

Biology 305: Biological Conservation (4cr)

Monday 2:00-4:30/Wednesday 4-4:50 ISC 137

FALL 2021

Instructor: Kristina Hannam, Ph.D. (she/her/hers)

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Office Hours (meet in ISC 259 or 244; check 259 first, 244 is right across the hall)

Mondays 9:30-10:30, Tuesdays 10-11am, and ON ZOOM ONLY 7-8pm, or by appointment.

Text: Cardinale, Primack, & Murdock 2020 Conservation Biology,

1st ed. Sinauer Associates, Sunderland, MA.

Plus additional readings posted on MyCourses

Learning Outcomes:

Upon completion of this course students will:

1. Describe the source and spatial distribution of biodiversity, the human threats to biodiversity and how these interact with population/community dynamics to enhance the threat of extinction.
2. Explain the theories/ideas that underlie selected current conservation and management practices in North America and around the world, and recognize the complexity that different social/cultural priorities add to conservation issues
3. Apply understanding of threats to biodiversity and conservation theory to develop a conservation plan to selected problems in case studies.
4. Evaluate and critique articles on conservation topics by developing questions and actively participating in evaluations of selected articles in class.
5. Create a written research proposal by identifying a question or problem, selecting appropriate background sources, and developing appropriate tests or management plans. Students will also critically evaluate the proposals of other students.
6. Cooperate with classmates in an applied conservation project at an off-campus site. Students will participate in collection of field data, analysis and report preparation. Students should expect to work independently or in small groups, and engage in professional interaction with and reporting to representatives of local conservation organizations (eg. DEC, NY State Parks, Land Trusts).

**NOTE this course does NOT count for *laboratory credit* toward the Biology B.S. or B.A.

Pandemic Learning Objectives:

I hope you will join me in adopting these additional learning objectives. The ongoing pandemic this semester will present challenges and opportunities for learning in new ways for all of us, and to be as successful as we can be, let's commit to each other:

1. To be patient and kind with ourselves and each other as we navigate new situations.
 2. To embrace the opportunity to learn in new ways and grow as life-long learners.
 3. To do our best, knowing that our best may look different than it has in other semesters.
 4. To communicate openly and clearly about our expectations, concerns, and goals.
 5. To be flexible. We are in unfamiliar and uncertain times. Circumstances may change over the course of the semester. Let's work together to make this the best class possible, knowing that this may be a moving target.
- credit to @MikkiBrock for sharing a draft of these objectives

Semester Schedule:

The following schedule is not set in stone. Dates/topics may shift, but you can assume that Exam dates WILL NOT CHANGE.

Module 1

Week 1-7 (Aug 30- Oct 18): Introduction, Invasive Species, Importance & Valuing Biodiversity

Textbook Chapters 1, 2, 11, 5, 6, possibly 9 (in this order)

Important Dates:

Guest Speaker on Wednesday: Sept 8

Service Learning Field Site Work: Sept 13, 20, 27, Oct 4

In-class work on Service Learning Project: Sept 22, Sept 29?

Oral Exam Questions out to students Oct 13

Oral Exam Oct 18

Module 2

Week 8-15 (Oct 18-Dec 20) Threats to Biodiversity, Causes of Extinction, Species-Level Conservation, Community & Ecosystem Conservation

Textbook Chapters 3, 4, 8, (9), 10, 11,12, 13, 14, 15

Important Dates:

Work on Service Learning Project: Oct 13

Nature Journals set #1 due Oct 12, Reflection Due Oct 16

Case Studies Oct 21, Nov 2

Research Proposal Topic Due Oct 29

Nature Journals Reflection #2 due Nov 29

Oral Exam Questions out to students Nov 11

Research Proposal Bibliography Due Nov 22

Oral Exam Dec 6

Draft Research Proposal Due Dec 8

Review Panels Dec 13

Final Research Proposals Due Dec 20

Grading:

Your grade in this course will be based on the following exams and assignments:

Exams & Reading Quizzes	30%
Nature Journals & Reflections.....	10%
Case Studies, Class Participation, Journal Discussion	15%
GVC Service Learning Assignments	25%
<u>Research Proposal</u>	<u>20%</u>
Total	100%

Final grades will be assigned according to the following distribution: >93%, A; 90-93%, A-; 87-89%, B+; 83-86%, B; 80-82%, B-; 77-79%, C+; 73-77%, C; 70-72%, C-; 60-69%, D; <60%, E. Under most circumstances, there will be no adjustment to your grades or the grading scale.

Don't be fooled, this is a *reading & writing-intensive* course that requires a lot of work both in and out of class.

Oral Exams & Reading Quizzes (30% of grade)

Oral Exams: There will be two oral exams over the course of the semester. Exams will cover material from the textbook and the lectures, as well as questions about any journal articles, case studies/problem sets or guest speakers from class. Exams are *not* cumulative per se, though there is a great deal of connection among topics in the course so certain themes may apply to questions on more than one exam.

For each oral exam, students will be provided with a pool of 10-20 exam questions at least 5 days before the exam. At that time, students will sign up for an individual appointment with Dr. Hannam on the Exam date. Students will answer 3 randomly chosen questions in the meeting with Dr. Hannam (lasting no more than 12 minutes). The rubric for grading exam questions will be available on the course Canvas site.

Reading Quizzes: On each Sunday indicated in the syllabus, there will be a reading quiz on the textbook chapters assigned for the previous week. Quizzes will have 5-10 multiple choice questions for each chapter assigned, plus optionally 1-2 questions (short answer or multiple choice) on case studies/presentations/discussions from the previous week (see next paragraph). The quiz will be open textbook and open note. Each quiz will be open from 12:01am until 11:59pm on Sunday, you will have one opportunity to take each quiz, and you will have 10 minutes to complete the quiz once you have opened it. Your lowest single quiz grade will be dropped.

Nature Journals & Reflections (10% of final grade)

Students will be required to find a dedicated "sit-spot" in a natural area that they visit once/week. During that visit, students will make detailed observations and record those observations in their journal. Students are also

expected to carry their journal to our service learning field site and record observations in their journal at that site as well. Weekly entries will be checked periodically by Dr. Hannam (either journals will be brought to class, or pages uploaded to Canvas at Dr. Hannam's discretion), and at 3 points during the semester, students will write reflections based on their field notebook entries, course readings, activities and discussions.

Class work and assignments including categories below (15% of final grade)

Case Studies

Students will work individually or in groups (as assigned by the instructor) during the semester on case studies (see semester schedule) and other in-class work and assignments. The instructor will announce details for each assignment. Some of these case studies and assignments may require work outside of class. Each of these case studies will have a short written assignment that must be handed in (usually online). All will be graded for completeness (0 for not turned in, 5 for incomplete or low-quality, or 10 for high quality & complete), and 3 will be graded more closely (on a 1-10 scale).

Class Discussions

Article Discussions: We will have (almost) weekly article discussions over the course of the semester during each module. And each week, one or more students will be assigned to help lead the discussion. All students are expected to contribute to discussions of articles, even in the weeks when they are not presenting. Participation in journal discussions will weigh heavily in calculation of class participation grades. The dates and articles that will be discussed are listed briefly in the syllabus and on the Canvas page.

****Students should expect to see questions about these articles on the exams.****

Class Participation

10points/week – based on contribution to article discussions & my assessment of your engagement in the class activities and case studies.

Service Learning Project (25% of final grade)

One credit of this 4 credit course is based on a service-learning project that the class will complete in support of the local land trust. This project will involve completion of background readings/research, collection of data in the field, design and writing of the final materials for the land trust, and presentation of a final report to the class and to the GVC. Successful completion of this project will require excellent teamwork (as evaluated by Dr. Hannam and your peers), and satisfaction of our client, the land trust.

Research Proposal (20% of final grade)

A 8-10 page research proposal will be required from each student in the course. The paper will be based on the student's reading, analysis and synthesis of the primary literature and development of a research proposal in which the student proposes an experiment or study. The proposal may be on any topic within the field of conservation biology. The assignment has multiple components with due dates throughout the semester – please pay attention to these dates on the syllabus/assignment sheet. Additional guidelines will be distributed via Canvas and in class. ****A Student MUST pass the proposal assignment in order to pass the class and receive credit for this class ****

Late work and Make-up work

In the Canvas Dropboxes for most assignments you will find that the due date/time may be different than the closing date/time. That means it is possible to submit late work (after the due date/time) up until the closing date/time. Late work is typically penalized -10% for each day (24hours) late, and the penalty may be assessed proportionally by time.

If you believe you have a valid excuse (illness or other extenuating circumstance) for late work, or need make-up work, you must contact Dr. Hannam as soon as possible, and before the end date of the module in which the work is due. Dr. Hannam will work with each student individually to determine the best solution to the missed deadline.

Communication with the Instructor

The best way to communicate with Dr. Hannam is via Geneseo email (hannam@geneseo.edu). Canvas course contact (Canvas inbox or Canvas class discussion question board) is the second best option. Dr. Hannam will make every effort to respond to messages sent to her during the workday by 6pm the same day. However, be aware that Dr. Hannam checks messages in batches 2-3 times/day, so may not respond immediately even during the workday. Emails sent after 5pm may not be answered until the following workday depending on Dr. Hannam's schedule outside of work. And Dr. Hannam typically takes one day/week off from work (usually Saturdays), and checks email on Sundays only sporadically.

Accommodations

SUNY Geneseo will make reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities. Accommodations will also be made for medical conditions related to pregnancy or parenting. Students should contact Dean Buggie-Hunt in the Office of Disability Services (tbuggieh@geneseo.edu or [585-245-5112](tel:585-245-5112)) and their faculty to discuss needed accommodations as early as possible in the semester.

Academic Dishonesty

SUNY-Geneseo's policies on academic dishonesty are summarized in the Code of Student Conduct found in the Geneseo Undergraduate Bulletin online. Plagiarism and other forms of academic cheating are prohibited and may result in a zero on an assignment or exam. Plagiarism and cheating will be reported first to the departmental office, and may be referred to the Campus Judicial Council. Repeated incidents will result in failure of the course. Exams and term papers will be checked for plagiarism. If you have any questions about what constitutes academic dishonesty please contact the instructor.

Taking Care of Your Mental Health

The Biology major is demanding, and as your instructor I try to keep in mind that mine is not the only course you are taking, and that most of you also have other demands on your time and attention in addition to your coursework. Juggling your many responsibilities can have an impact on your mental health. With this in mind, I realize that diminished mental health, including significant stress, mood changes, excessive worry, or problems with eating and/or sleeping can interfere with optimal academic performance. The source of symptoms might be strictly related to your course work; if so, please make an appointment to speak with me one-on-one. I realize problems with relationships, family worries, loss, or a personal struggle or crisis can also contribute to decreased academic performance.

SUNY Geneseo provides mental health services to support the academic success of students. Counseling Services, a part of the Lauderdale Center for Student Health & Counseling, offers free, confidential

psychological services to help you manage personal challenges that may threaten your well-being and success here in college.

In the event I suspect you need additional support, I will express my concerns and the reasons for them, and remind you of resources (e.g., Counseling Services, Career Services, Dean of Students, etc.) that might be helpful to you. It is not my intention to know the details of what might be bothering you, but simply to let you know I am concerned and that help, if needed, is available.

Getting help is a smart and courageous thing to do -- for yourself and for those who care about you.

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