

Welcome to Honors Biology III: Evolution and Ecology

About the Course

Instructor: Brendan Bohannon

Office: 309 Pacific Hall

Phone: 346-4883

Email: bohannon@uoregon.edu

Class hours and room: MWF 10:00 – 10:50AM, LIL 111.

Office Hours: Wednesdays from 11:00AM – 12:00PM, and by appointment, in 309 Pacific Hall.

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

Graduate Teaching Assistants (GEs): Marco Corrales (marcoc@uoregon.edu) and Ian Petersen (iap@uoregon.edu). Marco and Ian's office hours will be posted on our course website.

Biology Undergraduate Lab

Assistants (BULAs): Anna Kulawiec (akulawie@uoregon.edu), Elizabeth Bryan (ebryan4@uoregon.edu) and Rachael Allison (rallison@uoregon.edu).

Prerequisite: BI 282H is required.

Web Site: Our web site is accessible via the UO Canvas server. Login requires your UO Information Services (Computing Center) email address and the corresponding password.

How I will contact you: All of my communication to you outside of class and office hours will take place via email. Specifically, I will use the email registered to you by the University of Oregon. If you use another ISP for your email, make sure you arrange to have your UO email forwarded to it, or arrange to change your registered email address with UO.

Required readings: There is a required textbook for this course: "Biological Science, volume 2" by Scott Freeman et al. (fifth edition, Pearson). This is available at the UO Bookstore.

I will occasionally assign supplementary reading from other sources. Some of the supplementary reading assignments will be available for download from the course website as pdf files. To read these you will need Adobe Acrobat Reader, free software that is installed on UO computers and can be downloaded from the following website:

<http://www.adobe.com/products/acrobat/readstep2.html>.

iClicker questions: I will use iClicker questions during lectures, to reward you for reading before class, and to gauge your comprehension. Please register your iClicker with Canvas so that you will receive credit for answering these questions.

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. I feel strongly that 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 hoodwinked 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.

Our Strategy for Achieving these Goals

By now, most of your education has likely been structured around hour-long lectures. Lectures are good tools for downloading information. They require a particular dynamic. This dynamic, bluntly stated, is “professor professes, student writes it down”. Lectures, however, are pretty lousy ways to learn new skills, promote thought or challenge attitudes. And studies have shown that on average, students begin to lose attention after 15 - 20 minutes of lecture. Therefore, our class time together will be a mix of short “mini-lectures”, discussion and in-class exercises.

The goals of the class will be met through a combination of the following activities:

Reading — There will be a reading assignment for each class. I expect you **read the assignment BEFORE each class**. I cannot stress this enough. Your learning will be much more effective if you come to class prepared. To reinforce this behavior, I will use “iClicker” questions during class to determine your comprehension of the reading assignment and to reward you for coming to class prepared.

Mini-lectures — During each class, I will give mini-lectures building on the concepts presented in the reading assignments.

In-class discussion and exercises — We will have an opportunity during each class period for discussion of the reading and information presented in class. We will also occasionally have in-class exercises, such as problem sets, small group work, or in-class writing assignments.

Laboratory exercises — You will have the opportunity to gather real biological data and apply the concepts learned in class through laboratory exercises. Some of these exercises will be guided; others will be inquiry-based and will model the way biologists ask questions about ecology and evolution. You will receive more information about the laboratory exercises from the laboratory instructor during your first lab class meeting.

Field Trips — You will have the opportunity to expand on your knowledge of biology through field trips. Some of these field trips will occur during your laboratory class periods. However there is **one all-day field trip**: to the Oregon Institute of Marine Biology (on **Saturday, May 11th**).

How I Will Evaluate Your Learning

Preparation (10%) – Your preparation will be evaluated through in-class quizzes.

Participation (10%) – Your participation in in-class discussion, in-class exercises, and during the field trips will be evaluated.

Examinations (45%) – midterms (10% each) and final (25%). Exam questions may include questions previously used for homework. The exams will cover material from the reading, the class meetings, and the field trips.

Laboratory assignments (35%) – A handout outlining the expectations for laboratory assignments will be provided.

Important Deadlines

Midterm I: Fri., April 26 (**in class**).

Midterm II: Fri.. May 17 (**in class**).

OIMB Field Trip: Sat. May 11.

Final exam: Wed.. June 12 (**at 10:15AM, location TBA**).

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 at

<http://conduct.uoregon.edu>

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

The topics on the tentative outline below are subject to change. The time schedule is just a guess -- we will take as long as needed on each subject.

Week	Date	Topic	Reading*
Generation of biological variation			
1	4/1	Introduction to course & topic	
1	4/3	Introduction to evolution	25.1 – 25.2
1	4/5	Natural selection	25.3 – 25.5
2	4/8	Evolutionary processes I	26.1 – 26.3
2	4/10	Evolutionary processes II	26.4 – 26.6
2	4/12	Speciation	27.1 – 27.4
3	4/15	Phylogenetics I	28.1 – 28.2
3	4/17	Phylogenetics II	28.3 – 28.4
3	4/19	Phylogenetics III	TBA
Maintenance of biological variation			
4	4/22	Introduction to ecology	52.1 – 52.3
4	4/24	Behavioral ecology	53.1, 53.2, 53.6
4	4/26	Midterm 1	
5	4/29	Populations I	54.1 – 54.2
5	5/1	Populations II	54.3 – 54.4
5	5/3	Populations III	54.5 – 54.6
6	5/6	Communities I	55.1 – 55.2
6	5/8	Communities II	55.3
6	5/10	Communities III	55.4
Classification of biological variation			
7	5/13	Bacteria/Archaea	29.1 – 29.3
7	5/15	Protists	30.1 – 30.3
7	5/17	Midterm 2	
8	5/20	Plants	31.1 – 31.3
8	5/22	Fungi	32.1 – 32.3
8	5/24	Animals I	33.1 – 33.3
9	5/27	Memorial Day Holiday	
9	5/29	Animals II	TBA
Consequences of biological variation			
9	5/31	Energy flow/nutrient cycling	56.1 – 56.2
10	6/3	Global change biology	56.3
10	6/5	Biodiversity	57.1 – 57.2
10	6/7	Ecosystem function	57.3 – 57.4

*Numbered readings refer to sections in Freeman, *Biological Science (5th)*, vol 2 *Evolution Diversity and Ecology*, Pearson; TBA = to be assigned. TBA readings will be posted on the class website.

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

General UO Course Information

Class Courtesy

Please arrive in class on time. Late arrivals distract the instructor and the other students. Please turn off cell phones during the class meeting times. Use your laptop only for class activities. Do not leave class early unless you have cleared it with the instructor in advance. Ask questions if you did not hear or understand something.

Class rosters are provided to the instructor with the student's legal name. We will gladly honor your request to address you by an alternate name or gender pronoun. Please advise us of this preference early in the quarter (or before) so that we may address you properly.

Open inquiry, freedom of expression, and respect for difference are fundamental to a comprehensive and dynamic education. We are committed to upholding these ideals by encouraging the exploration, engagement, and expression of divergent perspectives and diverse identities. Classroom courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Our classroom is a learning environment, and as such should be a safe, inclusive and respectful place. Being respectful also includes using preferred pronouns for your classmates. Disrespecting fellow students as well as combative approaches, tones and/or actions are not acceptable. Please make us aware if there are classroom dynamics that impede your (or someone else's) full engagement.

Academic integrity

All students will be expected to adhere to the University's guidelines on academic integrity as outlined in the Student Conduct Code: <https://policies.uoregon.edu/vol-3-administration-student-affairs/ch-1-conduct/student-conduct-code>. As detailed in the policy, academic misconduct means the violation of university policy involving academic integrity. This includes cheating ("any act of deception by which a student misrepresents or misleadingly demonstrates that the student has mastered information on an academic exercise that the student has not mastered"), and plagiarism ("using the ideas or writings of another as one's own.") The instructors have a zero tolerance policy for academic dishonesty. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures.

Discrimination and Harassment

Prohibited Discrimination and Harassment

Any student who has experienced sexual assault, relationship violence, sex or gender-based bullying, stalking, and/or sexual harassment may seek resources and help at safe.uoregon.edu. To get help by phone, a student can also call either the UO's 24-hour hotline at 541-346-7244 [SAFE], or the non-confidential Title IX Coordinator at 541-346-8136. From the SAFE website, students may also connect to Callisto, a confidential, third-party reporting site that is not a part of the university.

Students experiencing any other form of prohibited discrimination or harassment can find information at respect.uoregon.edu or aaeo.uoregon.edu or contact the non-confidential AAEO office at 541-346-3123 or the Dean of Students Office at 541-346-3216 for help. As UO policy has different reporting requirements based on the nature of the reported harassment or discrimination, additional information about reporting requirements for discrimination or harassment unrelated to sexual assault, relationship violence, sex or gender based bullying, stalking, and/or sexual harassment is available at [Discrimination & Harassment](#).

Accessible education statement of support

The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in disability-related barriers to your participation. You are also encouraged to contact the Accessible Education Center in 360 Oregon Hall at 541-346-1155 or uoaec@uoregon.edu.

Campus resources to support your learning

Tutoring and Academic Engagement Center (<https://engage.uoregon.edu/services/>) Drop-in math and writing support in addition to tutoring, study skills support, and Class Encore. Located in the 4th Floor Knight Library (541) 346-3226, engage@uoregon.edu.

Counseling Center Call anytime to speak with a therapist who can provide support and connect you with resources. Located on the 2nd Floor of the Health Center(541)346-3227

Accessible Education Center The University of Oregon is working to create inclusive learning environments. The instructor believes strongly in creating inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your participation, please notify us as soon as possible. You are also encouraged to contact the Accessible Education Center. If you are not a student with a documented disability, but you would like for us to know about class issues that will impact your ability to learn, we encourage you to come visit during office hours so that we can strategize how you can get the most out of this course. Located on the 1st Floor of Oregon Hall (541) 346-1155, uoaec@uoregon.edu

Center for Multicultural Academic Excellence (CMAE) mission is to promote student retention and persistence for historically underrepresented and underserved populations. We develop and implement programs and services that support retention, academic excellence, and success at the UO and beyond. We reaffirm our commitment to all students, including undocumented and tuition equity students. Located on the 1st Floor of Oregon Hall (541) 346-3479, cmae@uoregon.edu

The *UO Access Shuttle* is an on-campus ride service provided at no cost to students with conditions that limit mobility. More information and a sign-up form can be found on the parking & transportation department website: <https://parking.uoregon.edu/content/access-shuttle>.

Reporting

The instructors of this class are Student-Directed Employees. As such, **if you disclose to us, we will respond to you with respect and kindness. We will listen to you, and will be sensitive to your needs and desires. We will not judge you. We will support you.** As part of that support, we will direct students who disclose sexual harassment or sexual violence to resources that can help. **We will only report the information shared to the university administration when you as the student requests that the information be reported** (unless someone is in imminent risk of serious harm or is a minor). Please note the difference between ‘privacy’ and ‘confidentiality.’ As Student-Directed Employees we can offer privacy because we are not required to report certain information to the university. However, we cannot be bound by confidentiality in the same way that a counselor or attorney is. The sharing of information by confidential resources such as these is protected by federal and state laws. Any information that we as student-directed employees receive may still be accessed by university or court proceedings. This means, for example, that we could still be called as a witness or required to turn over any related documents or notes that we keep.

Please note also that we are required to report all other forms of prohibited discrimination or harassment to the university administration. Specific details about confidentiality of information and reporting obligations of employees can be found at titleix.uoregon.edu.

Mandatory Reporting of Child Abuse

UO employees, including faculty, staff, and GEs, are mandatory reporters of child abuse. Child abuse pertains to individuals who are under the age of 18. This statement is to advise you that your disclosure of information about child abuse to the instructor may trigger my duty to report that information to the designated authorities. Please refer to the following links for detailed information about mandatory reporting: [Mandatory Reporting of Child Abuse and Neglect](#).

Safe Ride

541-346-7433 ext 2

pages.uoregon.edu/saferide

Safe Ride is an **assault prevention shuttle** that works to provide free, inclusive, and accessible alternatives to traveling alone at night for **UO students, faculty, and staff**.

We are a schedule-ahead service and riders can (1) call once we open to schedule a ride with a dispatcher or (2) leave a voicemail on the day of their ride request. We do not call riders ahead of time to confirm due to capacity constraints, but riders are always welcome to call us to double-check that their ride was scheduled. We are a feminist, ‘for-the-students/by-the-students’ organization and operate out of the Women’s Center in EMU 12F.

Operating hours:

Spring term Sunday - Thursday | 7p - midnight

Friday + Saturday | 7p - 2a

Summer term Sunday - Thursday | 9p - midnight
Friday + Saturday | 9p - 2a

Fall/Winter term Sunday - Thursday | 6p - midnight
Friday + Saturday | 6p - 2a

Policy and rules:

1. We are a **schedule-ahead service**, we **do not call ahead**, and we can only wait for riders for 5 minutes at their pick-up time and location.
2. We only give rides to groups of **3 or fewer** to prioritize groups that are at higher risk.
3. We are a **free service** and do not accept tips.