

BIOL 507: Conservation Biology
Fall 2017, T & Th 10:30 – 1:10pm
Nguyen Engineering Building 1107

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Office hours by appointment

Course Description:

This course will introduce students to the fundamentals of Conservation Biology, a discipline that merges taxonomy, natural history, and ecology with “resource” management and restoration ecology, set within a socio-economic, historical, political and legal context. The course will consist of interactive lectures, readings (including a text and primary literature), discussion, group projects, and inquiry-based experiential learning.

Required readings:

Students are expected to have read assigned texts **before class** and to be prepared to discuss the readings in class.

- *An Introduction to Conservation Biology* 1st Edition, by Richard B. Primack and Anna A. Sher (Sinauer Associates Inc., 2016)
- Primary (peer-reviewed) literature and other course texts as assigned, which will be posted on Blackboard.

Learning Objectives: By the end of the course, the successful student will be able to:

- Describe the tenets and goals of Conservation Biology
- Describe the threats to biodiversity and explain why biodiversity is valuable
- Identify and explain key concepts in taxonomy, ecology, genetics, biogeography and evolution relevant to conservation biology
- Explain how socio-economic, historical, political and legal contexts affect the conservation of biodiversity
- Clearly articulate actions that help conserve and restore biodiversity

Course Requirements and Evaluation:

- 1) **Leading a Literature Discussion** (50 points): This activity involves leading class discussion of primary literature with the entire class. You will be required to summarize the main points of the article and relate them to class themes during the discussion.
- 2) **Experiential Learning Assignments** (50 points): Students will participate in experiential learning activities over the course of the semester. After some of the activities, you will be required to complete a short assignment. Information about each activity and assignment is posted on Blackboard.
- 3) **Midterm and Final Exams** (100 points each): Students and instructors will collaborate to develop exam questions based on learning objectives during a pre-exam review session.
- 4) **Case Study Group Presentation** (125 points): You will be required to teach the rest of the class about one of our most pressing conservation problems and/or potential solutions (a list of possible topics will be provided). Presentations will occur at the end of the semester and grades will be based upon faculty and peer-evaluations of your work.
- 5) **Case Study Bibliography & Outline** (50 points): To help you develop your case study, you will submit an outline and annotated bibliography for your topic part way through the semester. The outline should briefly describe the main sections of your essay and provide a clear roadmap of your eventual presentation. Your annotated bibliography should convincingly demonstrate that your presentation will be based on sound, high-quality, and thorough research. Extensive feedback on the outline and bibliography will be provided that will help you create the final presentation.
- 6) **Participation** (150 points): You are expected to come to class prepared for discussion of readings and concepts, field trip activities, and group project meetings. Participation is assessed over the entire semester and can take many forms, e.g., responding to and presenting thoughtful questions, helping with course logistics, etc. Participation also involves doing everything you can to make our field trips run smoothly, and representing yourself, and our class well when we are engaged in activities off campus. Note that perfect attendance will only earn you 50 points. The other 100 points will be assigned at the discretion of the instructor.

Grading Scale

A	625-580	C	497-435
A-	579-560	D	434-375
B+	559-543	F	374-0
B	542-518		
B-	517-498		

Course Policies

Late Work

Papers and other assignments are to be submitted at or before the time noted on the course schedule. Late work will be reduced by 10% if it is up to 24 hours late, by 20% if it is between 24 and 48 hours late. No work will be accepted over three days late without a valid written medical excuse or notice of death in the family. No makeup work will be given unless you have made prior arrangements with the instructor.

Email Policy

GMU faculty and staff may only correspond with students through the students' GMU assigned email accounts. This is a legal requirement, so emails sent from other accounts will not be answered.

Cell Phones, Laptops and the Paperless Classroom

Please turn your cell phone off (not on vibrate) while in class. No texting or listening to music is allowed while in class.

You are welcome to bring a laptop to class and use it for class-related purposes (e.g. taking notes, referring to course texts). During class you are asked to refrain from using your laptop for purposes not related to class. Using your laptop for non-class purposes will decrease your participation score.

We will use the Blackboard online course management system to minimize paper use. Our aim is to collaboratively adopt policies that will balance academic needs with resource conservation concerns.

Honor Code

When you enrolled in this course you agreed to abide by the university's Honor Code. The Honor Code does not preclude collaborative work, such as informal discussions and studying in communities. Nor does it preclude assigned group work. The Honor Code does require that work you, as an individual, turn in ultimately be the product of your own individual synthesis or integration of ideas, and that the work a group turns in ultimately be the product of the group's collective ideas. If you are uncertain of the line between collaboration and cheating, see the instructor *before* turning in an assignment. As always, cite your sources. If you do not, it is plagiarism. Plagiarism means taking someone else's ideas or words and presenting them as your own without proper attribution of the source. This includes copying materials directly from the Internet. Use the approved citation method, as discussed in the first class.

Diversity Statement

School of Integrative Studies, an intentionally inclusive community, promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.

Accommodations for Students with Disabilities

If you are a student with a disability and you need academic accommodations, please see the instructors during the first class and contact the Office of Disability Services (ODS) - Student

Union Building I (SUB), Room 2500, <http://ods.gmu.edu/>, or (703) 993-2474. All academic accommodations must be arranged through ODS.

GMU Writing Center

The Writing Center provides free tutorial sessions for all students needing help with any writing project, from freshman essays to scholarly publications. It is best to make an appointment to ensure seeing a Writing Center consultant at a specific time; however, walk-ins will be accepted if there are openings. The GMU Writing Center is located in Robinson A114; (703)-993-1200; <http://writingcenter.gmu.edu/>

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Course Calendar

Date	Topics	Assignments (due by 10:30am unless otherwise noted)
T 8/29	Course overview Nuts and bolts: a review of the basics “Wish to Protect Our Oceans” – TED: Sylvia Earle	
R 8/31	What is Conservation Biology? “Thin Green Line” – Nature film Introduce Student-led Discussion & Conservation Journal Assignment	Primack & Sher Ch 1
T 9/5	Biodiversity “Saving Life on Earth” – TED: EO Wilson	Primack & Sher Ch 2
R 9/7	Jesus Maldonado – Conservation Genetics Introduce Case Study Assignment	
T 9/12	Value of Biodiversity	Primack & Sher Ch 3 Bennett, 2011
R 9/14	Student-led literature discussion 1	Knoche and Lupi, 2013 Conservation Journal #1 Submit top 3 preferences for Case Study topic due by 11:59pm
T 9/19	Threats to Biodiversity	Primack & Sher Ch 4
R 9/21	Student-led literature discussion 2	Wittemyer, 2011 Conservation Journal #2
T 9/26	Extinction	Primack & Sher Ch 5 Ceballos et al 2015
R 9/28	Student-led literature discussion 3	Sekercioglu <i>et al.</i> , 2007 Conservation Journal #3
Sat 9/30	National Public Lands Day	Prince William Forest Park
T 10/3	Population Biology Mid-term review	Primack & Sher Ch 6
R 10/5	Mid-Term Exam	
Sat 10/7	Conservation Discovery Day	Smithsonian Conservation Biology Institute
T 10/10	NO CLASS – Mon Classes Meet	
R 10/12	Protected Areas Review exam	Primack & Sher Ch 8

T 10/17	Establishing new populations	Primack & Sher Ch 7 (pp 236-246)
R 10/19	Student-led literature discussion 4 Discuss Case Study Outline & Bibliography	Ripple and Bescheta, 2012 or Mulder et al 2017? Conservation Journal #4
T 10/24	<i>Ex situ</i> Conservation “The Loneliest Animals” – Nature Film	Primack & Sher Ch 7 (pp 246-263) Braverman, 2014
R 10/26	Student-led literature discussion 5	Enßlin et al 2011 Conservation Journal #5
Sun	Field Trip to Maryland Zoo	
T 10/31	Conservation Outside Protected Areas “Hotspots” Film – Camp Pendelton	Primack & Sher Ch 9
R 11/2	Student-led literature discussion 6	Reed & Melenlender, 2008 Conservation Journal #6
T 11/7	Restoration Ecology	Primack & Sher Ch 10
R 11/9	No Class - Work on Case Study Outline & Bibliography	Case Study Outline and Bibliography (due by 11:59pm)
T 11/14	Sustainable Development “Climate of Change” – Film	Primack & Sher Ch 11
R 11/16	Student-led literature discussion 7	Hole et al 2005 Conservation Journal #7
T 11/21	No Class Last day to visit a Protected Area	EL Assignment: Protected Areas Essay (due by 11:59 p.m.)
R 11/23	No Class – Thanksgiving Holiday	
T 11/28	Future of Conservation Discuss Protected Area Visits	Primack & Sher Ch 12 Redford et al 2016
R 11/30	Second Exam Review Case Study Group Meetings; work on presentations	
T 12/5	Case Study Presentations	Upload a copy of your presentation by 10:30am
R 12/7	Case Study Presentations	Upload a copy of your presentation by 10:30am
T 12/12	Peer Evaluations Due	Upload the evaluations of yourself and your group by 5pm
R 12/14	Second Exam	