds of solid wastes, and methods of waste disposal (CLO 10)
11. Discuss biodiversity, extinction, value of biodiversity, threats to biodiversity, and what is being done to promote biodiversity (CLO 11)
12. Describe non-renewable energy resources, discuss hydraulic fracturing, major energy sources, how fossil fuels were formed and methods of extraction. Discuss issues with fossil fuels and atomic energy. Explain what happens in a nuclear chain reaction and the nuclear fuel cycle. (CLO 12)
13. Describe what is meant by renewable energy, contrast the types of renewable energy, and the role of conservation. (CLO 13)
14. Describe interactions between organisms and their environments, the concept of limiting factors, habitats, and niches. Explain how natural selection operates and the various relationships between organisms, and between organisms and their environments. (CLO 14)

15. Compare ecosystems and communities, what is mean by terrestrial and aquatic succession, the major terrestrial biomes, and aquatic ecosystems. (CLO 15)
16. Explain the science of how the earth is a greenhouse planet; describe the geological basis behind climate change, the consequences of climate change, and what might be done to address it. (CLO 16)

Materials

- *Environmental Science* 16th Edition by Eldon Enger and Bradley Smith, **ISBN:** 9781266361555 with McGraw Hill Connect access card 9781266214950 to access tutorials. The McGraw Hill Connect access card should have an eBook as part of the package if you do not want a physical textbook
- *BIOL 1132 Laboratory Manual* by Dr. Jaime Baxter-Slye.

Teaching Philosophy

Though this is a non-major's class, please complete assignments on time and don't procrastinate. The online materials and canvas quizzes are easy to ignore until the last minute so please don't get behind. You are given a lot of freedom as to when you do the readings or listen to podcasts, however, online classes have an entire different skill set.

This is supposed to be an enjoyable experience—we often have people who get excited to find there is a class in biology where no frogs are dissected. The last thing we want to do is to have a boring class and a lot of the topics have importance in today's world. If you participate in discussions, you will get a lot out of this class. If we can instill a lifelong passion for environmental issues and sustainability, we have accomplished one of our major goals.

Makeup Policy

According to College of Science rules, makeups are to be documented and are given at the discretion of the instructor and for (1) an official University approved absence, (2) a note from a local examining physician, (3) military or jury duty, or (4) participation in a religious observance from a recognized group.

Point Breakdown

Breakdown of Course Points

| Assignment / Activity | Points |
|--|--------|
| Four unit exams and one Cumulative Final exam; 125 points each | 500 |
| <ul style="list-style-type: none"> • If you like your grade on the first four lecture exams, you do not have to take the final. The cumulative lecture exam will substitute for the lowest or a | |

| | |
|---|-------------|
| missed lecture exam; essentially, the four highest scores will be counted | |
| McGraw Hill SmartBooks | 100 |
| Online Canvas Quizzes | 100 |
| Lab (<i>separate, dually enrolled course</i>) | 300 |
| Total Points | 1000 |

A>900 points; B: 800-899; C: 700-799; D: 600-699; F<599.

In past semesters, a 900 gets an “A” but an 899 gets a “B.”

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course.

Course Policies

Assignment Policy

Each week, a new chapter will be opened up and there will be:

1. Assigned readings from McGraw Hill Connect using Learn/Smart (worth 10 points) to be completed on Sunday. This is an active reading program and requires you to log in.
2. An online quiz (worth 10 points total) to be taken on UNT Canvas by 11:59 pm, due on Sunday evening.

Examination Policy

All lecture exams and the final **are on Canvas, closed book** and to be **taken individually**-- we count the highest four of five exams. If you miss an exam due to a university-sponsored event, please provide information in advance so we can work something out. We are not requiring Respondous Lockdown Browser or Monitor, however, we can still see if are looking at other web pages during exams.

Instructor Responsibilities and Feedback

While I see myself more as a facilitator and moderator, we are committed to your success and mastery of the material in environmental science, Please understand in a class of this size it may be a week before grades are uploaded.

Please use **UNT Eagle Connect** in all email correspondence—do not use CANVAS email and please give your full name and the section you are in. Since we have other responsibilities, it often takes about 24 hours for a response.

Late Work

No late work is accepted.

Attendance Policy

Attendance is required, but for a class with remote lectures, this means you need to access Canvas regularly (we can see if you've been online).

Class Participation

There is a 200-point category reserved for online quizzes and classroom assignments/discussions along with McGraw Hill SmartBook. Please participate.

Syllabus Change Policy

We reserve the right to extend due dates on exams; however, unless there was a typographical error, I will not move an exam date forward or backward.

UNT Policies

Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University. If you are caught cheating on a exam, you will receive a zero pending further investigation and you will be referred to Academic Affairs.

ADA Policy

The University of North Texas makes reasonable academic accommodations for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly

encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the [Office of Disability Access website](http://www.unt.edu/oda) at <http://www.unt.edu/oda>. You may also contact ODA by phone at (940) 565-4323.

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Blackboard online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's [Code of Student Conduct](https://deanofstudents.unt.edu/conduct) (<https://deanofstudents.unt.edu/conduct>) to learn more.

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail [Eagle Connect](https://it.unt.edu/eagleconnect) (<https://it.unt.edu/eagleconnect>).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 [insert administration dates] of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the [SPOT website](http://spot.unt.edu/) (http://spot.unt.edu/) or email spot@unt.edu.

Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See [UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses](https://policy.unt.edu/policy/07-002) (https://policy.unt.edu/policy/07-002).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.

- The work is identified as student work.

Course Schedule

| Week of | Topics | Chapters |
|----------------------------|---|---------------------------------|
| January 12 | Administrative Details, syllabus, expectations for course, Environmental Interrelationships | Chapter 1 |
| January 19 | Interrelated Scientific Concepts: Matter, Energy and the Environment | Chapter 4 |
| January 26 | Interactions: Environments and Organisms | Chapter 5 |
| February 2 | Kinds of Ecosystems and Communities | Chapter 6 |
| February 6 (Friday) | EXAM 1 | Chapters 1, 4, 5, and 6. |
| February 9 | Populations: Characteristics and Issues | Chapter 7 |
| February 16 | Biodiversity Issues | Chapter 8 |

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| February 23 | Land Use Planning | Chapter 12 |
| March 2 | Soil | Chapter 13 |
| March 6 (Friday) | EXAM 2 | Chapters 7, 11, 12, and 13 |
| March 9-14 | SPRING BREAK | |
| March 16 | Agricultural Methods | Chapter 14 |
| March 23 | Water Management | Chapter 15 |
| March 30 | Energy and Civilization | Chapter 9 |
| | Non-renewable Energy | Chapter 10 |
| April 6 | Renewable Energy | Chapter 11 (on exam 4) |
| April 10 (Friday) | EXAM 3 | (Chapters 14, 15, 8, and 9) |
| April 13 | Solid Waste | Chapter 18 |
| April 20 | Air Quality | Chapter 16 |
| April 27 | Climate Change | Chapter 17 |

April 29 (Wednesday)

Exam 4

Chapters 10, 16, 17 and 18

May 4-6

Final

Cumulative