

Welcome to Honors Biology III: Evolution and Ecology

About the Course

Instructor: Brendan Bohannon

Email: bohannon@uoregon.edu

Lecture hours/room: MWF 10:00-10:50AM, McKenzie 240A. Lecture will be in-person (no remote option).

Office Hours: Wednesdays from 11:00AM – 12:00PM and by appointment.

Laboratory instructor: Laurel Pfeifer-Meister (lpfeife1@uoregon.edu). Her office hours will be posted on our course website.

Graduate Teaching Assistants (GEs): Natalie Jaeger (njaeger2@uoregon.edu) and Matt Nardoci (mnardoci@uoregon.edu). Their office hours will be posted on our course website.

Undergraduate Teaching Assistants (BTUs): Sanjana Basak (sbasak@uoregon.edu), Kenzie Carnes (kenziec@uoregon.edu), Olivia Hougham (oeg@uoregon.edu), and Nolan Smith (nsmith16@uoregon.edu). Their office hours will be posted on our course website.

Prerequisite: BI 282H is required.

Web Site: Our web site is accessible via the UO Canvas server. Login requires your UO email address and the corresponding password.

Required readings: There is a required textbook for this course: “Biological Science” by Scott Freeman et al. (7th edition, Pearson). It is available via the UO Bookstore, and a copy is on reserve at the UO Price Science Library.

How to do well in this class

Study. I’m a big believer in the following:

Reading. It is VERY IMPORTANT to read the assigned textbook reading BEFORE each class.

Writing. Taking notes in your own words (from both the lecture and the reading) is an important component of learning.

Reflecting. Regularly looking back on what you’ve learned (e.g. weekly) is an important way to reinforce your learning.

Reviewing. Going back over your notes before each exam is crucial to doing well.

Ask questions. Please ask questions during class or bring them to my office hours. Discussion is a very powerful way to learn.

Don’t rely on chatbots. Chatbots can be fun, and some students find chatbots helpful for supporting their learning. You can ask chatbots to explain complex ideas to you or to provide examples illustrating a scientific concept. It is very important to remember that chatbots can generate inaccurate and sometimes fabricated answers. Even the chatbots know this; I asked the popular chatbot ChatGPT “how can chatbots be used in college biology courses” and it ended its answer with the reminder that chatbots “should not replace your own efforts in studying and understanding the material. It is important to still read the assigned materials, attend lectures, and participate in class discussions.” The exams in this course will be based on the material presented in lectures and in the textbook, and you should rely on these sources rather than chatbots.

Course Goals

I have three goals for this course:

Help you learn the central ideas in the sciences of evolutionary biology and ecology — This course is not a panoramic overview of ecology and evolution. These are very broad and integrative sciences. In a 10-week course an overview could only be cursory. As honors students you will learn more if we take the time to explore in detail some of the central ideas, major controversies and hot topics in ecology and evolution.

Help you become a more sophisticated consumer of science — I would be very happy if all of you went on to become professional biologists. However, this is unlikely to happen. Although most of you will go on to some other occupation, you will all be consumers of science, including biological science. One of my goals this quarter is to provide you with the experience necessary to be a better consumer of science, to know when you are being fooled by the misuse of the scientific method. We will regularly discuss recent scientific studies and ongoing scientific controversies.

Help you continue your transition from student to scholar — A scholar is someone who can think critically, argue logically, write clearly, and read effectively. Most importantly, a scholar understands how to organize and use knowledge, and takes responsibility for their own learning. My goal is to provide you with opportunities to practice all of these skills.

How I Will Evaluate Your Learning

Examinations (60%) – two midterms (20% each) and a final (20%). The exams will cover material from the readings and the lectures.

Laboratory assignments (40%) – More information regarding the expectations for laboratory assignments will be provided on our class website.

Important Deadlines

Midterm exams: Friday, April 28 and Friday, May 26. Both exams are during our scheduled class period.

Final exam: Monday June 12 (at 10:15AM).

My Expectations

Responsibility. I expect every one of you to take responsibility for your learning. This means coming to class prepared, working hard on class assignments both in and outside of class, and asking questions regularly.

Courtesy. I expect each of you to arrive to class on time, and to respect the views of others.

Honesty. I expect every one of you to abide by the University's policy on academic misconduct, described [here](#).

Plagiarism, cheating and other acts of academic dishonesty are serious offenses and will be dealt with accordingly.

About Me

I joined the University of Oregon faculty in September of 2006, after 8 years on the faculty at Stanford University. My research group studies the ecology and evolution of microorganisms, in environments ranging from rainforests to the human body. I am particularly fascinated with the diversity of microbial life and much of my research is focused on understanding the causes and consequences of microbial biodiversity.

Tentative course schedule

Week	Date	Topic	Reading*
<i>Generation of biological variation</i>			
1	4/3	Introduction to course & topic	
1	4/5	Introduction to evolution	22.1 – 22.2
1	4/7	Natural selection	22.3 – 22.5
2	4/10	Evolutionary processes I	23.1 – 23.3
2	4/12	Evolutionary processes II	23.4 – 23.6
2	4/14	Speciation	24.1 – 24.4
3	4/17	Phylogenetics I	25.1 – 25.2
3	4/19	Phylogenetics II	25.3 – 25.4
3	4/21	Phylogenetics III	
<i>Maintenance of biological variation</i>			
4	4/24	Introduction to ecology	49.1 – 49.3
4	4/26	Behavioral ecology I	50.1 – 50.3
4	4/28	Midterm I	
5	5/1	Behavioral ecology II	50.4 – 50.6
5	5/3	Populations I	51.1 – 51.2
5	5/5	Populations II	51.3 – 51.4
6	5/8	Populations III	51.5
6	5/10	Communities I	52.1 – 52.2
6	5/12	Communities II	52.3
7	5/15	Communities III	52.4
<i>Classification of biological variation</i>			
7	5/17	Bacteria/Archaea	26.1 – 26.3
7	5/19	Protists	27.1 – 27.3
8	5/22	Plants	28.1 – 28.3
8	5/24	Fungi	29.1 – 29.3
8	5/26	Midterm II	
9	5/29	Memorial Day Holiday (no class)	
9	5/31	Animals	30.1 – 30.3
9	6/2	Viruses	33.1 – 33.3
<i>Consequences of biological variation</i>			
10	6/5	Energy flow/nutrient cycling	53.1 – 53.2
10	6/7	Global change/Biodiversity	53.3, 54.1
10	6/9	Ecosystem function	54.2 – 54.4

*Numbered readings refer to sections in Freeman et al., *Biological Science* (7th edition, Pearson).

** Final Exam date/time: **10:15AM Monday June 12.**

General UO Course Information

Accessible Education

The University of Oregon is working to create more inclusive learning environments, including for students who identify as having a disability. At UO, 10% of students use the Accessible Education Center (AEC) and nationally an estimated 20% of undergraduates identify as having a disability. If there are aspects of the instruction or design of this course that result in disability-related barriers to your participation, please contact me—your success matters.

You are also encouraged to contact the Accessible Education Center in 164 Oregon Hall at 541-346-1155 or uoaec@uoregon.edu. The AEC offers a wide range of support services including note-taking, testing services, sign language interpretation and adaptive technology.

Accommodations for Religious Observances

The University of Oregon respects the right of all students to observe their religious holidays, and will make reasonable accommodations, upon request, for these observances. If you need to be absent from a class period this term because of a religious obligation or observance, please fill out the [Student Religious Accommodation Request fillable PDF form](#) and send it to me within the first weeks of the course so we can make arrangements in advance.

Student Wellbeing

Life at college can be very complicated. Students often feel overwhelmed or stressed, experience anxiety or depression, struggle with relationships, or just need help navigating challenges in their life. If you're facing such challenges, you don't need to handle them on your own--there's help and support on campus.

As your instructor if I believe you may need additional support, I will express my concerns, the reasons for them, and refer you to resources that might be helpful. It is not my intention to know the details of what might be bothering you, but simply to let you know I care, and that help is available. Getting help is a courageous thing to do—for yourself and those you care about.

[University Health Services](#) helps students cope with difficult emotions and life stressors. If you need general resources on coping with stress or want to talk with another student who has been in the same place as you, visit the Duck Nest (located in the EMU on the ground floor) and get help from one of the specially trained Peer Wellness Advocates.

University Counseling Services (UCS) has a team of dedicated staff members to support you with your concerns, many of whom can provide identity-based support. All clinical services are free and confidential. Find out more at counseling.uoregon.edu or by calling 541-346-3227 (anytime UCS is closed, the After-Hours Support and Crisis Line is available by calling this same number).

Basic Needs

Being able to meet your basic needs is foundational to your success as a student at the University of Oregon. If you are having difficulty affording food, don't have a stable, safe place to live, or are struggling to meet another need, visit the [UO Basic Needs Resource page](#) for information on how to get support. They have information, food, housing, healthcare, childcare, transportation, technology, finances (including emergency funds), and legal support.

If your need is urgent, please contact the Care and Advocacy Program by calling 541-346-3216, filling out the [Community Care and Support form](#), or by [scheduling an appointment](#) with an advocate.

Respect for Diversity

You can expect to be treated with respect in this course. Both students and your instructor(s) enter with many identities, backgrounds, and beliefs. Students of all racial identities, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, citizenship statuses, ability and other visible and non-visible differences belong in and contribute to this class and this discipline. All students are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the class.

Class rosters are provided to instructors with students' legal names. Please let me know if the name or pronouns I have for you are not accurate. It is important to me to address you properly.

Please let me know if aspects of the instruction, course design, or class activities undermine these principles in any way.

For additional assistance and resources, you may also consider contacting the [Division of Equity and Inclusion through their website](#) or by phone (at 541-346-3175), or the [Center for Multicultural Academic Excellence through their website](#) or by phone (at 541-346-3479).

Academic Integrity

The [University Student Conduct Code](#) defines academic misconduct, which includes using unauthorized help on assignments and examinations, the use of sources without acknowledgment, and recording class without “the express written permission of the instructor(s).” Academic misconduct is prohibited at UO. I will report all suspected misconduct to the Office of Student Conduct and Community Standards. If the Office finds a student has committed misconduct, consequences can include failure of the relevant assignment or exam, or of the course.

While unauthorized help and use of sources without citation is prohibited, learning together and citing sources is crucial! Each assignment and assessment will have a note about whether and how you might work with others so that you can clearly act with academic integrity. I will specify the citation method you should use for assignments, and you can find support in using the required citation method at the [UO Libraries' Citation Guides research guide](#).

If at any point in the term you are unsure about whether a behavior aligns with academic integrity in our course, please contact me. I view student questions about academic integrity as a desire to act with integrity, so I welcome your questions.

Mandatory Reporter Status

I am an “assisting employee”. For information about my reporting obligations as an employee, please see [Employee Reporting Obligations](#) on the Office of Investigations and Civil Rights Compliance (OICRC) website. Students experiencing sex or gender-based discrimination, harassment or violence should call the 24-7 hotline 541-346-SAFE [7244] or visit safe.uoregon.edu for help. Students experiencing all forms of prohibited discrimination or harassment may contact the Dean of Students Office at 541-346-3216 or the non-confidential Title IX Coordinator/OICRC at 541-346-3123. Additional resources are available at [UO's How to Get Support webpage](#).

I am also a mandatory reporter of child abuse. Please find more information at [Mandatory Reporting of Child Abuse and Neglect](#).”

Academic Disruption due to Campus Emergency

In the event of a campus emergency that disrupts academic activities, course requirements, deadlines, and grading percentages are subject to change. Information about changes in this course will be communicated as soon as possible by email, and on Canvas. If we are not able to meet face-to-face, students should immediately log onto Canvas and read any announcements and/or access alternative assignments. Students are also expected to continue coursework as outlined in this syllabus or other instructions on Canvas.

In the event that I as the instructor of this course have to quarantine, this course may be taught online during my quarantine.

Inclement Weather

It is generally expected that class will meet unless the University is officially closed for inclement weather. If it becomes necessary to cancel class while the University remains open, this will be announced on Canvas and by email. Updates on inclement weather and closure are also communicated as described on the Inclement Weather webpage.