Conservation Biology (BIOL-35600-01)
Spring 2019 Syllabus

Dr. Jennifer L. Ison
[redacted]

Time & location: MWF 9-9:50 am, RWW 260

Conservation Biology is an applied field of study within Biology focused on the conservation and protection of biodiversity. It synthesizes theories and principles from other fields (particularly Ecology, Population Biology, Genetics, Evolution, and Environmental Science) and applies them to current and future conservation issues. This course examines the theory, methods, and tools by which biologists attempt to understand and to protect biological habitats and their attendant natural populations of organisms. Topics include demographic and genetic conservation, invasive species, fragmentation and habitat loss, the design of nature reserves, management for conservation, and sustainable development within a conservation context.

Questions that motivate topics covered in this course include:

1) What is biodiversity? Why should it be preserved?
2) What are the current threats to natural areas and their effects on populations and species?
3) What are the ecological and genetic consequences of small population size?
4) How can we protect and restore populations and species?

Course texts

Required textbook: *A Primer of Conservation Biology* 5th Edition, by Richard Primack
Additional readings will be posted on Moodle

Conservation Biology is an interdisciplinary subject that emphasizes protecting and preserving biodiversity. In this course we will focus on the following learning objectives.

Course Learning Objectives:

1) Explain in-depth the theories and concepts foundational to the field of Conservation Biology.
2) Synthesize and apply knowledge from ecology, population biology, and ecological genetics in order to predict and mitigate threats to natural populations and species.
3) Evaluate the global ecological consequences of losing biodiversity.
4) Evaluate current practices and design a plan to restore and protect natural areas and native populations.

***Tentative* class schedule:** This schedule will likely change. For up-to-date information refer to Moodle. You are responsible for checking Moodle and staying up-to-date on readings and assignments as the schedule changes. The '*' indicates days with an open note reading quiz

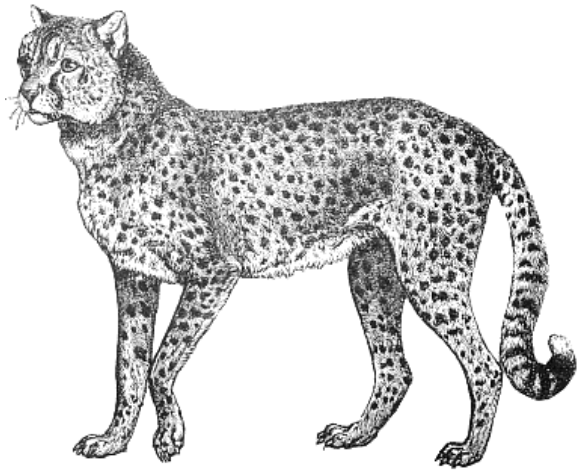
Date	Course topic	Readings (to be done prior to class)
Mon. Jan. 14	The unbearable hypocrisy & Course intro	
Wed. Jan. 16	The unbearable hypocrisy & What is biodiversity?	Blog post & review Ch. 1
Fri. Jan. 18	What is biodiversity?	Ch. 2 pages 21-35
Mon. Jan. 21	MLK service day—No class	
Wed. Jan. 23	Island Biogeography & estimating extinction rates*	Ch. 5 pages 135-150
Fri. Jan. 25	Island Biogeography & estimating extinction rates	
Mon. Jan. 28	Biodiversity-stability debate*-	Supplemental & Tilman 2012
Wed. Jan. 30	Biodiversity-stability debate	
Fri. Feb. 1	Threats to biodiversity: Climate Change	Cahill et al. 2013 & Ch. 4 pages 104-110
Mon. Feb. 4	Threats to biodiversity: Climate Change	
Wed. Feb. 6	Exam review	
Fri. Feb. 8	**Exam I**	
Mon. Feb. 11	Threats to biodiversity: Invasive species*	Ch. 4 pages 116-126
Wed. Feb. 13	Threats to biodiversity: Invasive species	Selments et al. 2012
Fri. Feb. 15	Threats to biodiversity: Invasive species	
Mon. Feb. 18	Habitat loss & fragmentation*	Ch. 9 pages 92-98
Wed. Feb. 20	Demographic consequences of small populations	Ch. 5 pages 161-165
Fri. Feb. 22	Demographic consequences of small populations	
Mon. Feb. 25	Genetic consequences of small populations*	Ch. 5 pages 150-161
Wed. Feb. 27	Genetic consequences of small populations	Kelly 2001
Fri. Mar. 1	Genetic consequences of small populations	Supplemental
Mon. Mar. 4	Exam review	
Wed. Mar. 6	**Exam II**	
Fri. Mar. 8	Other threats to biodiversity	Ch. 4 pages 98-104, 110-114 & 126-129
SPRING BREAK (Mar. 11-22)		
Mon. Mar. 25	Endangered Species Act	Ch. 6 pages 184-191
Wed. Mar. 27	Management project intro and work day	
Fri. Mar. 29	Ecological restoration *	Ch. 8 pages 270-280
Mon. Apr. 1	Ecological restoration	Grman et al. 2013
Wed. Apr. 3	Ecological restoration	
Fri. Apr. 5	In-class peer review	
Mon. Apr 8	ESA presentation	
Wed. Apr. 10	ESA presentations and work day	
Fri. Apr. 12	ESA presentations	Final ESA paper due Sunday

Date	Course topic	Readings (to be done prior to class)
Mon. Apr. 15	Management techniques: *Ex situ* conservation	Ch. 6 pages 200-209
Wed. Apr. 17	Management techniques: Biocontrols	Pearson & Calloway 2003
Fri. Apr. 19	Designing protected areas*	Ch. 7 pages 229-238
Mon. Apr. 22	Exam review	
Wed. Apr. 24	Exam III	
Fri. Apr. 26	IS research symposium—No class	
Mon. Apr 29	Environmental ethics discussion	Justus et al. 2009
Wed. May 1	In-class case study	
Fri. May 3	Final exam review	

Tues. May 7 @ 9 am FINAL EXAM

Grade components:

Item	Percentage of final grade
In class exams:	
Exams x 3 (16% each)	48%
Cumulative final exam	16%
Quizzes	6%
Paper discussions & other assignments	7%
Management project	20%
Engagement and professionalism	3%



Grading scale:

A = 100-93% A- = 93-90%
B+ = 89-87% B = 87-83% B- = 83-80%
C+ = 79-77% C = 77-73% C- = 73-70%
D = 69- 60%
F < 60%

Course and College Policies

*****Communication: Wooster email and Moodle are the official and preferred mode of communication for this course. You will need to check your Wooster account and course Moodle page each day.*****

Missed and late exams, quizzes, and assignments: Make-up exams will only be given with a letter from a doctor or the Dean of Students. You must contact me BEFORE the scheduled exam or as soon as possible afterwards if it is a medical emergency; be prepared to make-up the exam as soon as possible. Missing an exam without an excused and documented absence will result in you receiving zero points for the exam. Open note in-class reading quizzes are typically once a week (denoted by a * on the schedule). Make-up quizzes will not be possible, but I will drop your lowest quiz grade. All assignments turned in late will lose **10%** of the total points **each day** unless there are extenuating circumstances which can be verified.

Re-grade policy: If you believe that an error has been made in grading your course work, please contact me within a week from the date the assignment was returned to you.

Title IX reporting policy: The College of Wooster is committed to fostering a campus community based on respect and nonviolence. In accordance with Title IX, Wooster is legally obligated to investigate incidents of sexual harassment and sexual assault that occur on our campus. Faculty who become aware of any incident of sexual violence (including harassment, rape, sexual assault, relationship violence, or stalking) are required by law to notify Wooster's Title IX Coordinator. For more information about your rights and reporting options at Wooster, including confidential and anonymous reporting options, please visit http://www.wooster.edu/offices/titleix/.

Class etiquette: Cell phones must remain on silent and unused during lecture and lab. Laptop use in lecture is by permission of instructor only. No tobacco in class. Drinks in spill-proof containers are okay. As a general rule, no food in class (exceptions can be made).

Class attendance: There is no attendance policy for this course. Since it is an upper-level course, you are expected to attend all lectures. Attendance is particularly important on group project and paper discussion days. If you have an unavoidable absence on a group project or discussion day, please contact both your instructor and your group members. If you are chronically absent, I reserve the right to deduct points. If you have to miss class due to a college-sanctioned event or an extenuating circumstance, please inform me a week ahead of time. You are responsible for all of the material missed, and assignments must be submitted before the deadline to avoid late penalties. Although I would rather you show up late than not at all, tardiness is highly disruptive to the class. If you are chronically tardy, I reserve the right to deduct points.

The Learning Center – APEX: The Learning Center, which is located in APEX (Gault library) offers a variety of academic support services, programs and 1:1 meetings available to all students. Popular areas of support include time management techniques, class preparation tips and test taking strategies. In addition, the Learning Center coordinates peer-tutoring for several academic departments. Students are encouraged to schedule an appointment at the APEX front desk or call [redacted].

The Learning Center also coordinates accommodations for students with diagnosed disabilities. At the beginning of the semester, students should contact Amber Larson, Director of the Learning Center [redacted] to make arrangements for securing appropriate accommodations. Although the Learning Center will notify professors of students with documented disabilities and the approved accommodations, it is the responsibility of the students to speak with professors during the first week of each semester. If a student does not request accommodations or does not provide documentation, faculty are under no obligation to provide accommodations.

Academic Integrity: Each student in this course is expected to abide by the Code of Academic Integrity as printed in the Scots Key. I have a zero-tolerance policy for academic dishonesty, including plagiarism and cheating. Because laboratory exercises often involve group work and group study sessions can be useful, you are encouraged to study with other students to discuss information and concepts covered in class. ***However, any work submitted by a student in this course for academic credit must be the student's own work***. Penalty for violation of this Code may result in no credit for the assignment, failure of the course, and/or disciplinary action by the College. Here are some specific *examples* (not an exhaustive list!) of academic dishonesty:

- Copying another student's assignment – either a current or past student.
- Collaborating with another student on an assignment without express permission from me.
- Paraphrasing/copying any text from any resource without providing a reference.
- Extensive paraphrasing/copying of text from any resource (even if you provide a reference).
- Turning in the same assignment to multiple courses, in the same or different semesters, without prior consent from both professors.