

BIOL 1214.201 Life II: Evolution and Ecology

Charles M. Watson, Ph.D.
Associate Professor of Biology
Midwestern State University

Office Number: Bolin Hall 220-A

Research Laboratory: Bolin Hall 317

Office Telephone Number: 940/397-4255

Virtual Office Hours: M,W 10-11, T,Th 11-12:30

Email Address: charles.watson@msutexas.edu

Media: [The Watson Research Lab](#),
[Facebook Classes](#), [Facebook Research](#)
[Twitter Classes](#), [Twitter Research](#)

Time and Place of Class Meetings:

BIOL 1234-102 will be held in Room 100 of Bolin Hall at 9:30-10:50 on Tuesday and Thursday.

Students whose last names begin with A-J may report on Tuesdays and those whose last names begin with K-Z may report on Thursdays. Attendance is optional and all course materials will be available on D2L. In-class exercises and activities are designed simply to reinforce concepts.

Course Description:

The second in a three-course sequence designed for students majoring in the natural sciences. An introduction to the principles and mechanisms of evolution and ecology. The history, evidence, patterns, and mechanisms of evolution as a unifying theme of biology, including the role of genetic recombination. We will explore multiple levels of biological interactions within and among species and their environments.

Prerequisite(s): BIOL 1114 with a grade of C or better.

Note: Modern Biology is an integrative discipline, incorporating elements of Mathematics, Chemistry, Computer Science, and Writing. We expect that you have at least a basic understanding of each of these elements.

Student Learning Outcomes:

Upon completion of this course, students will be able to:

- Demonstrate a basic knowledge of patterns and processes in Evolution and Ecology
- Understand the mechanisms that underlie those patterns and processes.
- Discuss major advancements and innovations that led to our current knowledge in these fields
- Apply Evolutionary Theory as the unifying principle of Biology
- Demonstrate the ability to apply the Scientific Method in their laboratory exercises and projects
- Demonstrate the ability to analyze quantitative data and present that data in a scientifically appropriate manner
- Possess the ability to work as a member of a team in a laboratory group

Expectations:

Follow along with course materials, take quizzes and exams before the time they are due, and ask questions when you do not understand.

Required Textbooks and Other Course Materials:

The required textbook is *Life: The Science of Biology 12th Edition* by Hillis et al.. It is available as both a hardcopy and e-book at the University Bookstore. You will also need to purchase access to *Achieve*, the online platform for Macmillan learning. They can be purchased as a bundle (e-book + Achieve access) at a special price. If you took Life 1 last semester you may still have access...check before buying!

Desire2Learn (D2L):

D2L is an integral part of this course. Weekly video announcements, video lectures, and exams will be posted and/or linked to from D2L. Class notes and links to supplemental information will also be available here. **Check D2L regularly!**

Virtual Office Hours:

I will be available via Zoom for five scheduled office hours per week. You may also e-mail me and schedule a meeting at our mutual convenience. My Zoom personal meeting ID is: [728 649 5580](https://us02zoom.us/j/7286495580). I will admit you from the virtual waiting room as soon as I am available.

Grading Policy:

Biology 1214 consists of both a lecture and laboratory component. The following standard scale is used when reporting your composite grade: 90-100%=A, 80-89%=B, 70-79%=C, 60-69%=D, 0-59%=F.
Final Course Grade = (Lecture Grade x 75%) + (Laboratory Grade x 25%)

See Laboratory Syllabus for laboratory grading policy

Your lecture grade is determined by FOUR online exams to be completed online and weekly participation. Each exam will typically be from 30-50 questions long.

Attendance Policy:

Attendance is not required. If you do not feel comfortable in the classroom setting due to COVID-19 or any other reason, do not come to class. Also, if you feel the least bit ill...please stay home. There is no penalty for missing class due to illness. All the information will be available online.

Diversity, Equity, and Inclusion:

This classroom is a safe place. We are all part of a learning community comprised of diverse backgrounds, skills, ideas, and orientations. People of all diversity dimensions are welcome and valued and I am committed to an inclusive learning environment free from harassment, sexual misconduct, discrimination, or violence. Hate speech will not be tolerated and any form of harassment will result in expulsion from the classroom and a report to the proper university authority.

Conduct Policy:

Be respectful to everyone in the class, including yourself. **Cheating in any form will not be tolerated and may result in you receiving an "F" in the COURSE.** Please refer to the [Student Honor Creed](#).

Classroom Technology:

Smartphones, Laptops, and tablets are allowed as long as they are silenced and you use them for the purpose of taking notes or supplementing the lecture. If you are reported as misusing this privilege, individuals will no longer be allowed to have their technology in use during class time. I have no problem with being voice recorded. Do not answer cell phone calls in class! No classroom technology is allowed during exams or quizzes. MSU has negotiated special purchase deals with Dell should a student wish to purchase a new laptop. These purchase options can be found [here](#). Models with greater capability are listed under "Science and Engineering".

Students with Disabilities:

Any student with a disability is encouraged to contact [Disability Support Services](#) (DSS) at 940-397-4140. Special accommodations will be made once the student has been evaluated and provides documentation from that office. However, I will work with you to ensure success regardless of your status with DSS.

Campus Carry:

Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage regarding [Campus Carry](#).

COVID-19:

Please review the [MSU Texas Return to Campus Plan](#)

For this semester, students attending class must comply with MSU's requirement for wearing a face covering as mandated in the [MSU Texas Facial Covering Requirement](#) document.

Cleaning supplies are available upon entry to the classroom. Please sit only in designated seats and maintain as much distance as possible between yourself and other students.

The MSU Safety App provides a link a COVID-19 screening assessment. The MSU Safety App is available on the [Apple Store](#) or [Google Play App Store](#).

IF YOU FEEL ILL IN ANY WAY DO NOT COME TO CLASS!!!

Lecture Schedule

Intro: The Scientific Method
Chapter 19 & 12.1-4: Process of Evolution
Chapter 20: Phylogenies
Chapter 21: Speciation

EXAM I: Week of 08 February

Chapter 22: Evolution of Genes
Chapter 23: History of Life
Chapter 51: Animal Behavior

EXAM II: Week of 08 March

Chapter 52: Biogeography
Chapter 53: Populations
Chapter 54: Species Interactions

EXAM III: Week of 06 April

Chapter 55: Communities
Chapter 56: Ecosystems
Chapter 57: A Changing Biosphere

EXAM IV: Week of 26 April (Finals Week)

Note¹: Weekly video announcements will be posted every Monday.

Note²: In the event that we must go 100% online, this course model will experience no interruption in content delivery or assessment.