ESM 270: Conservation Planning and Priority Setting
Course Syllabus, Fall 2024

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Class Dates: **9/18/2024-9/25/2024**
Class times: **9am-5pm in Bren 3035**, unless otherwise noted.

The objectives of this course are for you to:
1. Understand the principles and concepts underlying conservation planning
2. Understand how these principles are applied in real world settings
3. Gain exposure to and experience with a range of conservation planning tools

Course Structure: This is an intensive, 8 day course. We will cover a lot of ground each day. It is recommended that you review the readings, labs, and recorded material prior to class. For most class days, there will be a combination of ~75minute lectures on key topics in conservation planning and 2 hour computer lab exercises using a planning tool that reflect concepts from lecture. There will also be dedicated time to read, review and discuss papers, and work on lab writeups and proposals.

Pre-class GIS test: The material in 270/270p is meaningless, if not dangerous, without in-depth understanding of GIS. As such, there will be a pre-class test on GIS that will be posted to canvas in August. You will have 1 hour to complete it any time before class starts. It will not require access to GIS software, but accessing a GIS beforehand might be helpful to refresh. Please review material from ESM 263. You need to know what you know, and so do the instructors!

Lectures: Lectures will explore different topics in conservation planning. Recorded lectures from prior years will be available on gauchocast over the summer as a resource. We will also record and post the live lectures. It remains required that you attend in person lectures.

Readings: Required readings accompany each lecture to provide context. All readings will be available on Canvas. Dedicated reading time will be built into each day. However, absorbing the readings fully may take time outside of class. Additional, optional readings will be posted on canvas. See the Readings and Discussion guidelines for tips on efficiently reading papers.

Student-led Reading Discussions: Lunch will consist of chatting about readings, hopefully enjoying the sunshine in the great outdoors. Everyone is expected to participate. Each day, two teams will lead reading discussions, each lasting about 20m. Sign up for a topic on Canvas. Every student is expected to lead one discussion, highlighting the importance of the topic, relevance to lecture and other material, and addressing any confusion from the class. These are low stakes, low stress discussions with your classmates and the TA that are designed to reinforce material.

Lab and Lab Assignments: Lab sections are designed to explore commonly used tools in conservation planning. We will start with an introduction to the tool. Students will then use real data to address a short conservation problem. You are expected to try troubleshooting and googling issues on your own, but

instructors are there for help navigating hurdles that google didn't solve. <u>All *analyses* should be completed individually</u>, though peer-to-peer discussion is encouraged. We strongly recommend reading the entire lab before starting, as we often provide hints for one potential way of completing the task. Lab assignments will be completed in pairs. Please see the [template and rubric](#) for the written assignment on Canvas. Please coordinate partners amongst yourselves and rotate partners each lab. You are responsible for coordinating with your partner to complete the write-up.

Project Proposal: The project proposal is included to encourage deeper exploration of practical conservation planning challenges. A proposal includes scoping of a problem, objectives, proposed data and proposed analyses. Proposals can be related to Group Projects or another topic that aligns with the concepts and tools presented in class. There will be dedicated time to work on proposals during class, but thinking through the project early will make for a better proposal. See [proposal template](#) on Canvas for more details.

Attendance & Participation: We cover a substantial amount of material in 270 at a fairly rapid pace. Engagement with the material is critical to building conceptual and practical knowledge. Arriving on time and staying the entire day is necessary, but not sufficient for participation credit; engaging in lecture and contributing to the paper discussions are also required, as is effort troubleshooting labs and helping classmates when asked. Participation will be used to adjust final grades up or down. Do not underestimate the importance of consistent, meaningful participation to your learning (or grade) outcomes. Please email the instructor asap (Larsen@bren.ucsb.edu) if you become ill or for other unexpected conflicts.

Grading: Besides the GIS test, all other aspects will be graded on a check, check plus, check minus, no credit basis. Check plus <u>exceeds expectations in all regards</u> (~top 10-20% of class). Check implies all expectations are met and there are no major flaws (majority of class). Check minus implies major flaws (hopefully unusual). No credit on an assignment will be given for subpar work that displays little effort or understanding (hopefully no one!). Historically, the average for grade for CP has been A-.

       Pre-class GIS test: 10% of grade
       Lab Assignments: 5 assignments (50% of grade)
       Student-led paper discussion: 1 assignment (10% of grade)
       Project proposal: 1 assignment (10% of grade)
       Participation: 20% of grade

*See Canvas for templates and grading rubrics.
*Lab 1 is due Friday 9/20 at 5pm, feedback will be provided asap. All others are due on the Sunday before week 1 of fall quarter. However, we strongly encourage you to submit them earlier so they don't pile up at the end.

    **Consider the syllabus a living document. Lecture topics & schedule are subject to change **

Day	9-10:15	10:30-12	12:15-1	1-1:30	1:30-3:30	3:45-5
1 (w)	Lect1:Intro & Class	Reading (t1: Conserv.	brown bag lunch	Break	Lect2: Conservation objectives	Intro to proposal,

	overview	objectives)	discussion: readings			example assignments/proposals
2 (R)	Lect3: Single Species	Reading (SS)	brown bag lunch discussion: readings	Break	Lab1: SDMs	Proposal Working time & General catchup
3 (F)	Lect4: Multi-species	Reading (Multi)	brown bag lunch discussion: readings	Break	Lab2: Hotspots	Optional: OH/ Working time
4 (S)	Lect5: Networks	Reading (networks)	brown bag lunch discussion: readings	Break	Lab 3: Marxan	Proposal Working time & General catchup
5 (Su)	*Catch up (no on campus events). Please read Dynamics papers and work on proposal!*					
6 (M)	Lect6: Dynamics	Reading & documentary (Restoration)	brown bag lunch discussion: restoration & dynamics	Break	Lab4: Circuitscape	Optional: OH/ Working time
7 (T)	Lect 7: Restoration	Reading (Social)	brown bag lunch	Break	Lab5: Restoration	Proposal Working time
8 (W)	Lect8: Social	Reading (ES)	brown bag lunch	Break	Lect9: Ecosystem Services	Class wrap up (plan to be here until 5)