IB 451: Conservation Biology (4 credits)
Syllabus Spring 2020

TU and TH: 9:30-11am
2020B NHB
Professor Alexandra Harmon-Threatt
TA's: Tolu Perrin-Stowe and Samantha Capel
Lab Sections Room: Foreign Language Building G27
Tu: 12-1:50 Tu : 2-3:50 W: 12-1:50

Pre-requisites

Ecology or equivalent. A basic understanding of genetics and evolution is advised.

Course description

Human domination of ecosystems has significantly altered natural landscapes and the organisms that inhabit them. The field of conservation biology was developed to specifically understand the consequences and solutions to human-mediated losses of habitats and species. As an inter-disciplinary field, conservation biology pulls from various areas of social science, ecology, biology, genetics, anthropology, sociology and restoration to identify problems and solutions to losses of habitats and species. In lecture, we will explore general background in these areas and then use periodic class wide discussion to try to pull all of the information together in a particular case study. The lab will provide opportunities to explore common techniques used in conservation biology to assess changes in habitats and populations. *This course meets the IB upper division Lab requirement.*

Recommended Text Book

Macdonald, DW and Katherine Willis (2013) *Key Topics of Conservation Biology 2*. Wiley- Blackwell. This is available through UIUC library in digital format. Other readings will be posted as needed to supplement.

Specific learning objectives

- Cover the major topics of conservation biology
- Discuss current papers in conservation
- Explore the social aspects of conservation biology
- Learn some of the general techniques used to determine the status of habitats, populations and communities
- Use the techniques and information discussed in class to further explore an issue of conservation biology

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 -15% of total grade

Class participation
Participation in lecture, discussions and forums is expected. During every class or lab opportunities to participate will be provided and whether you attend or participate will be noted. Failure to participate in at least 80% of class meetings will result in the lowering of your participation grade by the percentage relative to the number of classes participated in below 80%. So if there are 10 classes in a unit and you only participate in 7 of them your grade will be 7/8 or 87.5%.

In-class assignments
During class we will occasionally have activities that need to be completed. The goal of these assignments is to help you take a topic deeper and present information to the class.

Lab Activities -35% of total grade

There will be 9-10 labs during the semester to help further develop the topics and skills used in conservation biology. Each of these are worth roughly 40 points which will be split between a pre-lab and the lab. The pre-lab will be information that is essential to getting the most out of the lab and will entail reading some documents and answering some questions. The lab will require you to work through some problems and answer a set of questions and a short write-up. Most labs will happen in 164 Burrill Hall and occasionally in a separate computer lab. Some of them will require work outside of lab to ensure the lab is completed in a timely manner.

Exams- 30% of total grade
There will be 3 exams in the course at the end of each unit. These exams, while not inherently cumulative, will build on material learned in previous units. Each exam will be worth approximately 100 points.

Final Project – 20% of total grade
Using the information learned in lectures and skills learned in lab, students will be responsible for addressing an issue in conservation biology. In small groups, students will be expected to work with the TAs to identify a topic that can be used to create a scientific presentation and then translate that work for outreach. These topics will vary greatly between groups as we want to allow flexibility for groups to do something they are passionate about. Some possible ideas are partnerships between villages and conservation organizations, habitat assessments of a species and models of extinction risk of a species under different scenarios. The most important things to remember are that the project will need to explore a topic different in scope or topic from what was covered in class and then be able to translate that to something that would be appropriate for outreach and education.

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.

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 and no less than 1 week before the first exam. Only accommodations officially documented with DRES can be accommodated at this time and will be kept in strict confidence.

Grades
Because we strive to be fair in grading and there is extra credit available there will be no exceptions to this grading scale. I suggest you check your grades in Moodle regularly and bring up any inconsistencies immediately.

A+: 100-97	B+: 90-87	C+:80-77		
A:97-93	B: 87-83	C:77-73	D: 60-70%	F: 0-59%
A-: 93-90	B-: 83-80	C-: 73-70		

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. You can earn points for participation in lecture by answering questions and participating in the discussion of papers. During paper discussions and the online forum to share papers your participation will be judged weekly.

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 and thus late work will not be accepted. If you wait until the last minute (<3 hours before something is due or after 5 PM) to ask questions 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 and that assignments are uploaded properly.

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. If you experience issues with your group members please let us know immediately. We will work with you to address these issues but cannot help you after the fact.

Topics covered
During the semester we will cover a diversity of topics to understand how biology and conservation intersect and some of the processes that affect this interaction. The class is loosely divided into three units to cover: Ecology, Genetics and Social Sciences. Roughly one week will be used on each of these topics:

History of Conservation Biology, Threats to Biodiversity, Habitat Loss and Fragmentation, Climate Change, Conservation on Private Lands, Species and Populations, Conservation Genetics, The Role of Zoos in Conservation, Genetic Techniques, Working with Native peoples, Disease and The Role of Governments in Conservation.