Biology 610 | Advanced Evolutionary Genetics VI: Phylogenetics  
Spring 2019

Time and Location: Monday Wednesday Friday, 11:00am – 11:50am, 112 Willamette Hall.  
*Note: course runs May 17th – June 7th.

Professor: Matthew Barber, Ph.D.  
- Email: mfbbarber@uoregon.edu  
- Office hours: Monday and Wednesday 12:00 – 12:30pm, 321 Pacific Hall

Course Description. Phylogenetics is the study of evolutionary relationships between and among groups of organisms. In this course we will explore fundamental principles and approaches used to make phylogenetic inferences using molecular data. The 1-credit course will involve a combination of interactive lecture as well the use of phylogenetic software to analyze real molecular sequence data. This course is intended for graduate students with a strong background in evolutionary biology and constitutes the sixth section in the Advanced Evolutionary Genetics training modules.

Learning Goals. Upon completing this course, students will be able to:
1. Describe fundamental principles regarding the structure, inference, and interpretation of phylogenies.  
2. Evaluate and distinguish between commonly-used approaches for phylogenetic inference.
3. Apply contemporary software to reconstruct phylogenies using molecular data.
4. Use phylogenetic approaches to address broader questions about evolutionary processes.

Email. Please include “BI610” in the subject line, so your email can be attended to in time. I will try to answer your email in a timely manner; however I do not often check our email in the evenings or during weekends.

Required supplies. A functioning laptop computer with internet access will be necessary to follow along with in-class assignments.

Evaluation: This course is Pass/Fail. The emphasis will be placed on learning approaches and applying them in class and through weekly homework assignments. Additional readings will be provided to supplement lectures and in-class assignments. Students who attend class and make concerted attempts to complete assignments are expected to pass this course.

Classroom etiquette: Please arrive on time. Lectures and discussions begin promptly on the hour. Please do not leave early as this is disruptive to everyone. If you have an unusual circumstance and must leave early, please inform the instructor, and sit near the exit so your leaving is not disruptive. Finally, please be respectful of your fellow students.

Academic Integrity: You are expected to do your own work on homework, class presentations, and papers. Academic misconduct, including cheating and plagiarism, will not be tolerated.
Inclusive Learning: In this class we aim to build an inclusive learning environment. We understand that our members represent a rich variety of backgrounds and perspectives. We are committed to providing an atmosphere for learning that respects diversity. While working together to build this community we ask all members to:

- be open to the views of others.
- honor the uniqueness of their colleagues.
- appreciate the opportunity that we have to learn from each other.
- value each other’s opinions and communicate in a respectful manner.
- keep confidential discussions that the community has of a personal (or professional) nature.

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. Class rosters are provided to the instructor with the students’ legal names. 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.

Students with disabilities: If there are aspects of the instruction or design of this course that result in barriers to your participation, please let us know as early as possible, in person or via email. You may also wish to contact Accessible Education Services in 164 Oregon Hall, by phone at (541) 346-1155 or uoaec@uoregon.edu. We welcome the chance to help you learn, and will work with you to make it a positive experience.

Discrimination and Harassment

Prohibited Discrimination and Harassment Reporting

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. Specific details about confidentiality of information and reporting obligations of employees can be found at titleix.uoregon.edu.

Reporting

The instructor of this class is a Student Directed Employee. As such, if you disclose to me, I will respond to you with respect and kindness. I will listen to you, and will be sensitive to your needs and desires. I will not judge you. I will support you. As part of that support, I will direct students who disclose sexual harassment or sexual violence to resources that can help. I 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 a Student Directed Employees I can offer privacy because I am not required to report certain information to the university. However, I cannot be bound by confidentiality in the same way that a counselor or attorney is. Confidential resources such as these means that information shared 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 I could still be called as a witness or required to turn over any related documents or notes that I keep. Please note also that we are required to report all other forms of prohibited discrimination or harassment to the university administration.

Mandatory Reporting of Child Abuse
UO employees, including faculty, staff, and GEs, are mandatory reporters of child abuse. 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 less to prioritize groups that are at higher risk.
3. We are a free service and do not accept tips.