

EEB 2100E

Global Change Ecology

TLS 301, Monday/Wednesday 2:05-3:20PM

Instructor: Dr. Ed McAssey (he/him)

Email: edward.mcassey@uconn.edu

Office: Gant West 411

Student hours: Tuesdays 1:00-2:00PM or By Appointment

Course Catalog Description

Causes and ecological consequences of anthropogenic environmental change. Topics include: ecological consequences of human modification of the earth, sea and air; biotic responses to environmental change; and sustaining future ecosystems functions.

Course Description and Objectives

The global environment is changing, largely because of human activity. Environmental change is rapidly degrading natural ecosystems and the services they provide. The consequences for human society are myriad and potentially catastrophic but the political response to environmental change is hampered by a limited understanding of the causes and effects of environmental change. This course will analyze the ecological consequences of human-induced global environmental change. Ultimately, if humans are to mitigate the negative environmental consequences of our actions, we must first understand our impacts.

Course objectives

By the end of the course, students will be able to:

- Explain the major effects of global environmental change on species
- Analyze and interpret research findings in the field of global change ecology
- Examine different perspectives on global changes causes, effects, and solutions
- Relate the impact of human activities on ecological functions and services, as well as agricultural systems

Required materials:

There are no textbooks or other required materials for this course. All readings will be provided by the instructor via HuskyCT.

Recommended materials:

The book "Global Change Biology" by Erica Rosenblum is an excellent companion text for this course. A number of lectures were created, or enhanced, by using it as a source.

Class Format

Classes will consist of lectures, group work, and class wide discussion. Specifically, I'll present lectures on the topic of the day that will be made available via HuskyCT. Lectures will be broken up by group work activities. These will typically last between 10 and 15 minutes and will usually involve answering a series of prompts related to the day's topic. Groups will be expected to record their answers down on paper. Groups will be selected at random to describe their answers to the class. During these activities, I will move around the room to help groups answer the prompt, so that you feel confident in answering if called upon. As you'll see below, these in-class activities are not graded on accuracy but rather participation. Finally, I'll be giving the class a five-minute break at the halfway point of each class to use the bathroom, stretch, check emails, etc.

Types of Assignments

Exams – 300 points (Three exams worth 100 points each)

There will be three non-cumulative exams this semester. The exams will take place in two parts. The first part is a traditional individual exam. The following class period will begin with a group assignment. 75% of your exam score is based on individual exam and 25% of your score is based on the group assignment. However, if your group score is lower than your individual score, all 100% of the exam will be based on your individual performance. The purpose of the group assignment is for students to share opinions, debate, and explain the relevant course topics. You'll find that in addition to achieving the goal of answering the question you will also improve your communication skills and learn additional content from your classmates. ***Note: the final exam will not have a group component. Make-up in-semester exams will only be given in extraordinary cases with proper documentation. I must be notified **before** the exam if there are any issues for the possibility of a makeup exam.

In-Class Activities – 100 points

Each class meeting will involve in-class activities as described above in the "Format" section. In order to earn all 100 points in this category, you must complete in class activities in at least 20 different class meetings. We have 25 non-exam classes total, which means you can miss five in-class activities without incurring any penalty. Because of this flexibility, there are no makeups when it comes to in-class activities. Missed activities simply represent one of your five free misses and do not require any email explanation to the instructor. If more than five in-class activities are missed, points will be awarded according to the scale listed below:

In-Class Activities Completed	Points earned
20-25	100
15-19	80
10-14	60
5-9	40
0-4	20

Podcast Assignments – 40 points (Two assignments worth 20 points each)

Each week a podcast will be linked to our course via HuskyCT. Two times throughout the semester (of your choosing), you'll be expected to listen to the podcast and complete an assignment on HuskyCT. First, you'll answer four questions on the podcast material. Then you will search the scientific literature and describe two relevant peer-reviewed studies on the same general topic as the podcast (2 sentences each). These descriptions need to be correctly cited according to the conventions we discuss in class and on the rubric. Finally, you will propose potential future directions that research could take in this field (1-2 sentences). I will present a model response to you, so you know what I am looking for. Furthermore, we will discuss literature searches and citation practices so that you are empowered to interact with the scientific literature in a meaningful and accurate way. **A third podcast assignment may be submitted to replace the lowest podcast score.**

*Note - podcasts will be posted on Mondays and commentaries will be due the following Monday.

Seeing Climate Change? – An art exhibition at the Benton Museum – 20 point assignment

This semester we are very lucky to have an art exhibition on campus that is extraordinarily relevant to our course. I'm meeting with the Curator of the Benton Museum at the start of the semester to brainstorm a way to incorporate the exhibition into our class. The syllabus will be updated early in the semester to describe this assignment.

Grading Scale

Percentage Score	Letter Grade
>92.5	A
>89.5	A-
>86.5	B+
>82.5	B
>79.5	B-
>76.5	C+
>72.5	C
>69.5	C-
>66.5	D+
>62.5	D
>59.5	D-
<59.49	F

*Note – There are no curves in this course

Lecture Schedule

Date	Topic
17-Jan	Intro
22-Jan	Brief History of Life / Anthropocene
24-Jan	Scientific Literature
29-Jan	Global Warming
31-Jan	Move
5-Feb	Adapt
7-Feb	Acid rain, nutrients
12-Feb	Acid rain, nutrient, Coastal Pollution
14-Feb	Coastal Pollution, Exam Review
19-Feb	Exam
21-Feb	Coastal Pollution
26-Feb	Declines in biodiversity
28-Feb	Effects of land use change
4-Mar	Effects of land use change
6-Mar	Ecological impact of food production
18-Mar	Ecological impact of food production
20-Mar	Ecological impact of food production / emerging disease
25-Mar	Disease under global change
27-Mar	Disease under global change, Exam Review
1-Apr	Exam
3-Apr	Ecosystem services
8-Apr	Ecosystem services
10-Apr	Human population growth
15-Apr	Overexploitation
17-Apr	Food sustainability and environmental change
22-Apr	Food sustainability and environmental change
24-Apr	Future prospects, Exam Review

*Note - Lecture topics are tentatively listed above and may change. However, the exam schedule is final (see above) and will not be changed.

Academic Integrity: I expect all submitted individual assignments in our class to represent **your** own **original** thoughts and ideas. That means that cheating and plagiarism will not be tolerated. If you have any question about what is allowed on any assignment, please ask ahead of time. Consequences for violating this policy include receiving a zero on the assignment(s) and referral to the Division of Student Affairs. For University policies and procedures on academic honesty, please see UConn's Responsibilities of Community Life: The Student Code and the Office of

Community Standards: <http://www.community.uconn.edu>. The policy on Academic, Scholarly, and Professional Integrity and Misconduct can be found here: <https://policy.uconn.edu/2023/07/11/academic-scholarly-and-professional-integrity-and-misconduct-aspim-policy-on/> .

Additional Resources

Policy Against Discrimination, Harassment and Related Interpersonal Violence

The University is committed to maintaining a safe and non-discriminatory learning, living, and working environments for all members of the University community – students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate amorous relationships can undermine the University’s mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate amorous relationships, and such behavior will be met with appropriate disciplinary action, up to and including dismissal from the University. Additionally, to protect the campus community, all responsible employees (including faculty), as outlined in the Policy Against Discrimination, Harassment and Related Interpersonal Violence, are required to report to the Office of Institutional Equity any information that they receive related to sexual assaults, intimate partner violence, and/or stalking involving a student. *An exception to this reporting exists if students disclose information as a part of coursework submitted to an instructor in connection with a course assignment. Even in the absence of such obligation, all Employees are encouraged to contact OIE if they become aware of information that suggests a safety risk to the University community or any member thereof.* The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with university officials who can help. More information, including confidential and exempt employee resources available for support and assistance, can be found at equity.uconn.edu and titleix.uconn.edu.

Center for Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or <http://csd.uconn.edu/>.

Office of Emergency Management on Emergency Preparedness

In case of inclement weather, a natural disaster, or a campus emergency, the University

communicates through email and text message. Students are encouraged to sign up for alerts through <http://alert.uconn.edu>. Students should be aware of emergency procedures, and further information is available through the Office of Emergency Management at <http://publicsafety.uconn.edu/emergency/>.