

EFB 390: Wildlife Ecology and Management

Syllabus Fall 2023

Lecture: Tues & Thurs 2:00-3:20, Illick 5
Plus 55 minutes weekly recitations

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Office hours and locations TBA.

COURSE DESCRIPTION:

This is a broad, foundational course. While the overarching goal is to make students familiar with fundamental topics in wildlife ecology and management.

Wildlife *ecology* is an extremely complex science, that explores themes like population dynamics, behaviors, space use, disease, habitat, trophic interactions, that is studied with a suite of rapidly evolving tools – field observations, advancing technology, statistics and modeling.

Wildlife *management* places all the complexity of wildlife ecology into a sloppy social, political, historical, ethical and legal realm. Most professional “wildlife” managers will openly admit that they spend much more time trying to manage *people*.

In this course, we will introduce methods, theories, concepts, and contemporary research topics in wildlife ecology, placing these into the very human inflected context of management.

We will hopefully also get you even more interested in wildlife ecology than you maybe already are! It is my opinion that there is no better or more interesting job than being a wildlife ecologist.

COURSE LEARNING OBJECTIVES/OUTCOMES:

- Understand fundamental concepts in wildlife ecology and ecological theory, such as population dynamics, wildlife-habitat relationships, limiting factors, surveying and estimation, wildlife statistics.
- Develop and hone research skills – especially building a bibliography, understanding and synthesizing peer reviewed literature and grey literature on wildlife ecology and management.
- Develop some rudimentary skills in R programming and statistical tools for fitting and interpreting commonly used models in wildlife ecology.
- Become familiar with the historical context and current (conflicting) philosophies of wildlife management, how these apply to past, present, and future approaches to wildlife research

and management, and some of the key agencies, entities, and individuals that participate in this process.

- Become familiar with the human dimensions of wildlife ecology and management including the role of social, economic, and political dimensions through analysis and synthesis of research articles, popular press articles, reports, and other media, and discussions.
- Synthesize concepts in wildlife ecology, wildlife and habitat management, policy, and human dimensions components to describe, understand, and consider solutions to contemporary wildlife conservation and management challenges, using evidence-based approaches.

COLLEGE LEARNING OUTCOMES

Scientific Reasoning | Quantitative Reasoning | Communication Skills
Technological and Information Literacy (Zotero!) | Basic programming and statistics (R!)
Values, Ethics and Diverse Perspectives | Critical Thinking | Collaborative work

TEXTBOOKS AND SUPPLIES:

There is no required textbook in this class, though a few texts can be recommended. There will, however, be many readings assigned – book chapters, scientific articles, population articles, “grey literature,” some seminal readings. All materials will be made available on the course Blackboard page. All lectures (and other important materials) will be most reliably available on the course website: <https://eligurarie.github.io/EFB390/>. Bookmark this page!

ATTENDANCE POLICY:

This course will **primarily** cover material that does not appear in your assigned readings or other out-of-class materials. Thus, you should make an effort to attend all classes. If you must be absent for a class, consult with me beforehand and make sure to obtain class notes from a classmate.

We strongly encourage you to make sure to come to class prepared. If you come to class consistently, come prepared having completed any assigned reading or viewing, and pay attention, you are highly likely to succeed in learning the concepts and knowledge I am hoping for you to learn and earning a grade you are satisfied with.

Also – visit us, all of us, at office hours (or at other times)! We love to talk about this stuff.

GRADING STRUCTURE

Your grade will be based on 1 (or 2) quizzes, weekly assignments (including several group projects during the semester), and a final major project + final group presentation.

Assignment	Grade Percentage
Weekly Assignments	35%
Exams (2)	30%
Final project + presentation	25%
Participation + engagement	10%
Total	100%

Academic dishonesty non-discrimination and inclusive excellence, and others, can be found in the ESF student handbook (<https://www.esf.edu/students/handbook/>).

TENTATIVE CLASS SCHEDULE

[GL – indicates “Guest Lecture”; blue colors indicate scheduling has not yet been finalized.]

Date	Day	Module	Topics
Aug 29	Tues.	Background	Basics and Definitions
Aug 31	Thurs.		<i>GL: Casey Koons on Library Science & Research</i>
Sep 5	Tues.		Human-Wildlife History - Part I
Sep 6	Thurs.		Human-Wildlife History - Part II
Sep 12	Tues.	Estimation and Sampling	Counting Animals - Part I
Sep 14	Thurs.		Counting Animals - Part II
Sep 19	Tues.		Counting Animals - Sampling Uncertainty
Sep 21	Thurs.		Mark-Recapture (<i>with GL: Ophélie Couriot</i>)
Sep 26	Tues.	Ranges and Habitats	Distributions and Ranges
Sep 28	Thurs.		Niches and Habitats
Oct 3	Tues.		Modelling just about anything
Oct 5	Thurs.		Dr. Moore on Zoo Conservation (<i>GL</i>)
Oct 10	Tues.	NO CLASS	
Oct 12	Thurs.		<i>Mega symposium of mini-talks on delta AIC in Wildlife Ecology</i>
Oct 17	Tues.	Population Ecology	Exponential Growth and Stochasticity
Oct 19	Thurs.	Exam I	
Oct 24	Tues.		Interactions and Physiology (<i>EG & GL</i>)
Oct 26	Tues		Movement and Spatial Ecology
Oct 31	Thurs.	Models of management	North American Model of Wildlife Conservation
Nov 1	Tues.		Hunter harvest and controversies (<i>GL</i>)
Nov 7	Thurs.		<i>Haudanosaunee Environmental Protection Plan (GL)</i>
Nov 9	Tues.		<i>Co-management in northern Canada (GL)</i>
Nov 14	Thurs.		<i>Urban Ecology (GL)</i>
Nov 16	Tues.		<i>Migratory Bird Management (GL)</i>
Nov 21	Thurs.	THANKSGIVING	
Nov 23	Tues.		
Nov 28	Thurs.		<i>Furbearer management (GL)</i>
Nov 30	Tues.		<i>Wildlife Law (GL)</i>
Dec 5	Thurs.		<i>Adaptive Management (GL)</i>
Dec 7	Thurs.		<i>Urban Ecology (GL)</i>
Dec 12	Tues.	Exam II	
Final Time Slot		FINAL PROJECT PRESENTATION SYMPOSIUM	

IMPORTANT NOTE: I retain the right to change anything at any time! In practice this is nearly always to the benefit of the students.