BIOSC 1610: Conservation Biology
Summer 2023

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Please include "BIOSC 1610" in the subject line when emailing me regarding the course.

Course objectives

During this course, students will:

- Clearly define terms and principles relevant to conservation biology.
- Understand and describe how humans contribute to environmental problems.
- Identify major threats facing species, communities, and ecosystems.
- Learn basic tools for assessing and addressing environmental health and degradation.
- Understand the complexity of many conservation issues, and how conservation biology operates in a multidisciplinary manner.
- Recognize the importance of economics, sociology, politics, biology, and their interactions in both causing and resolving environmental problems.

Prerequisites

Foundations of Biology 1 & 2 lecture and lab or equivalent (BIOSC 0150, 005X, 0160, and 006X).

Course materials

There are no required textbooks for this section of the course. Course readings, handouts, and other documents will be posted on Canvas.

Grading scale

Final letter grades are determined on a straight scale as follows:

Final percentage	Grade
92.50 - 100	A
89.50 - 92.49	A-
87.50 - 89.49	B+
82.50 - 87.49	B
80.50 - 82.49	B-
77.50 - 80.49	C+
72.50 - 77.49	C
70.50 - 72.49	C-
67.50 - 70.49	D+
62.50 - 67.49	D
60.50 - 62.49	D-
≤60.49	F

Course format & assignments

Please note that this is a full semester packed into 3 weeks, so each day is like a week of a full-length semester. This course includes a mix of lectures, discussions, projects, and laboratory and field exercises. Due dates and instructions for each assignment will be communicated in class and via Canvas. Grades will be reduced 10% per 24-hour period following assignment due dates.

The total number of points earned out of 500 will determine your final grade. The maximum points per category are as follows (subject to minor changes if activities change):

Category	Assignment	Points	Total points
Project 1: Sage-grouse	Town hall presentation	100	150
	Debate	50	
Project 2: Issues in conservation bio.	Annotated bibliography	100	200
	Presentation	100	
Lab/field	Mark-recapture labs	20	75
	Amphibian Bd lab	10	
	Medina County field trip	10	
	Jennings field trip	10	
	Participation	25	
Lecture/discussion	What's that?	5	75
	Conservation news	5	
	Submitting answers to discussion questions (10 points each, choose 3 of the 8 throughout the course to submit)	30	
	Participation	35	
		TOTAL	500

Class procedures

Canvas

All registered students can access the course website on Canvas. The class files on Canvas will contain all of the handouts from class, announcements, information about assignments, grading rubrics, etc. Students should check Canvas frequently for course announcements and other information.

Email

I will routinely send out announcements through email and/or Canvas. Given that this is a compressed course, I expect you to read emails send to your University of Pittsburgh email account (or the email account provided upon course registration for non-Pitt students) daily during the work week (Monday through Friday).

Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an email forwarding service that allows students to read their email via other service providers (e.g. Gmail). Students that choose to forward their email from their pitt.edu address to another address do so at their own risk. If email is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University email address. To forward email sent to your University account, go to *http://accounts.pitt.edu*, log into your account, click on '*Edit Forwarding Addresses'*, and follow the instructions on the page. Be sure to log out of your account when you have finished.

Emergency situations
Assignments missed due to emergency situations (illness, serious injury, or death in your immediate family) will be considered on an individual basis. You must submit your request for an extension in writing (e.g., email); verbal communication is not sufficient. Please use the following guidelines to prepare your request:

1) Your request for an extension or accommodation must include your name, a detailed description of the nature of the emergency, and the assignment that you missed.
2) Your missed assignment(s) must be submitted to me no later than one week after the assignment's due date.
3) Documentation must be provided. For example, if the emergency is due to a medical condition, you must include evidence that you sought medical care.

Failure to comply with these guidelines could result in a zero recorded for the assignment.

Academic integrity
Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity (https://as.pitt.edu/faculty/policies-and-procedures/academic-integrity-code) will be required to participate in the outlined procedural process as initiated by the instructor.

Violation of the Academic Integrity Code requires the instructor to submit an Academic Integrity Violation Report to the Dean's Office.

Any attempt to submit work that is not the student's own work is a violation of academic integrity. If I find that a writing assignment contains evidence of plagiarism, the level of severity will determine whether the sanction is an F in the course, a 0 score on the assignment, or partial credit on the assignment. **A second academic integrity offense in the course will result in an automatic grade of F.**

Turnitin
Students agree that by taking this course all required papers will be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of Turnitin.com page service is subject to the Usage Policy and Privacy Pledge posted on the Turnitin.com site.

Students with disabilities
If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890/412-624-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course. For more information, visit http://www.studentaffairs.pitt.edu/drs.

Course schedule (subject to change, especially due to weather)

Below are our planned activities. Unless otherwise noted, all assignments should be completed by 8 am on the day on which they're due. You should also complete all reading and/or media for the day's discussions by 8 am unless otherwise noted in class or via Canvas.

The schedule is split up by week to make it a bit easier to read. Each lecture/activity is marked with a number corresponding to which topic it relates to:

- 01 – Biodiversity: Threats & conservation
- 02 – Mark-recapture (2 parts – crayfish and newt)
- 03 – Habitat alteration
- 04 – Overexploitation
- 05 – Pollution
- 06 – Disease & climate change (includes amphibian disease lab)
- 07 – Invasive species
- 08 – Protected area design
- 09 – Habitat restoration & mitigation (includes field trip to Medina County, OH)
- 10 – Ecosystem management (includes field trip to Jennings Env. Edu. Center)
- 11 – Often-neglected species in conservation
- 12 – Conservation & social sciences

Week 1:

Day	Date	Topics/activities	What you should complete before class
M	5/15	PLE general orientation Intro to BIOSC 1610 course and projects Lecture (01): Biodiversity: Threats and conservation	
T	5/16	Field (02): Mark-recapture (Part 1: crayfish) Discussion (01): Papers on general conservation bio Lecture (03): Habitat alteration	Discussion (01): • Tilman et al. (2017) • Williams et al. (2020)
W	5/17	Field (02): Mark-recapture (Part 1: crayfish) Discussion (03): Habitat alteration articles/podcasts Lecture & activity (04): Overexploitation	Discussion (03): • Articles/podcasts related to Tiehm's buckwheat (see document)
Th	5/18	Activity: Introduce salamander ID Field (02): Mark-recapture (Part 2: newts) Lecture (05): Pollution Activities (05): Review salamander ID, project work time	
F	5/19	Field/lab (02): Analyze mark-recapture (crayfish) Discussion (05): Pollution Lecture (06): Disease & climate change	Submit responses to Discussion 01 and/or 03 by 8 am if those are ones you're choosing to submit. Discussion (04): • Chapter from Carson's *Silent Spring*

Week 2:

Day	Date	Topics/activities	What you should complete before class
M	5/22	**Project 1 activity: Sage-grouse town hall meeting** Lecture (07): Invasive species Field (06 & 02): Amphibian disease salamander survey, continue newt mark-recapture while there	**Project 1 Town hall presentation**
T	5/23	Discussion (07): Invasive species Lecture (08): Protected area design Activity: Project work time	Project 1 town hall peer evaluations Discussion (07) • Chittka & Schürkens (2001) • Pardini et al. (2008)
W	5/24	Lab (06): Amphibian disease DNA extractions, qPCR Discussion (08): Protected area design Lecture (09): Habitat restoration & mitigation Activity: Project work time	Review amphibian disease lab handout (06) Discussion (08): • Damschen et al. (2006) • Damschen et al. (2019) **Project 2, Part 1: outlines** • **Annotated bib** • **Presentation**
Th	5/25	Field trip (09): Spend the day with Jim Spetz, Natural Resource Manager for the Medina County (OH) Park District	
F	5/26	Lecture (10): Ecosystem management **Project 1 activity: Sage-grouse debates** Activity: Project work time	Submit responses to Discussions 05, 07, and/or 08 by 8 am if those are ones you're choosing to submit. Medina County field trip (09) follow-up due. **Project 1 debate materials**

Week 3:

Day	Date	Topics/activities	What you should complete before class
M	5/29	NO CLASS – MEMORIAL DAY	
T	5/30	Field (10): Jennings Environmental Education Center (Slippery Rock, PA) While there – Discussion (10): Ecosystem management	Project 1 debate peer evaluations Discussion (10): • Grumbine (1994) • Borunda (2021)
W	5/31	Lab (06): Amphibian disease – analysis & results Field/lab (02): Mark-recapture (newt) analysis Lecture (11): Neglected species in conservation	Jennings field trip (10) follow-up due (08) •
Th	6/1	Discussion (11): Parasites in conservation Zoom guest: Luke Arnold, Pitt alumnus and current Environmental Programs Coordinator with the Borough of Mechanicsburg Discussion (12): Conservation & social sciences Activity: Project work time	Lab packets due: • Mark-recapture • Amphibian disease Discussion (11): • Carson et al. (2020) Discussion (12): • Mascia et al. (2003) • Chapter from Kimmerer's *Braiding Sweetgrass* • Podcast episode of your choice
F	6/2	**Project 2 presentations** Course evaluations	Submit responses to Discussions 10, 11, and/or 12 by 8 am if those are ones you're choosing to submit. **Project 2, Part 2:** • **Annotated bibliographies** • **Presentations**