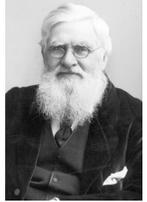
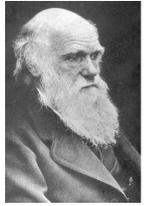


**Biology 270: Principles of Evolution (Section 3)**

Instructor: Dr. Brian C. Barringer  
 Email: bbarring@uwsp.edu  
 Phone: 715-346-2452  
 Office: CBB 302A (inside Biology Department main office)  
 Office Hours: Thursdays and Fridays 10:00-11:30  
 Other times by appointment  
 Whatever the time, I prefer to meet via zoom  
 Please email me with your preferred time(s) to schedule  
 Lecture: Mon/Wed/Fri 12:00-12:50 in DUC 370 (Legacy Room)  
 Lab: Mon 1:00-2:50 in TNR 461 (However, only one lab meeting will be in-person)



**Course Description:** This course introduces students to the history and fundamental principles of evolutionary biology. As a *Communication in the Major* course, oral and written communication skills will be emphasized in lecture and lab.

**Course Learning Outcomes:** After taking this course, students will be able to:

- 1) Describe and discuss the history of evolutionary thought.
- 2) Describe and apply knowledge of fundamental evolutionary processes to investigate patterns in nature, including the generation and maintenance of genotypic and phenotypic diversity within and among species.
- 3) Critically analyze and discuss scientific literature and use the scientific method to generate and explore relevant questions of interest.
- 4) Effectively communicate scientific information and critically evaluate and provide meaningful feedback on the written work and oral presentations of others.

**Required Course Materials:** *Evolutionary Analysis*, 5<sup>th</sup> ed., Herron and Freeman, 2014 (rental); Additional materials will be provided for you on Canvas.

**The structure of this course in a COVID-19 environment:** I have done my best to revise this course in a way that accommodates the many complexities we all face in the new (but temporary!) reality of COVID-19. I am going to try delivering in-person lectures; however, if attendance is poor and/or the situation with COVID-19 changes for the worse on our campus or in our community, I might switch to a virtual or online modality (all lectures will be recorded and shared on Canvas in any event). Only one lab will be in-person (see course schedule for date); all others will be online. For those of you who are unable/unwilling to attend any in-person meetings, you will be able to complete all course activities and assignments online and asynchronously.

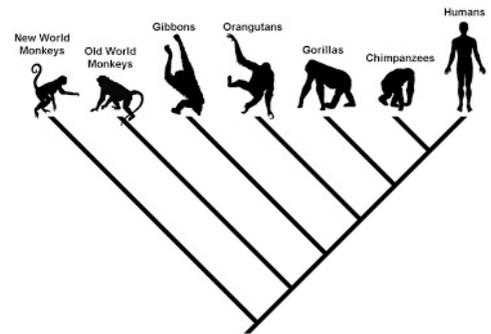
**Exams:** This course includes four exams total: three midterms and a final. Exams will consist of a mixture of question types (e.g., short answer/essay, multiple choice, matching, fill-in-the-blank, and quantitative problems). Exams will focus on lecture material; however, lab activities and supplemental readings compliment lecture material and will probably serve as inspiration for exam questions. All exams will occur entirely online in the form of word documents that you download/upload. The final exam is cumulative, though it will be weighted slightly toward material covered near the end of the semester (i.e., after midterm III). The final exam is also worth a bit more than the midterms.

**Quizzes:** I will ask that you read a number of items (mostly peer-reviewed journal articles) and watch one short video this semester. Most reading/video assignments will be accompanied by a short quiz (found on Canvas). Quizzes are not meant to be difficult; they are simply meant to provide an incentive for you to complete the reading/video assignments in a timely manner. All quizzes will be due at 11:59pm on the day they are assigned.

**Lab:** Only one lab meeting will occur in-person (see course schedule for date); all others will occur entirely online. Whether in-person or online, lab activities and assignments will comprise a relatively large portion of your course grade.

**Grading:** The total number of points possible in this course is 420. Point values for individual exams, quizzes, assignments, etc. are listed below. Values with an asterisk (\*) refer to assignments that, if not completed, will result in the associated loss of points and a reduction of your letter grade to the next lowest full grade (i.e., B+ to a C+).

Activity	# Points Possible
Midterm exams (3)	50 each
Final exam	60
Quizzes (10)	5 each
Population genetics problems	20
Herbivore foraging project report	40*
Herbivore foraging project report peer evaluation	20*
Phylogeny construction assignment	20
100 articles presentation	40*
100 articles presentations peer evaluations	20*



Your final grade in this course will be based on the percentage of all possible points that you earn throughout the semester. To determine your final grade the following metric will be used:

≥ 94%	90-93%	87-89%	84-86%	80-83%	77-79%	74-76%	70-73%	67-69%	60-66%	≤ 59%
A	A-	B+	B	B-	C+	C	C-	D+	D	F

**Make-up and late policy:** Make-ups for exams and quizzes should not be needed because they are delivered online (asynchronously) and you will have a relatively wide window of time to complete them. Assignments are due on their respective due dates no later than 11:59 pm (see course schedule, below). Assignments turned in late lose 20% of their value per day.

**Students with disabilities:** I am happy to help you if you need special accommodations to succeed in this course. Please visit the UWSP Student Disability and Assistive Technology Center (located in LRC 609) to document your needs and then contact me so that appropriate arrangements can be made. More information can be found here:

<http://www.uwsp.edu/disability/Pages/default.aspx>

**Academic integrity:** It is your responsibility to be aware of your rights and responsibilities as a UWSP student. Please take the time to read and understand the information found here (and let me know of any questions):

<https://www.uwsp.edu/dos/Documents/UWS%2014-1.pdf> Also, be sure to review the following information on plagiarism: <https://libraryguides.uwsp.edu/plagiarism>

**Course schedule:** Note that I reserve the right to change this schedule, with due notice, as we progress through the semester. We will only have one in-person lab meeting this semester (on 9/14). Shaded dates (9/23-10/5 and 10/21-11/2) refer to the two herbivore foraging project data collection time periods (details will be shared in class). Also note that on 10/28 we will have a virtual meeting on zoom (rather than in-person lecture).

Date	Topic	Assignments/assignments due
9/2	Introduction	
9/4	Pattern and process in nature	<b>Read Kunin 1997; focus on section 1.1. Quiz I.</b>
9/7	No class – Labor Day	

Date	Topic	Assignments/assignments due
9/9	History of evolutionary theory	Read Carroll 2009a and 2009b. Quiz II.
9/11	History of evolutionary theory	
9/14	History of evolutionary theory <b>Lab (in-person; in cohorts): Introduction to herbivore foraging project.</b>	Herbivore foraging project report assigned. Herbivore foraging project report peer evaluation assigned.
9/16	The evidence for evolution	Read Quammen 2004 and watch Dawkins video. Quiz III.
9/18	The evidence for evolution	
9/21	The evidence for evolution <i>Lab (online): scheduling and setting up herbivore foraging project feeding stations.</i>	
9/23	Evolutionary change within populations	Population genetics problems assigned.
9/25	Evolutionary change within populations	
9/28	Evolutionary change within populations <i>Lab (on own): work on gathering data for herbivore foraging project.</i>	
9/30	Evolutionary change within populations	
10/2	Evolutionary change within populations	Read Byars <i>et al.</i> 2010. Quiz IV.
10/5	No lecture meeting <i>Lab (on own): work on Population genetics problems and Midterm Exam I.</i>	Population genetics problems due. Midterm Exam I
10/7	Species and speciation	
10/9	Species and speciation	
10/12	Species and speciation <i>Lab (online): 100 articles presentations assignment.</i>	Read Knowlton <i>et al.</i> 1993. Quiz V. 100 articles presentation assigned. 100 articles presentations peer evaluation assignment assigned.
10/14	Species and speciation	
10/16	Species and speciation	Read Losos <i>et al.</i> 1997. Quiz VI.
10/19	Origin and history of life on earth <i>Lab (online): how to analyze and interpret herbivore foraging data</i>	
10/21	Origin and history of life on earth	
10/23	Phylogenetics	
10/26	Phylogenetics <i>Lab (online): creating and interpreting phylogenetic trees.</i>	Phylogeny construction assignment assigned.
10/28	<b>Virtual meeting via zoom:</b> Visiting speaker Sue Kissinger from the Academic and Career Advising Center at UWSP	
10/30	Phylogenetics	Read Harcourt <i>et al.</i> 1981 and Harcourt <i>et al.</i> 1995. Quiz VII.
11/2	No lecture meeting <i>Lab (on own): work on Phylogeny construction assignment and Midterm Exam II.</i>	Phylogeny construction assignment due. Midterm Exam II
11/4	Life-history evolution and ecology	
11/6	Life-history evolution and ecology	
11/9	Life-history evolution and ecology <i>Lab (on own): work on herbivore foraging project report.</i>	100 articles presentation due.
11/11	Life-history evolution and ecology	

Date	Topic	Assignments/assignments due
11/13	Life-history evolution and ecology	Read Croft <i>et al.</i> 2015. Quiz VIII.
11/16	Behavioral evolution and ecology <i>Lab (on own): work on 100 articles presentations peer evaluations.</i>	100 articles presentations peer evaluations due.
11/18	Behavioral evolution and ecology	
11/20	Behavioral evolution and ecology	Read Sundstrom <i>et al.</i> 1996. Quiz IX.
11/23	No lecture meeting <i>Lab (on own): work on Herbivore foraging project report and Midterm Exam III.</i>	Herbivore foraging project report due. Midterm Exam III
11/25	No class – Thanksgiving Break	
11/27	No class – Thanksgiving Break	
11/30	Evolution and society <i>Lab (on own): herbivore foraging report peer evaluation.</i>	Read Achenbach 2015 and Rouner 2015 and (skim) Funk and Rainie 2015. Quiz X.
12/2	Introduction to the science of ecology	Herbivore foraging project report peer evaluation due.
12/4	Introduction to the science of ecology	
12/7	<i>Lab (on own): optional; work on herbivore foraging project report revision.</i>	
12/9	Introduction to the science of ecology	
12/11	Course wrap-up	(Optional) Herbivore foraging project report revised version due.
12/16	<b>Final Exam (officially scheduled for 2:45-4:45 pm)</b>	

