College Biology II

BIOL1620 [redacted]

Instructor Information

Course Description

For Biology/Science Majors. This course introduces evolutionary biology, organismal biology, and ecology. It covers the vast diversity of life including viruses, bacteria, archaea, protists, plants, fungi and animals, the origin and evolution of life on Earth, natural selection, the construction and interpretation of phylogenies, and ecological relationships. Three hours of lecture per week.

Course Presentation

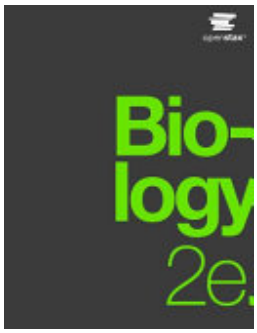
This course is an in-person course and attendance is required. We will be meeting every Tuesday and Thursday from 10:00am-11:20am in AAB118

Course Prerequisites

Prerequisite: BIOL 1610 w/C grade or better

Corequisite: BIOL 1625 (may be taken previously w/C or better)

Required Textbook or Materials



Title: Biology 2e
ISBN: 9781947172951
Authors: Mary Ann Clark, Jung Ho Choi, Matthew M. Douglas
Publication Date: 2018-03-28

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

Description of Assignments/Exams

Canvas quizzes - 20%
I will post the reading for each class/week on Canvas. These will be accompanied by a short, open book quiz. This is simply to ensure that you will come to class prepared to discuss and ask questions regarding the material.

In-class assignments - 20%
The pedagogical literature strongly supports active learning as an excellent method of mastering material — better than listening to a lecture or passively reviewing powerpoint slides. We will therefore be working in class frequently to complete group activities such as case studies, worksheets, etc. You are expected to fully participate with your fellow students during this time. Points may be deducted for disruptive behavior or disengagement (such as looking at your phone rather than discussing with your peers).

Scientific paper annotation - 10%
We will be reading and discussing papers from the primary literature. You will complete an assignment on your own (due at the beginning of class) and then we will discuss them together.

Exams - 40%
There will be three midterm exams. The exams will be closed book. Exams will not be comprehensive; however some concepts build on previous material.

Comprehensive Final Exam - 10%
The final exam will be closed book and cover the entire semester.

Communication Plan

The best way to contact me is via the Canvas Inbox. I reply to messages within two business days. If you do not receive a response within this time, please message me again.

Grading Scale

A…… 93-100%
A-…….. 90-93%
B+…….. 87-90%
B…… 83-87%
B-…….. 80-83%
C+…… 77-80%
C…… 73-77%
C-…….. 70-73%
D+…… 67-70%
D ……... 63-67%
D-…….. 60-63%
E…….. <60%

General Course Policies

Attendance: Attendance is required. We will be completing assignments in class most days, so missing class will affect your grade negatively. I will drop three in-class assignments to allow for the occasional unavoidable absence.

Academic Integrity: Cheating on an exam or plagiarizing (including AI; see below) will result in a zero for the exam/assignment for the first infraction. A second infraction will

result in an E for the course.

Generative artificial intelligence (AI) software is a rapidly emerging tool that students may be interested in using. If doing so, SLCC students are expected to adhere to the same standards as the Code of Student Rights and Responsibilities statement on plagiarism. Presenting generative AI software content as your own is a violation of academic integrity. If you use generative AI in your work, you must indicate that you have done so.

Due Dates and Late Work Policy: Please know and follow the due dates for the course. Late pre-class quizzes will not be accepted; however, the lowest three scores will be dropped. In-class assignments can be completed up for up to half credit within a week of the assignment (if there is a written component; in-class discussions cannot be made up) and the lowest three scores will be dropped. Scientific paper annotations can be completed for up to half credit within a week of the assignment; none of these will be dropped.

Drop, Withdraw or Incomplete Grade: Last day to drop from class with refund is September 10th, withdraw without refund is October 22nd. A grade of "I" (Incomplete) is at the instructor's discretion and can be given if a student is facing extenuating circumstances preventing them from finishing the semester. In order to receive an incomplete, most of the course work must be completed (e.g. ~70%) with a passing grade.

SLCC Academic Policies: SLCC academic policies may be found in the SLCC 2024-2025 Catalog, and the Code of Student Rights and Responsibilities.

Course Student Learning Outcomes

- Students will be able to describe and apply the principles of evolution, including the mechanisms that change the gene pool of populations, and explain how these factors have resulted in the diversity of life on Earth. Students will be able to describe how new species arise.
- Students will be able to interpret, evaluate, and construct phylogenetic trees. Students will be able to describe how organisms are classified and explain the relationship between phylogeny and taxonomy.

- Students will be able to describe key evolutionary innovations including multicellularity, endosymbiosis, sex, and morphological and ecological changes that have changed the course of the history of life on Earth.
- Students will be able to describe the major groups of organisms, their characteristics, and representative examples of each group.
- Students will be able to describe major events in the history of life and hypotheses regarding the origin of life. Students will be able to describe hypotheses regarding the origin of life and identify traits that all life shares due to common ancestry.
- Students will be able to describe ecological interactions within populations, communities, and ecosystems. Students will be able to describe how abiotic factors influence biogeography.
- Students will be able to describe ecological concepts such as niche, energy budget, and life history, and explain the relationship between them.
- Students will be able to evaluate how biology relates to society, including interactions between humans and other organisms. Students will be able to identify factors influencing the current Anthropocene extinction event, including global climate change and its effects on diversity and biogeography.
- Students will be able to read and interpret scientific literature, graphs, and data. Students will be able to communicate scientific findings through individual and group activities.

College Wide Student Learning Outcomes

SLCC has identified nine essential capacities all students should strengthen, regardless of academic major or career plans, that will serve students in all aspects of life.

- Acquire substantive knowledge in the intended major and throughout General Education
- Communicate effectively
- Develop quantitative literacies necessary for the chosen field of study

- Think critically
- Express themselves creatively
- Develop civic literacy and the capacity to be community-engaged learners who act in mutually beneficial ways with community partners
- Develop the knowledge and skills to work with others in a professional and constructive manner
- Develop information literacy
- Develop computer literacy

Course Learning Environment

By enrolling in BIOL 1620, you are agreeing to:

- attend all class sessions to the best of your ability.
- be familiar with and adhere to all of the course policies, due dates, and grading criteria presented in the course syllabus.
- follow the SLCC student code of conduct.
- come to class prepared with the required readings and assignments.
- fully participate in in-class group activities, discussions, and lectures.
- complete all exams and assignments during the scheduled times and/or by the due dates.
- treat your fellow students and instructors with respect and kindness. Your comments to others should be factual, constructive, and free from harassing statements.
- contribute to a classroom environment that is welcoming to every individual, regardless of race, ethnicity, sexuality, gender identity, disability, age, nationality, citizenship status, religion, culture, socioeconomic status, etc.
- use your phone/device/laptop for course work only during class time.

- please communicate with me ASAP if you have an emergency/situation that would prevent you from completing assignments, taking an exam at the scheduled time, etc. (I cannot help you if you do not communicate with me!).

Free STEM Tutoring

STEM Learning provides free tutoring services and textbook checkout to students enrolled in various courses offered by the School or Science, Math, and Engineering.

Tutoring is provided as a drop-in service only, except in certain circumstances.

Please visit https://www.slcc.edu/stem/tutoring/index.aspx for more information!

How to Navigate to Canvas

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

You can access the document by clicking on the following link:
https://slcc.instructure.com/courses/530981/pages/institutional-syllabus

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, please visit the Institutional Syllabus under the Tutoring and Learning Support tab: https://slcc.instructure.com/courses/530981/pages/institutional-syllabus. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

SLCC Student Academic Calendar

Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, please visit the Institutional Syllabus under the Advising and Counseling Support Services tab: https://slcc.instructure.com/courses/530981/pages/institutional-syllabus. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	In-Class Assignment - Animal Evolution and Development	Assignment	10
	In-Class Assignment - Archaeplastids and Seedless Plants	Assignment	10

Due Date	Assignment Name	Assignment Type	Points
	In-Class Assignment - Basal Animals	Assignment	10
	In-Class Assignment - Community Ecology	Assignment	10
	In-Class Assignment - Deuterostomes	Assignment	10
	In-Class Assignment - Ecosystem Ecology	Assignment	10
	In-Class Assignment - Eukaryote Evolution	Assignment	10
	In-Class Assignment - Fungi	Assignment	10
	In-Class Assignment - Population Ecology	Assignment	10
	In-Class Assignment - Population Genetics	Assignment	10
	In-Class Assignment - Prokaryotes	Assignment	10
	In-Class Assignment - Protists	Assignment	10
	In-Class Assignment - Protostomes	Assignment	10
	In-Class Assignment - Seed Plants	Assignment	10
	In-Class Assignment - Selection and Mutation	Assignment	10

Due Date	Assignment Name	Assignment Type	Points
	In-Class Assignment - Speciation	Assignment	10
	In-Class Assignment - Viruses	Assignment	10
	Pre-Class Quiz - Animal Evolution and Development	Quiz	10
	Pre-Class Quiz - Archaeplastids and Seedless Plants	Quiz	10
	Pre-Class Quiz - Basal Animals	Quiz	10
	Pre-Class Quiz - Community Ecology	Quiz	10
	Pre-Class Quiz - Deuterostomes	Quiz	10
	Pre-Class Quiz - Ecosystem Ecology	Quiz	10
	Pre-Class Quiz - Eukaryote Evolution	Quiz	10
	Pre-Class Quiz - Fungi	Quiz	10
	Pre-Class Quiz - Population Ecology	Quiz	10
	Pre-Class Quiz - Population Genetics	Quiz	10
	Pre-Class Quiz - Prokaryotes	Quiz	10

Due Date	Assignment Name	Assignment Type	Points
	Pre-Class Quiz - Protists	Quiz	10
	Pre-Class Quiz - Protostomes	Quiz	10
	Pre-Class Quiz - Seed Plants	Quiz	10
	Pre-Class Quiz - Selection and Mutation	Quiz	10
	Pre-Class Quiz - Speciation	Quiz	10
8/22	Pre-Class Quiz - the Tree of Life	Quiz	10
8/22	In-Class Assignment - The Tree of Life	Assignment	10
8/27	Pre-Class Quiz - History of Life on Earth	Quiz	10
8/27	In-Class Assignment - The History of Life on Earth	Assignment	10
8/29	Pre-Class Quiz - Taxonomy and Phylogeny	Quiz	10
8/29	In-Class Assignment - Taxonomy and Phylogeny	Assignment	10
8/30	Intro to Hypothes.is	Assignment	5

Due Date	Assignment Name	Assignment Type	Points
9/3	Pre-Class Quiz - Leopard Seal Paper	Quiz	10
9/3	In-Class Assignment - How to Read a Scientific Paper	Assignment	10
9/5	In-Class Assignment - Phylogeny	Assignment	10
9/10	Pre-Class Quiz - Viruses	Quiz	10
9/12	Scientific Paper Annotation - COVID paper	Assignment	10
9/23	Exam 1	Quiz	0
10/21	Exam 2	Quiz	0
11/26	Exam 3	Quiz	0
12/12	Final Exam	Quiz	0

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