

ESM 514: Collaborative interdisciplinary research

Winter 2022

Monday 12:00-1:30pm

Bren 1510 or [Zoom](#)

Instructors:

Kelsey Jack

Email: [kelseyjack@ucsb.edu](mailto:kelseyjack@ucsb.edu)

Office: Bren 4412

Roland Geyer

Email: [geyer@bren.ucsb.edu](mailto:geyer@bren.ucsb.edu)

Office: Bren 3426

## Overview

The Bren School seeks to train its PhD students for successful collaboration across disciplines. ESM 514 is designed to provide the opportunity to engage with the potential and challenges of cross- and multi-disciplinary collaboration. In ESM 514, students will also have the opportunity to learn basic principles of research that apply to both disciplinary and multi-disciplinary research. The class is organized around eight practical issues and challenges that arise during the research process, from formulating a question to forming a team of collaborators and fundraising to surviving the peer review process. Through activities, discussions and examples, the class will help demystify different stages of the research process and provide practical tools that will help students succeed in the transition from consumers to producers of knowledge.

## Course materials and logistics

Course materials, including readings, homework assignments and notes and activities associated with in-class engagement will be shared via a [Google team drive](#).

Structure: Each week will be structured around three common elements: (1) a clearly defined learning objective, (2) a short homework assignment designed to apply the class topics to student research interests, (3) in-class activities and discussions that provide an opportunity to learn from each other. The course will emphasize practical tips, tools and skills.

Readings: Most class meetings will also be accompanied by 1-2 required readings and a longer list of optional readings. These will be organized in the Google team drive according to the week of the term. In addition, a folder of general readings includes resources related to multi- and

cross-disciplinary research that can serve as reference throughout the course (and beyond). Students are encouraged to add to the shared set of readings by uploading pdfs or posting URLs to the drive.

[Google team drive](#): Your use of the Google team drive to stay organized, share materials, etc. is both a course tool and a collaboration tool. Title your shared content so that it is both concise and understandable to your collaborators. Discuss and adopt shared norms about file names, file paths, communication, etc.

Office hours: Both instructors are available for office hours by appointment throughout the term. We will make an effort to hold 20 minute 1:1 meetings with each of you at the start of the term so that we can get to know you better. After that, it will be up to you to schedule meetings to discuss class performance, how to apply course topics to your research, questions from class, etc.

## Schedule

A detailed class schedule that includes both topics and deliverables is available in the team drive's main folder. The schedule is subject to updates as we move through the term. Each week will focus on a different topic, as follows:

Week	Date	Topic
1	Jan 3	Challenges and benefits of interdisciplinary research
2	Jan 10	Proposing and refining a research question/problem
3	Jan 24	Pulling together a “dream team” of collaborators
4	Jan 31	Collaboration tools
5	Feb 7	Literature and motivating/selling your research
6	Feb 14	Visualizing data and results
7	Feb 28	Presenting your research and being a good audience member
8	March 7	Proposal writing and funding
9	March 14	De-mystifying the peer review process

## Deadlines and deliverables

You will have a short homework assignment most weeks. To practice interdisciplinary collaboration, you will be randomly assigned to a partner most weeks and will complete the homework assignment with that person. Most weeks, you will be asked to complete a short

memo (1-2 pages) summarizing your thought process, result, etc. These should take you around 2 hours to complete each week and should be organized to communicate your ideas succinctly and clearly, whether in bullet point or paragraph form. The main goal of the assignments is to get you to apply the class topic to your own areas of interest, and to practice collaborative thinking and writing. A secondary goal is to give you practice clearly communicating ideas to your collaborators and peers. To that end, you will be selected to give a short (5 minute) presentation on one or two memos during the quarter. These will be assigned at the individual level but groups will probably work together to prepare the material. The random partner assignment will happen at the end of class and memos will be due at the start of class the following week. The first 15 minutes of class will be devoted to presentations, and groups will be expected to use slides, deliver a rehearsed and concise presentation, and respond to peer questions.

You will receive feedback on these assignments if they are falling below expectation or vastly exceeding expectation. We will not provide written feedback on each assignment -- if you would like more feedback, please sign up for office hours with one of the instructors. We would be very happy to talk through your work in detail.

At least two homeworks will be completed individually. First, the homework for week 3 will require that you interview a Bren faculty member. Take this as an opportunity to get to know someone (not one of your instructors!) who you have not spoken to or met with, but whose work is of interest to you. Second, the homework for week 7 involves a memo on a Bren seminar (or other seminar at UCSB) of your choosing. Both of these individual memos can be submitted at any point during the term, but no later than the last day of classes (March 18); the extra time is intended to give you more flexibility in scheduling and completing the assignment. Additional guidelines for the memo can be found in the relevant folder on the Google team drive.

The deliverables associated with these deadlines should be posted to the team drive under /Homework/Week X/ (e.g., Week 5's homework is due at the start of Week 6; upload it into the Week 5 folder). Title your submissions Lastname1\_Lastname2\_WeekX. You only need to upload one per group. Please save slides in /Homework/Slides/, following the same naming convention.

## Expectations

Your grade in the course will be based on participation (40%), homework submitted each class period (40%) and your presentations (20%). You will have ample opportunity for participation in class, and you will have no problem earning full participation points if you make comments, ask questions and show up to class.