

IB 105 Fall 2019- 3 credits
Introduction to Environmental Biology
Tu-Th 1-2 pm
2020 NHB
Professor Alexandra Harmon-Threatt
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TA: Tolu Perrin Stowe

Prerequisites None

Course requirements met 3 hours Gen Ed Life Science

Test required None

Course description

Introduction to Environmental Biology is designed to teach important biological concepts and improve general science literacy to help you better understand current environmental problems. These skills will form the foundation for your development as a critical consumer of science information 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 environmental biology in everyday life.

Specific learning objectives

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

- Apply the basic scientific principles in environmental biology to real-world situations like whether or not to support biofuel initiatives, how to best preserve biodiversity, and how to feed the world without destroying the environment.
- 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 science, 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.

In-class activities

Content application lectures

Class meetings will include lecture, group activities, and in-class questions. We expect you to attend class and take notes on paper or with your computer. We will provide paper or electronic copies of slides during class. You may use your computer to take notes during lecture, but activities such as using Facebook, shopping online, or playing games are very distracting to other students and to us. If we find you using your computer in a way that is distracting we will ask you not to bring your computer to class. Turn your cell phones to mute and refrain from texting during class. Class time is too valuable to waste.

Problem-solving activities

There will be some group activities during class. These are designed to help you practice some of the skills you will need to complete your exams and group projects.

Class and Discussion participation

We will periodically ask tophat questions during most class meetings. Questions may be designed to give us more information about what to teach, check your understanding, poll the class for opinions, or prompt discussion. Questions will be graded for participation rather than whether your answer is correct or not. To earn full credit for participation you need to answer at least 80% of the questions. This allows you some wiggle room for class absences, forgetting your device, or dead batteries.

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 forwarded to the Committee for Student Academic Integrity. Students found guilty by the Committee will be given a grade of F for the course and be referred to the Dean for further action.

Assessment

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

Participation	200 pts
In-Class Activities and Quizzes	200 pts
Pre-Lecture	150 pts
Discussion assignments	150 pts (~15 pts per week)
Written Final	100 pts
Group Project	200 pts

Total	1000 pts
Extra Credit:	50 possible pts

Grades

There will be no (+/-) in this class. With ample opportunity to earn extra credit it should be relatively easy to ensure you receive the grade you want. So the letter grade breakdown is as follows:

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

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.

Attendance policy

We expect you to attend and actively participate in all class meetings. You are responsible for all material covered in class whether or not you attend. There will be in-class discussions approximately once per week and in class questions asked daily. You will earn points for participation by answering questions via tophat and participating in class discussions. You only need to answer 80% of tophat questions to receive maximum participation credit, which allows you wiggle room for missing occasional classes, illnesses, emergencies, forgetting your clicker, or dead batteries.

We will not consider any excused/unexcused absence issues or technology issues with tophat. If you forget your device please feel free to turn in a piece of paper with your name ID and answers to all in-class questions.

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 of assignments. 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.

Technology

We will not consider technology excuses in this course. Make sure you back up your work to avoid losing data or work if your computer crashes. It is your responsibility to make sure you have access to Moodle.

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 two step 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.

Topics covered

During the semester we will cover a diversity of topics to understand how biology and the environment intersect and some of the processes that affect this interaction. Roughly one week will be used on each of these topics:

Scientific Method, Biodiversity, Evolution, Genetics, Biogeochemical cycles, Food Systems, Climate change, Population Growth, Species Interactions, Threats to biodiversity, Physiology, Waste, Environmental Policy, Environmental Toxicology, Bioremediation