

BIOL/EVPP 518: CONSERVATION BIOLOGY
FALL 2021
TR 10:30-11:45 AM IN223 & ONLINE 3 credits

Instructor: Dr. Travis Gallo

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Office hours (by phone): Wednesday 11am-1pm, call or text 940-367-0741
(office hours appointments preferred)

Course Description:

The loss of the biological diversity is now one of the most rapid forms of environmental change in the modern era. This course covers the causes and consequences of biodiversity loss, and discuss approaches for overcoming these threats in ways that balance the needs of people and nature. The class begins by defining biodiversity and exploring why biodiversity is so important. The class then focuses on the main causes of biodiversity loss, focusing on how practitioners mitigate these impacts. The final portion of the course will focus on the most common theories, models, tools, and techniques that are used to conserve biological diversity. . This interactive class emphasizes student involvement and participation. Although there will be regular lectures by the instructor and guest speakers, the focus of the course will be on student-led in-class discussions.

Course Goal:

Students will gain a greater understanding of the major principles and contemporary issues in Conservation Biology.

Learning Outcomes:

There are 5 learning outcomes that are designed to help students master the skills needed to obtain and be successful in a job working as a conservation biologist in a government agency, non-profit organization, or academia:

1. Be able to analyze and use common arguments used to justify conservation so that one can use those arguments in discussions with stake-holders who hold divergent world views.
2. Have a mastered understanding of the biological and social factors that control biodiversity, as well as the modern drivers of biodiversity change.
3. Be able to apply common theories, models, and tools that are used in various conservation disciplines
4. Learn how analyze information from a variety of disciplines in the natural and social sciences to develop effective conservation planning.
5. Be able to read and critically evaluate peer-reviewed literature so that one can keep abreast of emerging problems, new techniques, and modern controversies that will form the foundation for extended learning throughout one's career.

Assigned Readings:

Course materials include articles from the primary literature and occasionally from other media sources. All readings will be posted on Blackboard.

Textbook (optional):

Edited by Navjot S Sodhi and Paul Ehrlich. Conservation Biology for All. Open Source: <https://conbio.org/publications/free-textbook/>

Lectures:

On Thursdays we will have synchronous (live) lectures via Zoom. A link to the Zoom classroom is located on the main course menu on Blackboard. The lectures will be the main learning content of the course. All lectures will be recorded and a link to the recording will be provided after the class under the Weekly Lessons folder for that respective week.

Discussions:

Each week we will have an in-person discussion focused on papers from the scientific literature. Typically, a team of 4-5 students will be assigned to lead each discussion section. The lead students are expected to submit 3-5 discussion questions on the reading for posting on Blackboard no later than **11:59 pm on Sunday**. Students not leading but 'participating' in the discussion must 1) attend each discussion section and 2) turn in short, concise answers to the posted questions when they arrive to class. At the start of the discussion, the lead students will provide a thorough yet concise (no more than 5 minutes!) overview of the paper. In the summary, you should: 1) review the major points of the paper, 2) highlight novel results and conclusions, 3) relate the paper to other readings or discussions in class or your own knowledge, and 4) raise questions or objections you have with the methods, results, and/or conclusions. Following the summary, the lead students should then be prepared to actively generate and facilitate discussion for the rest of the allocated time. 50% of your grade will be leading a discussion, and the other 50% will be participating in the discussion (attendance). There are 11 discussions total. Therefore, you will be required to lead 2 and attend 9. You cannot miss the discussion that you lead. However, each discussion you 'participate' in is worth 7 points. You need 50 points to receive a perfect score for discussion 'participation' therefore there is flexibility to miss ~1.7 discussions. If you participate in all the discussion, the extra 13 points will be considered extra credit, so they will still count.

One-pager Policy Handout:

Each student will be required to write a 1-page policy brief on the topic of your term paper. More details on this assignment will follow.

Midterms and Final Exam:

We will have one midterm and a final exam. The midterm will cover all material up to the previous class period. The final exam will be designed to encourage students to review and synthesize all course material. Exam questions will be taken from lectures, readings, and discussions. Everything discussed in class is fair game, even if I do not post it on Blackboard. An alternative exam date will only be approved if you speak with me at least several weeks in advance with a valid reason.

Graduate Student Project:

Graduate students will be assigned an additional writing project worth 100 points to fulfill the requirements for 518. This project will consist of a ~2000-word report on a hidden figure in Conservation, Ecology, and Natural History. More details will be discussed during the first week of classes. This assignment will be due the last day of class.

Grading

Point allocation for evaluation of students (**all late assignments will incur a 10% drop in grade per day**):

	TOTAL POINTS
Discussions Lead	50 points (2 x 25 points each)
Non-led Discussion Participation	50 points (9 x 7 points each)
1-page Policy Brief	50 points
Graduate Student Project	100 points
Exam I	50 points
Final	100 points
TOTAL	400 points

Cutoffs for grades will be based on the following percentages: 100-98 = A+; 98-93 = A; 92-89 = A-; 88-87 = B+; 86-83 = B; 82-79 = B-; 78-77 = C+; 76-70 = C; 69-60 = D; ≤ 59 = F.

Lecture Slides:

I will do my best to post a PDF of the lecture slides by midnight the night before class. Please note that portions of the posted lecture slides will be missing information that can be filled in during lecture.

COVID-19:

The COVID-19 pandemic has changed all of our lives. Many of us are still balancing multiple responsibilities, like school work, child/family care, and jobs. Additionally, we may have COVID-related disruptions. These stacked responsibilities can create scheduling difficulties. Some of us don't have an ideal space to take online courses or do our work. And the heightened vigilance surrounding not getting sick creates an emotional and physical burden on our everyday lives. These additional stresses can make us prone to getting sick or making a 'mistake' in our social distancing practices. I understand, and I want to whole heartedly stress that self-care and your health should be your top priority. Therefore, I will try to build flexibility in the class.

- 1) All lectures will be recorded. If you can't make it for any reason. You can watch the lecture later.
- 2) Attendance is not required (**applies only to Lecture**). I want you to come to class and sit in on the live lectures. But I understand how fluid this all is for everyone.
- 3) While attendance at Discussion is required, I will work with you if you are having difficulty attending. Please stay in communication with me.

With that said, the class will build on itself, and it will be easy to get behind. If you fall behind, stay in communication with me and work with me and I will help you catch up. The only thing I ask of you is to not abuse this sympathy for our collective shared circumstance. I too am working to protect two children from schooling, in some cases I will probably be home schooling, I have a working partner, and a fear of myself or family members getting sick. Let's work together and support each other so that we can learn as much as possible given the current circumstances.

Mental Health:

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 speak with me. However, problems with relationships, family worries, loss, or a personal struggle or crisis can also contribute to decreased academic performance and I recognize that.

Counseling and Physiological Services (CAPS) <http://caps.gmu.edu> provides mental health services to support the academic success of students. Their free and confidential psychological services include group counseling, skills-based workshops, case management, crisis consultations, time-limited individual counseling as well as faculty and staff consultation. They also have great online resources under the Well-Being tab. CAPS is operating during the COVID-19 pandemic and providing confidential resources and online telehealth meetings.

In the event I suspect you need additional support, I will express my concerns and the reasons for them, and remind you of these resources 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.

Disability Accommodations

If you have a documented learning disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Disability Services (SUB I, Rm. 4205; 993-2474; <http://ds.gmu.edu>) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:

As a faculty member, I am designated as a "Responsible Employee," and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu. George Mason University is committed to providing a learning, living and working environment that is free from discrimination and a campus that is free of sexual misconduct and other acts of interpersonal violence in order to promote community well-being and student success. We encourage students who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support. University Policy 1202: Sexual Harassment and Misconduct speaks to the specifics of Mason's process, the resources, and the options available to students.

Academic Integrity:

What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification. It is expected that students adhere to the George Mason University Honor Code as it relates to integrity regarding coursework and grades. The Honor Code reads as follows: "To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the University Community have set forth this: Student members of the George Mason

University community pledge not to cheat, plagiarize, steal and/or lie in matters related to academic work.” More information about the Honor Code, including definitions of cheating, lying, and plagiarism, can be found at the Office of Academic Integrity website at <http://oai.gmu.edu>.

Privacy

The use of Blackboard is *required* for this class. You can log in using your GMU username and password at <http://mymason.gmu.edu>. I use Blackboard to post lecture slides, grades, homework assignments, etc. Please use your MasonLive email account to receive communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address.