ANIMAL BEHAVIOR IN THE WILD

SUMMER 2023, JUN 26 - AUG 18
BIOE 142L: A VIRTUAL FIELD COURSE

COURSE LEARNING GOALS

By the end of this course, you will be able to:

- Appreciate the **diversity and complexity** of animal behavior
- Comprehend **fundamental concepts in behavioral ecology** and recognize the methods used to study animal behavior
- **Observe and describe** patterns in animal behavior and generate hypotheses that could explain what you observed
- **Think critically** about the development of behavioral ecology as a field, and the methods used to study behavior, and apply this critical thinking to interpret scientific literature
- **Formulate a scientific question**, design a small research project that could answer your question, collect the necessary data, and use quantitative reasoning to interpret the results
- **Interact with peers** to communicate ideas, give and receive feedback in a caring and constructive way
- Reflect on your learning process, your capacity to develop new skills, and how you can **apply what you have learned** to your goals beyond the classroom
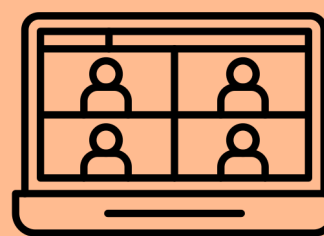
What about your own goals?

Take some time to reflect what do you want from this course!
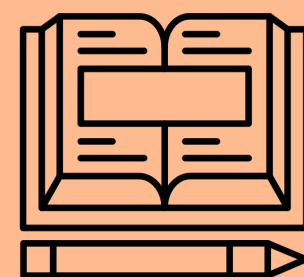
HOW TO BE SUCCESSFUL

Show up

Attend sections and student hours. Add a picture to your Zoom profile. If possible, keep your camera on in sections. Connect with peers during section and on Slack.

Take notes

It can be a digital or a physical notebook. It's important to have a place to organize content (lectures, readings), thoughts, and questions. AND to record animal behavior data.

Do the work

We have many small assignments and everything counts! Submit the tasks on time and let us know if you need to use late-passes. Every activity has the purpose to help you achieve the learning goals.

Ask for help

Humans learn together! Ask for help and help your colleagues if you can. If you are stuck in a task for more than 20 min: message on Slack, attend student hours, contact the teaching team.

MEET THE TEACHING TEAM

Instructor: Louise Alissa de Morais
ldemorai@ucsc.edu

Student Hours: Mon 3-4 pm and Wed 1-2 pm. Cannot make it? Email me for an appointment!

Course TA: Emily Nazario
enazario@ucsc.edu

Student Hours: Thur 3-4 pm Book an individual 15 min appointment on Canvas.

MATERIALS

For this class, you will need a computer with a reliable internet connection and a working microphone. Turning your camera on isn't necessary but would improve engagement and energize the teaching team. Electronic resources we will use throughout the course include:

- Canvas, our primary course website
- Zoom, Section meeting ID: 998 1288 2979, passcode: 142behav
- Slack, workspace 142L_AnimalBehavior
- GoogleSheets or Microsoft Excel
- R and R Studio statistical software

There is NO REQUIRED TEXTBOOK. All readings will be provided.

NEED HELP?

As instructors, **we will do our very best to help you do your very best**, and we want you to know that we are here to help you! Some of the material in this course will be difficult, and we understand that things happen in life that can make it hard to succeed in school. Our main purpose as instructors is to support your learning, but we can't help you if we don't know what is going on, so please reach our to us asap if you need help. If you are struggling with any aspect of this class, choose one or more of the following steps to find help:

1. Check the full Syllabus – it's full of detailed resources to help you with the course!

2. Ask your classmates on the class Slack for help. Your peers are a valuable resource- we share an impressive amount of collective knowledge and are all learning together.

3. Send your instructors a message in Slack so we can work with you to create a plan for your success moving forward.

- If you do not have a Slack accountt go <u>HERE.</u> to create one. Make sure to use your @ucsc.edu email to create your account and enter your full name as it appears in Canvas so we know you you are!
- You can join our Slack Work Space by following this <u>LINK</u>.
- If you are unfamiliar with Slack, you can find more information <u>HERE.</u>

4. You can also send your instructors an email through Canvas. On the far left of Canvas you should see an "inbox". Click on it and compose a message to your instructors directly through Canvas. If you message e the teaching team by e-mail, it is possible that your question get lost in our messy inboxes.

Even if you aren't struggling, we are always happy to hear from you- so let us know if theree is something you are curious about, are enjoying or have a question about!

COMMUNITY GUIDELINES

The diversity that all students bring to this class is a resource, strength, and benefit to us all. To foster an inclusive learning community, we ask all of us to:

- Bring an attitude of curiosity about what we can learn from our different perspectives
- Share our unique experiences, values, and beliefs
- Be open to the views of others and value the uniqueness of our colleagues
- Communicate feedback in a respectful manner
- Use this opportunity together to discuss how we can create an inclusive environment in this course and across the university

While annotating the Syllabus (activity on Week1), you can add additional proposed guidelines that matter to you using comment boxes :)


ACCESSIBILITY

We strive to create an academic environment that supports and encourages ALL students by making our learning community as accessible as possible. If you encounter materials that are not accessible to you, experience barriers to participation, or have any questions or concerns about the classroom environment, you are encouraged to bring this to your instructor's attention– we will gladly work with you to help you feel supported and included!

We are also happy to honor accommodations letters from the Disability Resource Center (DRC). We encourage all students who may benefit from learning more about DRC services to contact DRC by email at drc@ucsc.edu.
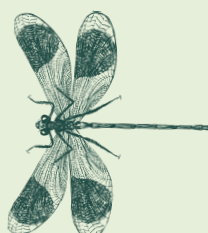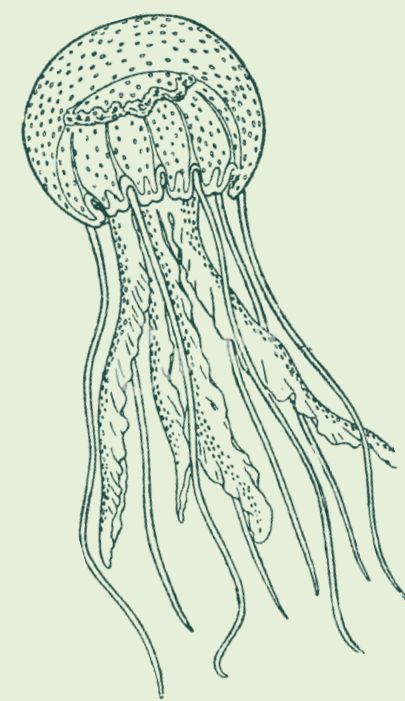
COURSE STRUCTURE
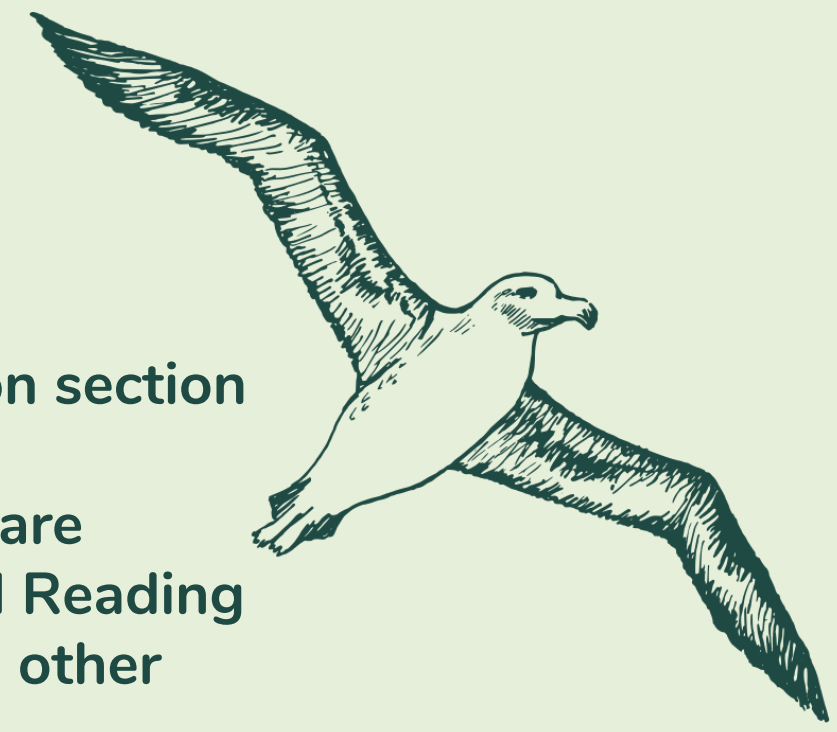
This course is organized around weekly modules that build on each other, with all materials, readings, and assignments available on Canvas. We will meet in an informal Zoom discussion section once per week (Tuesday, 10 am) to review and practice material. The course also has 3 labs (prepping for the final project) involving a short writeup and one final research project. You are expected to work ~15 hours per week to satisfy all course requirements. Lecture & Quiz and Reading & Response are due every Tuesday 9:30 am (important to finish before section time). All the other assignments are due Saturday 11:59 pm.

Assignment may be modified slightly depending on students needs, so check the weekly announcements !

|	Lecture & Quiz	Reading & Response	Scientific Skills	Collective Wisdon	Learning Reflection
COURSE ORIENTATION					
WEEK 0	None	None	Growth mindset: knowing how to "not know"	Weird & Funny videos: Meet your peers	Welcome survey
PART 1: FOUNDATIONS IN ANIMAL BEHAVIOR					
WEEK 1 Jun 25 - Jul 1	How and Why questions in Animal Behavior Research	Davies, Krebs & West Ch 1: Natural Selection, Ecology and Behavior	Practicing curiosity	Syllabus annotation with Hypothesis	What you learned, what went well, and what was challenging?
WEEK 2 Jul 2 - Jul 8	Asking and answering ultimate questions	Martin & Bateson Ch 3: Getting started	Describing and quantifying behavior	Learning together: lessons from our first observations	What you learned, what went well, and what was challenging?
					LAB 1 DUE
PART 2: DESIGNING A RESEARCH STUDY					
WEEK 3 Jul 9 - Jul 15	Asking and answering proximate questions	Martin & Bateson Ch 5: Recording Methods	Asking questions and generating hypotheses	Reading and annotating scientific literature	What you learned, what went well, and what was challenging?
WEEK 4 Jul 16 - Jul 22	Costs & benefits of being social	Martin & Bateson Ch 3: How good is your research? AND Dawkins Ch 4: Three principles of observational design	Designing studies to test hypotheses and answer questions	Brainstorming ideas for final project and peer feedback	What you learned, what went well, and what was challenging?
					LAB 2 DUE
PART 3: ANALYZING BEHAVIOR					
WEEK 5 Jul 23 - Jul 29	Finding, competing for, and choosing food	Beckerman & Petchey Ch4: Import, explore, graph	Learning from and with others: Using graphs to ask and answer questions		What you learned, what went well, and what was challenging?
WEEK 6 Jul 30 - Aug 5	Finding, competing for, and choosing mates	Beckerman & Petchey Ch5: Doing your statistics in R	Learning from and with others: Using statistical analyses to ask and answer questions		What you learned, what went well, and what was challenging?
					LAB 3 DUE
PART 4: COMMUNICATING FINDINGS					
WEEK 7 Aug 6 - Aug 12	Human behavior	Find and read a journal article relevant to your project	Understanding and drafting your poster	Share the main points of your journal article	What you learned, what went well, and what was challenging?
WEEK 8 Aug 13 -Aug 18	Societal benefits of studying behavior	None. Time to focus on your poster!	Careers in animal behavior	Final project poster presentation (submit in Canvas and share during Section)	Final course reflection and closing survey
					FINAL PROJECT

ASSIGNMENTS & ASSESSMENTS

Weekly Module Assignments

Weekly activities were designed to create a consistent structure over different modules, support you in learning the key concepts and developing the necessary skills related to the course learning goals. We acknowledge that the course has several assignments, but they are low stakes and remove the pressure to excel in a final exam. Check below a short description of each type of assignment and how much they value towards your final grade.
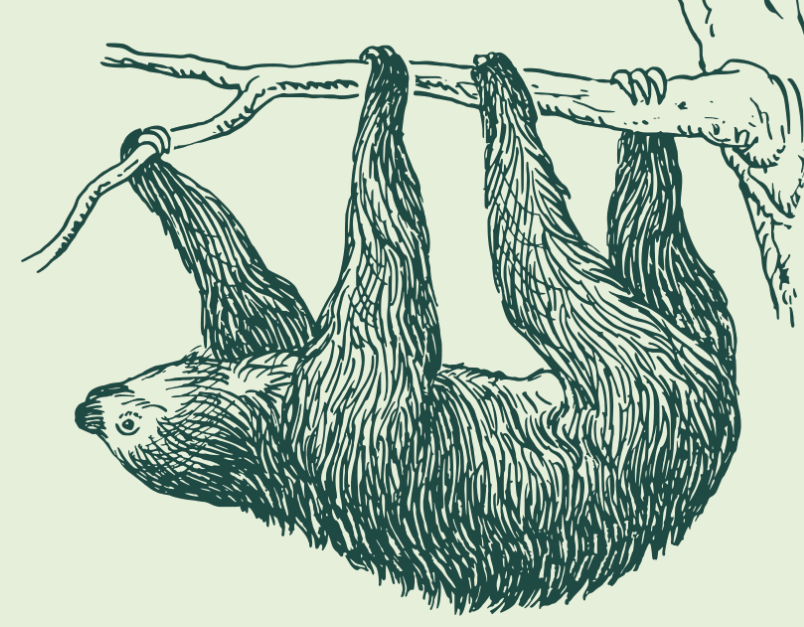
Assignment type	% grade	Assignment description
Lecture & Quiz	15%	Lecture videos will provide an **overview of the fundamental concepts of studying animal behavior**. After watching a short lecture, you will have two attempts to take a quiz (multiple-choice/ short answer) to determine whether you remember and understand lecture material.
Reading & Response	15%	Reading assignments **deepen your animal behavior knowledge** with detail about research frameworks, experimental design, and data analysis. Written responses ask you to engage with and apply the reading material to deepen your understanding.
Scientific Skill	15%	The goal of these assignments is to give you **hands-on experience learning practical research skills**. To complete this assignment, you will practice a skill through a tutorial then write a response about your experience.
Collective Wisdon	15%	These weekly assignments are designed to leverage our collective knowledge and **learn from each other's experience** as we practice scientific skills and refine our research projects.
Learning Reflection	10%	At the end of each module, you will write a short reflection on your learning process. Research shows that this type of reflection, known as **metacognition, has been shown to increase learner's ability to transfer and adapt** learning to new contexts and tasks, and increases the effectiveness of learning overall.

How will these weekly assignments be evaluated? Written responses and skill assignments do not have single correct answers and are addressed based on your engagement with the material and effort (i.e. did your answer address the prompt and draw on and apply material learned in class). You will receive weekly feedback on all written assignments.
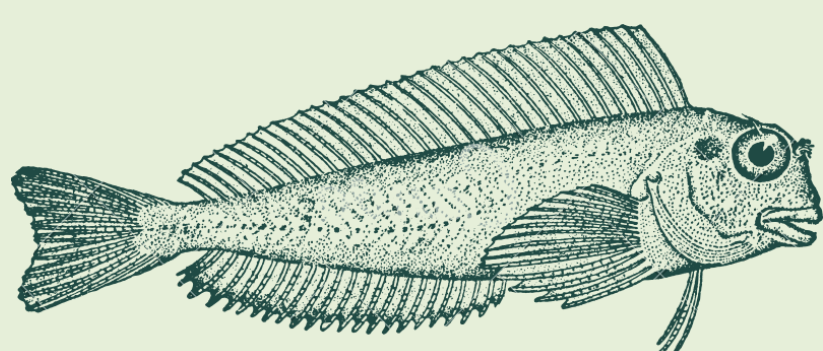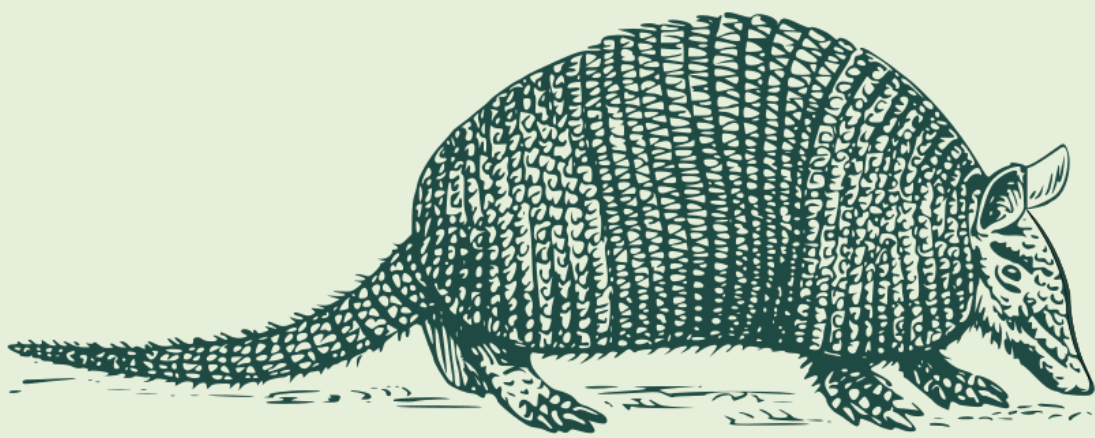
Cumulative Assignments

These cumulative activities are designed to integrate your knowledge and skills throughout the course and provide helpful "checkpoints" for you to ensure you understand the material. Your final project represents the culmination of your knowledge in the class and offers an authentic research experience, emulating what it might be like to have a career as an animal behavior researcher.

| Assignment type	% grade	Assignment description
Lab reports	15%	The goal of lab assignments is to **practice combining your scientific skills**. During labs you will collect basic behavioral data to help you **prepare for your final project**. This practice during lab will help you learn what works for a research project – and what might not work – before committing to a final project.
Final Project	15%	For your project, you will then **design a simple study** to ask and answer a question about animal behavior, develop methods and collect data, produce graphs using your data, and perform statistical analyses to draw conclusions. You will **share your work as a poster** to the class and complete a (short) written summary report.

How will these cumulative assignments be evaluated?
Your lab reports are a chance to practice combining skills and writing about your experience in a written report, which will be evaluated based on your engagement with the material and effort (similar to written weekly assignments). Final projects will be assessed on whether they follow the project guidelines, using a rubric shared ahead of time.

DEADLINES & ASSESSMENTS

Keep going; you will get there!

- Module assignments open on Canvas each Sunday at 12:01 am;
- Due dates are either Tuesday (9:30 am, just before section) or Saturday (11:59 pm);
- Assignments must be submitted before the deadline for full credit; see modules for specific dates.
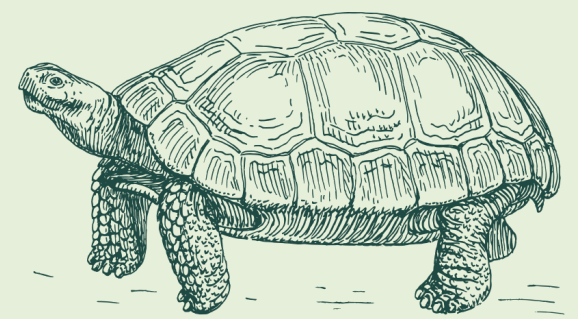
Punctual submission allows us enough time to give you detailed feedback. With this in mind, we recognize that in real life things happen that can throw any of us off course! For this reason, all students are allowed 5 "late passes" for small assignments (weekly quizzes, reading responses, skill assignments) and 1 "late pass" for a single lab. When you use a **late pass**, you can be 2 days late submitting your work– without any penalty.

We will track late passes for you so you do not need our permission to use a late pass, but if you exceed your late pass allowance, you will receive 50% credit (maximum) for any further assignments that are late. If you are experiencing circumstances that interfere with your ability to complete your assignments, please let your instructors know ASAP, and we will work with you to find solutions. Need help? Check the Canvas home page all the different ways you can reach us and your colleagues for support.