**Conservation Biology**
**WIS 4554/5555c**

Fall 2018
T/TH 9:00 – 10:25 am
Newins-Ziegler 112
3 credits

**Instructor:**
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**Course Description:**

Welcome to Conservation biology! Conservation biology is an interdisciplinary science designed to address the causes and consequences of the global biodiversity crisis. This mission-driven field also seeks to provide effective tools to protect biodiversity against mounting threats in the current human-dominated era. Conservation biology is an exciting field because it is constantly evolving and is relevant to current events happening all around us. This course should be enjoyable and it should enrich your passion for contributing to a conservation-related field.

The objectives of this course are to:

1. Explore key concepts that have shaped the evolving field of conservation biology
2. Outline the historical and current threats to biodiversity around the globe
3. Examine the advantages and disadvantages of conservation strategies currently being implemented to reverse biodiversity loss

By the end of this course, students should be able to:

1. Articulate sources of variation in biodiversity at species, community, and ecosystem levels

2. Explain intrinsic and extrinsic factors contributing to extinction risk
3. Construct and interpret concept maps of key biodiversity concepts
4. Understand and communicate how biodiversity values vary across different cultures and places
5. Articulate and provide examples of the variety of human threats to biodiversity at local and global scales
6. Evaluate the efficacy of real-world conservation strategies in different socio-ecological contexts
7. Use multimedia tools to effectively explain conservation issues to others

**Target audience:**

This course is designed for upper-level undergraduate and graduate students. Because Conservation Biology is an interdisciplinary science, we welcome students from diverse backgrounds. Due to the broad scope of the field, we will not be able to cover the following topics in detail: conservation genetics (covered in WIS 3553C Introduction to Conservation Genetics) and human dimensions of conservation (consider taking WIS 4523/WIS 6578 Human Dimensions of Natural Resource Conservation).

**Course components:**

*Class Participation*

This course relies heavily on active student participation. While there will be short lectures in each class session, the class period will also include active learning activities. **Class attendance is therefore an essential part of succeeding in this course.** Attendance will be taken at the start of each class period via a sign-in sheet. Please notify the TAs of any absence. You will be allowed 2 absences with no explanation. Each absence beyond these 2 will result in a 5-point deduction each time unless there is an excusable reason for missing (i.e. illness, research trip, or family emergency).

Each class period will include questions posed to the class that will be answered anonymously via the software program/app *Poll Everywhere*. There is no need to register or download the software. Please bring your cell phones and/or laptops to class. If you do not have either, you will not be penalized in any way and you can still participate via pen and paper. These exercises are not graded and are anonymous. Their purpose is to facilitate discussion and participation.

*Course Webpage*

The course will be maintained on the Canvas E-learning website https://elearning.ufl.edu/. All course materials (including lectures, readings, and assignments) will be posted on this website. Lecture slides will be posted here prior to each class meeting. Grades will also be maintained on the website. Please turn in any assignments via the submission buttons on the website.

*Readings and Reading Quizzes*

Readings will be assigned and should be completed prior to each class period. They will be made available on the course webpage. You do not need to purchase a textbook for this course. There will be 5 reading quizzes throughout the semester which will each include 10 multiple choice/short answer questions directly addressing content in the readings. These questions will be straightforward to answer if you have done the readings. Reading quizzes will be administered in class and are closed book/notes.

*Concept Map Assignment*

Students will choose any key concept discussed in the first section of the course (see class schedule) and create a concept map to illustrate how the concept can be applied in a specific example (e.g., species or ecosystem). The map can be either digital (e.g., powerpoint, bubble.us) or hand-drawn. Students will bring their maps on the 9/27 class day and discuss in groups.

*Wakelet Assignment*

Students will create a Wakelet (http://wakelet.com/) on a chosen "hot topic" in conservation biology. Wakelets are online information portals that summarize content on a given issue. They include embedded links to a wide variety of online content including articles, blogs, images, twitter, and youtube. This assignment will also involve providing peer feedback/reflection on a wakelet created by another classmate.

*Virtual Tour Assignment*

Students will create a Virtual Tour in Google Earth on a chosen biodiversity threat. See:
https://earth.google.com/web/data=CgQSAggB
Students will complete this assignment in groups of 5 or 6 people. Students will take viewers on a tour of the world to learn about how this threat is playing out in different places and describe methods being used to manage the threat. Virtual tours will be presented in class on the last two days of the course. This assignment will also involve providing peer feedback/reflection on a virtual tour created by another group.

*Take-home Exam*

A take-home (open book/open notes) exam will be administered at the end of the course. The exam should be completed individually (not in groups). There will be three open-ended short essay questions (~ 1 page response each). The exam is designed to synthesize information learned during the semester.

*Graduate Student Assignments*

Graduate students enrolled in the 5555c section of this course are required to have additional assignments beyond those required in the 4554 section. These will include (1) writing a research paper on a topic of their choice due at the end of the semester and (2) designing and leading a

creative in-class activity at some point during the semester relating to the topic covered that day. A list of possible topics/days to choose from will be provided.

*Extra Credit Opportunities*

Students may attend a seminar held on the UF campus throughout the semester on a topic related to conservation biology and write up a short summary of the seminar. The seminar summary is worth 10 points of extra credit. Please submit on Canvas by December 5.

There will be a competition for students to create the best original conservation biology-related meme (or cartoon) in the last week of class. Students can get 10 extra credit points for submitting a meme. There will also be small prizes given out for the best ones in different categories (voted on by the students).

**Grading:**

Grades will be calculated as follows:

A (93% or greater), A- (90%-92.99%), B+ (87%-89.99%), B (83%-86.99%), B- (80%-82.99%), C+ (77%-79.99%), C (73%-76.99%), C- (70%-72.99%), D+ (67%-69.99%), D (63%-66.99%), D- (60%-62.99%), E (<60%)

| **Item** | **Points** |
|---|---|
| Attendance | 100 |
| Take-home exam | 100 |
| Readings quizzes (5) | 50 |
| Concept map | 50 |
| Wakelet (wakelet = 75 pts, peer feedback = 25 pts) | 100 |
| Virtual tour (tour = 75 pts, peer feedback = 25 pts) | 100 |
| **Total*** | **500** |

* Graduate students enrolled in section 5555c have an additional 100 points (50 for class activity, 50 for research paper; total points = 600)

Please also see the UF policy on assigning grade points:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

**Class Schedule**

| **KEY CONCEPTS** | | **Assignments due** |
|---|---|---|
| 23-Aug | What is conservation biology? | |
| 28-Aug | Characterizing biodiversity | |
| 30-Aug | Patterns of biodiversity | |
| 4-Sept | Extinctions | |
| 6-Sep | Extinctions pt 2 | Reading quiz |
| 11-Sep | Sources and Sinks | |
| 13-Sep | Community diversity- Dr. Masanori Fujimoto | |
| 18-Sep | Valuing biodiversity | |
| 20-Sep | Panel on biodiversity perspectives | |
| 25-Sep | Ecosystem Services- Ben North TA | Reading quiz |
| 27-Sep | Synthesis | Concept maps |
| **THREATS TO BIODIVERSITY** | | |
| 2-Oct | Habitat destruction/fragmentation | Virtual tour ideas signup |
| 4-Oct | Climate change | |
| 9-Oct | Overharvesting | |
| 11-Oct | Pollution | Reading quiz |
| 16-Oct | Wildlife trade - Dr. Christina Romagosa | |
| 18-Oct | Chasing Coral- film (Dr. Hull gone) | |
| 23-Oct | Pollution | |
| 25-Oct | Invasive species- Alicia McGrew | Wakelets |
| **CONSERVATION STRATEGIES** | | |
| 30-Oct | Sustainable Agriculture- Rashidah Farid TA | |
| 1-Nov | Legislation | Reading quiz |
| 6-Nov | Protected areas | Wakelet peer review |
| 8-Nov | Urban planning- Dr. Mark Hostetler | |
| 13-Nov | Reintroduction/Restoration | |
| 15-Nov | Science communication | |
| 20-Nov | Synthesis | Reading quiz |
| Thanksgiving | | |
| 27-Nov | Virtual tour presentations | Grad papers |
| 29-Nov | Virtual tour presentations | Memes |
| 4-Dec | Agenda for the future | Virtual tour peer review |
| Finals week | | Take home exams |

***Academic Honesty***

*UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.*

***Course Evaluation***

*Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at* https://evaluations.ufl.edu*. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at* https://evaluations.ufl.edu/results/.

***Campus Resources***

*Health and Wellness*

- *U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.*
- *Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.*
- *Sexual Assault Recovery Services (SARS) Student Health Care Center, 392-1161.*
- *University Police Department, 392-1111 (or 9-1-1 for emergencies). http://www.police.ufl.edu/*

*Academic Resources*

- *E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learningsupport@ufl.edu. https://lss.at.ufl.edu/help.shtml.*
- *Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. http://www.crc.ufl.edu/*
- *Library Support,* http://cms.uflib.ufl.edu/ask*. Various ways to receive assistance with respect to using the libraries or finding resources.*
- *Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.* http://teachingcenter.ufl.edu/
- *Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/*

*Student Complaints*

- *Campus:* https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf
- *On-Line Students Complaints:* http://www.distance.ufl.edu/student-complaintprocess

***Students with Disabilities***

*Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.*