

## **Conservation Biology – ESPP 90E**

### **Syllabus Fall 2016**

#### **Meeting Time and Place**

Wednesday 2:30 pm to 4:59 pm

Room: Museum of Comparative Zoology 429

#### **Prerequisites**

There are no prerequisites for the course, although some coursework in ecology is recommended.

#### **Instructor**

Dr. Onja Razafindratsima

Email: xxx

Office hours: Friday 1:00 – 3:00 pm (MCZ 444C)

#### **Website**

We will use Canvas for assignments, schedules, announcements, etc. Powerpoint lectures will be posted to the website the day after they are given. This allows me to make last minute updates and changes as needed and allows more flexibility in materials covered depending on the direction of class discussion.

#### **Course description**

Conservation biology strives to describe, understand, and forecast biodiversity dynamics by applying ecological and evolutionary theory within the contexts of resource management, economics, sociology and political science. This course will explore the motivations for preserving biodiversity and the consequences of decision-making under conflicting interests, with a focus on terrestrial ecosystems. It is designed to apply ecological principles and theories to address conservation issues. Case studies will include endangered species protection and reintroduction, prioritizing choices in conservation, habitat fragmentation and loss, exotic species invasions, over-harvesting and sustainable development, exotic pet trade, and human-wildlife relationship.

This course will emphasize student involvement and participation. The class will discuss current research and debates concerning conservation ethics, conflicts with human society, and environmental legislation at local, national, and international levels. Weekly classes will involve lectures on essentials of conservation biology, discussion of emerging topics through reading of research papers and hands-on learning through analysis of real data. Seminars and discussion forums with guest researchers & conservation practitioners and field trips with hands-on data collection will also be offered.

#### **Course objectives and expected learning outcomes**

By the end of this course, I hope that every student will be able to:

1. Describe why conservation biology is important using well-supported arguments;
2. Interpret, summarize and clearly present primary scientific literature from weekly readings, and to reflect on its conservation implications;
3. Advocate for biodiversity conservation, through outreach opportunities;
4. Develop a strong understanding of wildlife conservation problems and issues that relate to practical management;
5. Demonstrate newly acquired skills frequently used by conservation biologists, through practical exercises, improved writing and speaking skills, and discussion leading;

## **Additional information regarding the depth/breadth of the course**

### Reading assignment

Each week, all students will be required to read assigned papers plus one related scientific article they find (a complete reference to this article to be sent to me by email with the following assignment). Each student will formulate 5 critical comments and/or questions based on the reading materials, to be submitted to me by email at least 2hrs before each class. The questions are expected to be thoughtful and the answer should not be directly addressed in the reading itself. These questions and comments will be used in the class discussion.

### Class presentation and discussion leading

Each week, an individual or group (depending on the size of the class) will present a summary of the information in the assigned papers and facilitate a class discussion on topics related to the reading. At the start of the discussion, the lead student will provide a concise summary of the assigned papers. In the summary (in any format), you should: (1) review the major points of the papers, (2) highlight novel results and conclusions, (3) relate the papers to other readings or discussions in class or your own knowledge (particularly of very recent publications or relevant current events), and (4) raise questions or objections you have with the methods, results, and/or conclusions. Following the summary, the lead student should then be prepared to actively generate and facilitate discussion for the rest of the allocated time. You will be assigned a grade for leading the discussion. Each student must come to the class prepared to discuss and critique the paper. See handout for more info.

### Review paper

Students will be required to write a review paper in the area of conservation biology and to go through a mock scientific review process with peers in their class. Each student will choose a topic to be discussed and determined in the first few weeks of the class (a one-paragraph summary describing the topic will be required during the course). Students will use the primary literature to research and prepare a paper that should (1) synthesize what is known about the conservation topic, (2) highlight information gaps, and (3) define priorities for future research and practices.

The paper will be submitted mid-semester, at which point it will be graded and receive peer review by 2 other students (double-blind review) and the instructor. Peer reviews will be returned to the author, who will then be expected to revise the paper according to the reviews and submit a final revision toward the end of the semester.

The purpose of this exercise is to help students improve their scientific writing abilities, understand the peer review process, and possibly have an end result that they could submit to a conservation related journal! See handout for more info.

### Oral communication

All students will present their work, from the review paper above, in a class seminar (12 minutes plus 3 minutes for questions) at the end of the semester.

### Outreach

Students will choose between the following outreach options:

- 1- Each student finds a personal way to communicate a conservation case, topic or research results to the general public. They can be original in their choice (leaflet, event outline, short videos, multi-media output, creative performance, etc.). The outreach products will be presented with a 5 minutes flash communication at the end of the course.

- 2- Individual or group of students organizes an outreach event for the World Lemur Festival held on October 28-29 (can be before or after these dates, but during the same week). They can be original or take ideas from previous festivals (<http://goo.gl/kXQyF1>). The instructor must be informed about the event (where, when, what). Each group member must be actively involved in the planning and running of the event to receive a full grade.

### **Course policies and expectations**

Students are expected to actively participate in all the activities pertaining to this class, including in-class discussions, outreach/communication projects and field trips. Assignments submitted after the due-date will be penalized, except in extremely unusual circumstances (advanced arrangement required).

### **Grading**

Points allocated for evaluation of students

	Total points
Review paper	
First draft	100 points
Revision	50 points
Peer review	50 points
Paper presentation (oral)	75 points
Discussion lead	50 points
Critical comments/questions	25 points
Outreach presentation	25 points
Class participation/attendance	50 points
Field trip report	25 points
<b>TOTAL</b>	<b>450 points</b>

### **Schedule**

A schedule with weekly topics will be determined and distributed after students sign up for discussion topics.

### **Academic Integrity**

An open, participatory environment is essential for a thorough and in-depth discussion of conservation topics. Thus, collaboration and flow of ideas is highly encouraged in this course. However, all written projects and assignments submitted for a grade must be strictly individual, and your own- unless they are part of a collaborative project, with multiple authors. If you have any doubt about proper attribution of sources or practices of academic honesty, please see me directly.

### **Accommodation for students with disabilities**

Students needing academic adjustments or accommodations because of a documented disability must present their Faculty Letter from the Accessible Education Office (AEO) and speak with the instructor by the end of the second week of the term, September 16, 2016. Failure to do so may result in the Course Head's inability to respond in a timely manner. All discussions will remain confidential, although instructors are invited to contact AEO to discuss appropriate implementation.