

WELCOME TO INTRODUCTION TO CONSERVATION BIOLOGY



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NRM/BIOL 277: INTRODUCTION TO CONSERVATION BIOLOGY

Spring Semester 2019

Meeting Time: Tuesday and Thursday 11:30 AM -1:00 PM

Classroom: Arctic Health Research Building (AHRB) Room 183 on the UAF Fairbanks campus.

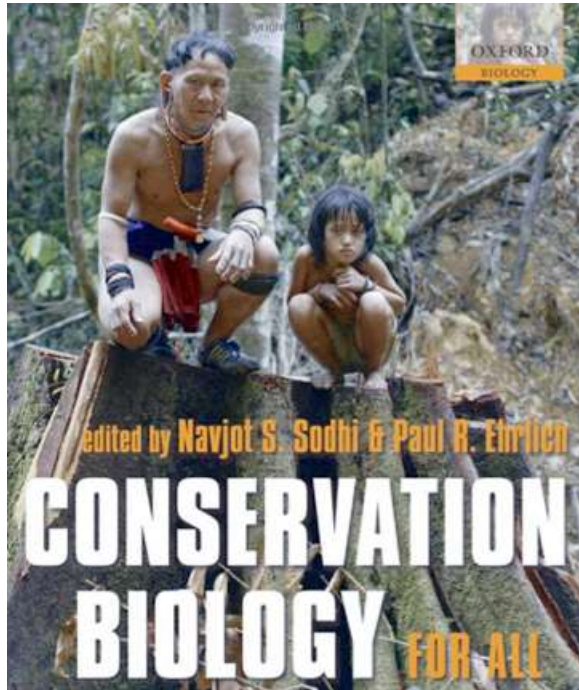
Instructor Gino Graziano, Instructor of Invasive Plants and Forest Health

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Email gagraziano@alaska.edu.

Office Hours - (arrange in advance to confirm) Thursday 9:00-11:00 am; Monday, Wednesday, Friday by appointment (9:00 to noon preferred).

Course Text



Download Conservation Biology For All, by Navjot S. Sodhi and Paul R. Ehrlich free mongabay.com/conservation-biology-for-all.html

Chapter readings are posted to Blackboard.

Course Description

This course will provide an overview of: (1) the principles of the science of conservation biology and the contributions of several different integrative levels (genetic, population, ecology, earth system, and social science) of interdisciplinary science to problems in conservation biology (2) the framework of organizations, laws, programs, and land management systems that are specifically focused on identifying, protecting, and maintaining natural diversity in the U.S., selected other nations, and international programs (3) current topics in conservation biology including climate change, invasive species, human modified landscapes, and changing fire regimes (4) the role of people in conservation including outreach and education in generating support,

Traditional Ecological Knowledge, and how conservation goals are framed and achieved

Course Structure

(A) The course consists of class and online discussions of readings to cover the scientific principles of conservation biology and the value-based rationales that drive conservation biology. Early in the course students choose a conservation topic that they will address in their class discussions and reports. The chosen topic must be approved by the instructor.

(B) Students will provide an in person or record an oral presentation approximately every two weeks that summarizes their chosen conservation topic in the context of the previous course topics. Each student will present key parts of their report to the class filling approximately 10 minutes. Student presentations will include visual aids. Time for questions and comments will be allowed when presentations are in person, and included in the participation grade. When presentations are recorded and shared students are expected to ask and respond to questions online.

Conservation Biology Issue report

Students will choose a conservation biology issue to develop a comprehensive report that students will build on throughout the semester. Reports use the course topics as a general outline, with required elements to address in the report provided by the instructor as learning objectives. Approximately every other week students will present to the class their topic as it pertains to the associated learning objectives. Presentations will be posted to Alaska.edu YouTube and shared with the class via Blackboard (details below). Topics selected may be either, conservation of a specific area (e.g. watershed, National Park, Wildlife Reserve), species, habitat type, or natural resource. Topics will be approved by the instructor. Students are

encouraged to pursue their own interests in choosing a report.

Supplemental Readings (to be posted on the course Blackboard site)

Current scientific journals, resource management articles, and news/analysis articles.

- F. Overharvesting
- G. Invasive Species
- H. Climate change
- I. Fire and biodiversity

COURSE TOPIC OUTLINE

Topic I Principles and drivers of change

- A. Conservation Biology as a changing science/Role of People in Conservation
- B. Biodiversity
- C. Ecosystem function and services
- D. Habitat destruction
- E. Habitat fragmentation

Topic II Conservation into practice

- A. Conservation planning and priorities
- B. Preventing extinctions
- C. Endangered species management
- D. Conservation in human modified landscapes
- E. Conservation theory to practice
- F. Conservation biologist tools

ASSIGNMENTS & GRADING

Grading Policy

I. Writing assignments (Midterm Paper) - 20% of Course Grade

Student groups will be expected to write a 4-8 page summary of their conservation topic as it pertains to outlined learning objectives that address the previous chapter lessons and assigned readings. The writing assignment will be graded on turning in the assignment on time, clarity of writing, punctuation and grammar, citation of appropriate scientific literature and reports related to the conservation topic, and covering each learning objective with an appropriate level of depth to:

- a) demonstrate student understanding of the learning objective, and
- b) is appropriate for the chosen conservation topic.

The goals are to:

1. Pursue a conservation biology topic of personal interest.
2. Build technical writing skills.
3. Demonstrate understanding of learning objectives in a written form.
4. Build skills in searching for, understanding, and citing scientific literature.

II. Student Presentations (first 6) - 20% of Course Grade

Students will give an oral presentation that highlights the key points from the learning objectives that pertain to their chosen conservation topic. Presentations will include visual aids as appropriate. Students will be graded on the organization and clarity of the presentation, appropriate use of visual aids, covering

the topics in enough depth to provide a basic understanding of the topic, and response to questions and comments. Students will also be graded on their engagement with presenters by asking questions and making constructive comments. The length of presentation will be approximately 5-10 minutes.

The goals are to:

1. Develop an understanding of the variety of conservation topics chosen.
2. Summarize a specific topic within a strictly limited time for presentation, making sense of it, and identifying the most relevant points to reach conclusions.
3. Develop presentations, with special emphasis on speaking cogently and fluently.
4. Develop critical thinking skills resulting in questions and constructive comments that improve our understanding of a subject.

III. Quizzes/tests – 20%

At least 6 quizzes/tests will be provided to students to take individually. These quizzes/tests will include questions that pertain to the learning objectives provided by the instructor to students. The purpose of the quizzes/tests are to allow students to demonstrate their knowledge of all the learning objectives covered.

IV. Class Response - 10% of Course Grade

Students will be expected to participate in discussions of course reading topics, and respond to questions asked by the instructor and peers. Students will discuss which learning objectives are highly relevant to their chosen conservation topic, and they intend to research in greater detail. Timely response to lesson questions is an obvious requirement of achieving this course grade, and it is imperative that all students read the materials, view lecture videos and supplemental materials, and respond to course questions in a timely fashion. Students will be graded on providing appropriate responses to questions and constructive comments that help develop deeper understanding of the subject. Class response to reading/supplemental materials, lectures, and associated questions must be complete prior to the posted date/time that the class is regularly held, and response to others questions and comments must occur by midnight that day.

Example: For a reading/lecture video on Tuesday respond to all posted instructor questions prior to 11:30 am that Tuesday. Response to the instructor's comments and providing comments on others responses is required by midnight that same Tuesday. You must comment on at least one other student's response to a question.

Rationale:

1. Understanding concepts develops when students discuss assigned readings as they pertain to broad conservation biology concepts applied to case studies.
2. Interaction with the instructor and peers allows students to demonstrate understanding of the application concepts.
3. Discussing readings as they pertain to the student chosen conservation topic will improve written and oral assignments, and the process of developing ideas for those assignments.
4. Interaction with peers and the instructor is a tangible demonstration of the seriousness of the student toward the course.

V. Final paper - 20% of Course Grade

Students will be expected to write an 8-12 page summary of their conservation topic as it pertains to outlined learning objectives that address the previous chapter lessons and assigned readings, and all comments made by the instructor. Final papers will be graded on turning in the assignment on time, clarity of writing, punctuation and grammar, citation of appropriate scientific literature and reports related to the conservation topic, organization of larger technical report, and covering each learning objective with an appropriate level of depth to a) demonstrate student understanding of the learning objective, and b) is appropriate for the chosen conservation topic. The final paper will build on the most pertinent concepts and provide final summary recommendations for appropriate conservation goals and actions pertaining to the topic.

The goals are to:

1. Pursue a conservation biology topic students are most interested in.
2. Build technical writing skills.
3. Demonstrate understanding of learning objectives in a written form.
4. Build skills in searching for, understanding, and citing scientific literature.
5. Build skills in compiling and organizing a large report.
6. Build skills in responding to comments provided by reviewers, in this case the instructor.

VI. Final Presentations - 20% of Course Grade

The last three class periods will be set aside for students to present their final reports. Each student will give a presentation lasting approximately 20 minutes with an additional 10 minutes allowed for questions and discussion (questions and discussions may be online). The student's oral presentation will highlight the key points from the final paper. Presentations will include visual aids as appropriate. Students will be graded on the organization and clarity of the presentation, appropriate use of visual aids, covering the topics in enough depth to provide a basic understanding of the topic, and response to questions and comments. The final presentation will build on the most pertinent concepts and provide final summary recommendations for appropriate conservation goals and actions pertaining to the topic.

The goals are to:

1. Orally present summaries, and recommendations for conservation goals and actions that pertain to the chosen topic.
2. Expose students to a variety of conservation topics chosen.
3. Summarizing a large report within a strictly limited time for presentation, making sense of it, and identifying the most relevant points to reach conclusions.
4. Speak in front of peers, with special emphasis on speaking cogently and fluently.
5. Critically think about conservation topics and develop questions and constructive comments that improve our understanding of a subject.

VII. Late assignment policy

Unexcused late assignments will have their final score lowered by 5% of the maximum allowable score for every day the assignment is late.

FINAL EXAM - 10:15 a.m. - 12:15 p.m., Wed, May 3

ADDITIONAL INFORMATION: PRESENTATION AND PAPERS

Recording and posting presentations:

To record videos that include slides from programs such as Powerpoint utilize Screencast-o-matic (<https://screencast-o-matic.com/>), a free video recording and editing software. The completed video will be uploaded to your University of Alaska YouTube account and shared via blackboard. Here are some tips and tricks for making your screen recording.

Step 1. Write a script and or storyboard for your presentation.

Step 2. Practice to make sure the lighting, camera angle, audio, and background all look good. Practice a few times to get comfortable.

Step 3. Record your video.

Step 4. Upload your video to YouTube:

1. Go to YouTube.com and log in with your @alaska.edu account. The first time you do this, you will be walked through some steps to set up your account. Contact your instructor if you run into trouble. Click on the upload button at the top of the YouTube account. You can set the privacy level to either Unlisted or Public.
2. Once your video is uploaded to YouTube, copy the URL

Step 5. Paste the URL into a new post on Blackboard in the “Presentations” section. Don’t link the URL, just paste the plain text.

Step 6. View the post and make sure that your presentation shows up and is viewable through the post.

Are you new to giving presentations? UAF has help available at the UAF Speaking Center. Visit their website (<https://uaf.edu/speak/about/>) for more information.

Paper:

Turn in papers via e-mail to the instructor (gagraziano@alaska.edu), prior to midnight on the due date. Papers should be formatted with Times New Roman size 12 font, single spaced, with 1 inch margins. Citations may use any recognized format you are familiar with, but make sure and be consistent using only one citation style. Images and figures may be used, but should be included in appendices labeled Appendix 2 Figures. Appendix 1 will include any learning objectives you found irrelevant to your subject. In Appendix 1 you must define the learning objective and explain why it is irrelevant to your conservation topic. Appendix 1 will count towards your total page numbers, but will not count against you if you go over. Note that page numbers are a guide, and you aren’t really graded on page numbers. If you cover the material adequately, and write concisely you will achieve the appropriate number of pages.

Are you new to writing papers? UAF has a Writing Center that can provide you with assistance. Visit their website (<https://www.uaf.edu/english/writing-center/>) for more information.