

IB 110 Race and Environmental Biology
Fall 2020
Lecture: M &W 3pm-4pm
Discussion: 1hr (Time and Location TBD)
Teaching Assistants: Tolu Perrin Stowe, Patrick Wilson
Location: ONLINE

Instructor Professor Alexandra Harmon-Threatt

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255 Morrill Hall

Student Hours Thurs 11am via zoom

Prerequisites None

Course credit 3 hours

Course meets requirements for Gen Ed Life Sciences **and** Gen Ed US Minority Cultures (USM)

Text required None. Readings will be posted on the course webpage

Frequency and duration of class meetings

The full class will meet twice a week and small 20 person discussions will meet with Teaching Assistants once a week for one hour.

Course Description

Are environments the same for all people? Can environment be inequitably distributed? Does culture affect interactions between people and their environment? In this class we will explore how the social construct of race can shape individual environment, susceptibility to change and the biology that underpins the interaction. Through case studies, we will discuss environmental threats such as climate change, pollution, habitat degradation and disease and how they interact with US minority communities and cultures. We will also highlight how minority culture and backgrounds affect interactions with the environment, and how policies and actions create environments and situations detrimental to minority families.

Race and Environmental Biology is designed to teach important biological concepts and improve general science literacy to help you better understand current environmental problems and how culture, policy and biology intersect. This course will focus on how environments are shaped by culture and race and how racial disparities can exist in interactions. These skills will form the foundation for your development as a critical consumer of science information and its intersection with society in the media. We will focus on the biological principles involved as we examine these topics in the context of some contentious and confusing issues related to US minority cultures and environmental biology in everyday life.

Specific Learning Outcomes

At the end of this course, students will be able to:

- Understand how “environment” can be shaped by US minority cultures and how this varies between people and can affect biology and health.
- Apply the basic scientific principles in environmental biology to real-world situations like whether to support parks on landfills, how green solutions could leave communities behind and why our hunger for oil contributes to health problems in minority communities.

- Identify and evaluate valid sources of scientific information. Discern and analyze that information to make everyday decisions.
- Integrate ideas and communicate your understanding about biology with others in a format which: is adapted to particular circumstances and audiences; addresses issues in the context of the larger community and environment; and allows you to apply societal ethics to scientific inquiry and findings.
- Learn about yourself and learn to work effectively with others in a group and develop and cultivate an interest in current science issues.

Teaching and Learning Method

In today's knowledge economy you need to be able to think critically and work collaboratively to solve problems. Now that the Internet puts the world at your fingertips, you don't need to memorize facts. Instead, you need to practice applying and using facts to make decisions. Just as in scientific practice, the issues you will address are too overwhelming for one person to gather all the resources needed to make a decision. In this class, as in the biological and social sciences, you will work together with your peers to produce a product. Collaborative learning can facilitate deep learning and foster communication and problem-solving skills that will serve you in future coursework and careers. Each of you can contribute different skills that complement each other in the process of articulating your reasoning and creating your group projects.

Grades

There will be no (+/-) in this class. The letter grade breakdown is as follows:

A: 90-100% B: 80-90% C: 70-80% D: 60-70% F: 0-59%

Grade Components

The grade you earn in this course will be based on the following component parts:

Pre-Lecture Assignments	15%
Lecture Participation/Assignments	15%
Discussion Assignments	20%
Assessments	25%
Final Group Project	25%

Pre-Lecture Assignments

These readings are intended to ensure you gain basic knowledge on a topic and are prepared for the material covered in lecture and discussion. Completing these activities before class allows us to cover more material at greater depth. The assignments are due before the first class of the week and you can turn them in for 20% reduced credit up to 3 days (36 hours) after they are due. Each activity will include readings, videos and questions to complete. Each assignment will be worth 10-15 points.

Lecture Participation/Assignments

Active participation is vital to your success in this course. During lectures, interactive questions and discussion will occur for which you will receive participation points. After lecture there will be a post-lecture assignment to reflect on the material discussed and covered in lecture. Each lecture day will be worth approximately 3-7 points. If you cannot participate in the lecture you will be able to earn most of the points through the post/lecture activity. You do not have to participate in all activities to receive full

credit. This allows you to miss lectures or even a post-lecture assignment without needing to reach out to the instructor.

Discussion Assignments

Discussion meets once per week for one hour. During this time you will complete assignments and review material to further your understanding of information covered in lecture and pre-lecture activities. Attendance is taken and will count toward your grade. Assignments missed during discussion cannot be made up without proper documentation (see Late Work below).

Final Group Project

You will be expected to work with a small group (3-5) to complete a final project in the course. This project is designed to help you. The project has been broken into several small pieces to assist you in producing the best final project. Groups will be assigned within discussion based on topic interest and assignments are due at the end of discussion periods. If there are problems with your group please inform the TA and instructor immediately. Also see Group Issues below

Assessments

There will be multiple assessments throughout the course to ensure you are following the concepts and building on material. These assessments will be given at the end of each topic to allow you to synthesize the information learned in the previous section. These assessments will be mostly written but may include multiple choice.

Academic Integrity

The academic integrity policy of University of Illinois at Urbana Champaign states: "It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions."

The complete policy and procedures are available at: <http://studentcode.illinois.edu/>. As a student at UIUC, it is your responsibility to become familiar with, understand, and abide by the standards outlined in this policy before performing any academic work. Ignorance of these policies is not a defense in cases of infringement.

Any person found using unauthorized assistance (including plagiarism, submitting work for more than one class without obtaining permission from all instructors, copying answers from another student during an individual exam, sharing clickers, or turning in group work to which you did not contribute) will be reported following the procedures outlined in the Student Code, using the FAIR system.

Respect and Civility

Students are expected to conduct themselves in accordance with the campus Student Code. This class will explore numerous culture and experiences outside of what your personal experience has been. Because of this it is important to remember to discuss these subjects with the civility and respect you would want someone to discuss a group with which you identify. When writing and discussing other cultures it is important to remember to be thoughtful of perspectives that differ from your own and respectful of the people who are from these communities some of which may be your classmates. Any behavior determined not to comply with the Student Code will result in dismissal from the class and further infractions may result in dismissal from the course. As a reminder the Campus Integrity

Statement states: "The University of Illinois at Urbana-Champaign expects its faculty, staff, students and guests to conduct themselves in accordance with the community values of civility, respect, and honesty; to maintain the highest level of integrity and exercise critical judgment in all dealings, decisions and encounters; and to maintain and strengthen the public's trust and confidence in our institution."

You will receive three warnings if your language and comments are divisive or offensive. After these warnings you will receive a 0 on assignments in which your comments are deemed inappropriate.

- What does it mean to be divisive or offensive? Personal attacks, controversial statements with no basis in fact, demeaning someone's experience to play "devil's advocate", belittling language, broad racial generalizations, and stereotyping are all divisive and offense. If you could not find a credible source to support something you are trying to state as fact it is likely in this category.

Disability Accommodations

We are happy to work with students to meet their needs but it is imperative that students make the instructor or TA aware of disability related accommodations as soon as possible. Only accommodations officially documented with DRES can be accommodated at this time and will be kept in strict confidence. Please see the Community of Care website (<https://odos.illinois.edu/community-of-care/>) to access valuable resources.

If you require special accommodations, please contact the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak Street, Champaign, call 217.333.4603, or email disability@illinois.edu. Please note accommodations are not retroactive to the beginning of the semester, but begin the day you contact your professor with a current letter of accommodation from DRES.

Emergency Dean

"Help is only a phone call away." A university-wide Emergency Dean is always available to provide you with personal assistance in times of emergency, such as serious illnesses, hospitalizations, accidents, deaths or other major crises. Emergency Dean Service: 217-333-0050.

Attendance Policy

We expect you to actively participate in class activities and meetings. You are responsible for all material covered in class whether or not you attend. You will earn points for participation by answering questions and participating in class. We have balanced the points for synchronous and asynchronous so you will not need to participate in every activity and if you can only participate asynchronously you will still be able to earn all participation points. This also should allow you wiggle room for missing occasional classes, illnesses, emergencies, forgetting your clicker, or dead batteries.

Regrading Policy

Every attempt will be made to grade fairly, consistently, and accurately. For regular, in-class exams, if you disagree with the way your answer on your individual exam was graded, you may submit a written request for a regrade within 72 hours of receipt of your graded exam, at which point we reserve the right to regrade the entire exam.

Late Work

You will have adequate time to complete all assignments. Late assignments may be turned in up to 3 days late with a 20% penalty per day it is late. If you wait until the last minute (<3 hours before something is due or after 5 PM) we will not be able to help you. You have control over your schedule and one of the important skills you need to develop is how to organize and manage your time. If you find yourself in an extreme circumstance, please contact DrHT or your TA to make appropriate arrangements.

Technology

Technology is essential to this course and it is your responsibility to ensure you have access to Moodle, the internet, and can use the programs and resources we assign. Make sure you back up your work to avoid losing it if your computer crashes. Please contact us immediately if you have access issues so we can address them before they impact your course grade.

Group Issues

A large part of the grade you earn in this course will come from participation in group projects. We believe that this will help you master the material as well as help you develop communication, technology, and collaboration skills, such as dividing tasks and providing and accepting peer feedback, that you will need in college and your eventual profession.

Firing a group member: When you work on a group project, it is inevitable that you will contribute differently and it is possible that some team members may contribute more than others. We expect you to work together to collaboratively solve problems, but we are available should you need periodic outside help to navigate and improve your group dynamics. It can become a critical problem if, over time, one person consistently dominates all group dynamics or demonstrates a lack of commitment to the team (i.e., failing to attend meetings, not completing his or her portion of the group task, or submitting unacceptable work on behalf of the group). In such an instance, we reserve the right to "fire" that member. Firing involves a twostep process: (1) The team (in consultation with the instructor) gives the wayward member a warning which includes the wayward teammate negotiating with the group how he or she is going to be a better teammate. (2) If the member continues to behave inappropriately, that individual will be fired from the group by the instructor. If your membership within the group is terminated, you forfeit all team benefits associated with completing the project as a group. You will complete individual assignments and exams from the point of termination to the end of the semester. Bad teammates usually show their tendencies early, so let a problematic group member know her/his behavior is not acceptable early.

Copyright

Student Content

Participants in University of Illinois courses retain copyright of all assignments and posts they complete; however, all materials may be used for educational purposes within the given course. In group projects, only the portion of the work completed by a particular individual is copyrighted by that individual. The University of Illinois may request that students' materials be shared with future courses, but such sharing will only be done with the students' consent. The information that students submit during a course may, however, be used for the purposes of administrative data collection and research. No personal information is retained without the students' consent.

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Topic Schedule. Note: All due dates and topics are subject to change. Most up to date information will be available on Moodle.

Topic area	Week	Class	Pre-Lecture	Topic	Post-Lecture Follow Up	Discussion	
Intro	1	1	What lens do you bring to the class?	Intro	How can we talk about the difficult?	Topic: Looking up scientific resources. Proper citations. Expectations around communication	
		2		The cultural construction of environments	Taking stake of your personal environment?		
Health and Access	2	3	What is health and the importance of social wellbeing (video)	History of Health disparities	Training of doctors today reinforcing disparities	Topic: Physiology of the Body	
		4		Poverty and the challenges it poses to health	Efforts to revitalize rural health and challenges with policy		
	3	5	Gender and Implicit Bias in healthcare	Labor Day -NO CLASS	NA	Topic: Intro to genetics? What is a population?	
		6		Gender based discrimination in healthcare	Mental Health and gender based discriminations		
	4	7	What is a genetic population?	Population based differences in response	Health care use and access	Topic: Central Dogma	
		8		Environmental/Community Health	Assessment		
	Pollution	5	9	Intro to Pollution	Pollutants intro	EPA superfund sites locations	Topic: Carcinogens and damage to DNA
			10		Toxic Waste	Chicago and Toxic Waste Distribution	
6		11	What is a deadzone?	Air Pollution	air pollution and biodiversity	Topic: Pesticides and Environment	
		12		Agricultural Pollution	intersections of agriculture, poverty, immigration status		
7		13	The throw away generation	Plastics	other effects of plastics	Topic: Bioaccumulation and Foodwebs	
14	Assessment	Assessment					
Biodiversity Losses	8	15	What is biodiversity?	What makes a species?	Why does diversity matter?	Topic: Evolution/ natural selection	
		16		Genetic diversity	Why does genetic diversity matter?		
	9	17	Species Biodiversity	Species interactions and maintenance of biodiversity	Instability of food webs	Topic: Biodiversity and disease	
		18		Threats to biodiversity	Urban areas and biodiversity losses		
	10	19	Destruction of environments and effects on humans	Habitat destruction	Humans and interaction with biodiversity	Topic: Difference between climate and weather	
		20		Biodiversity Challenges	Assessment		

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Climate Change	11	21	Biodiversity and climate losses	Climate change background	Weather or climate?	Topic: Climate misconceptions
		22		Biodiversity losses due to climate	Importance of models	
	12	23	Water cycle	Water availability	Localization of effects of climate change	Topic: Final Project
		24		Climate and Health	How did climate change get political?	
	13	25	The best climate policy	climate mediated disease	is disease risk cultural in the time of climate change	Topic: Final Project
		26		Climate policy	Assessment	
14	27	NA	Fall Break	NA	Topic: NONE	
	28	NA	Fall Break	NA		
Traditional Knowledge	15	29	Background on TEK	The value of culture and environment	mitigating disasters	Topic: Final Project
				30	The shaping of ecosystems	
	16	31	Using TEK to inform policy	Slowing natural disasters	Erasing TEK	Topic: NONE
		32		Setting harvesting	Assessment	