College Biology II Laboratory

BIOL - 1625 001

Course Calendar

This is a tentative schedule and may be subject to some changes. Major changes will be announced in class and on Canvas.

Lab	Date	Topic
1	27 Aug	Intro to Course, Measurements, Research Projects
2	3 Sep	Microscopy
3	10 Sep	History of Life
4	17 Sep	Phylogeny
5	24 Sep	Prokaryotes
6	1 Oct	Supergroups Excavata, Amoebozoa, and SAR
7	8 Oct	**Field Trip:** Natural History Museum of Utah
--	15 Oct	**NO LABS** - Fall Break
8	22 Oct	**Lab Exam 1**; Archaeplastida 1
9	29 Oct	Archaeplastida 2
10	5 Nov	Fungi
11	12 Nov	**Field Trip**: Loveland Living Planet Aquarium
12	19 Nov	Animals 1
--	26 Nov	**NO LABS** - Thanksgiving Break
13	3 Dec	Animals 2
14	10 Dec	**Lab Exam 2**

Course Description

For Biology/Science Majors. Laboratory observation and experimentation to enhance understanding of evolution, diversity, and ecology, including basic microscopy, sample

preparation, molecular
techniques, and observation of organisms from the major groups of life. Students will apply the scientific
method to the course concepts by conducting a research project and presenting their findings.

Pre-Requisite(s): BIOL 1620 w/C or better or BIOL 1620 must be concurrent
Semester(s) Taught: All

Course Presentation

This is an in-person class that meets every Wednesday 8:30-11:20 am in SI 360 at the Redwood (Taylorsville) campus. There may be some field trips which will have an alternate meeting time and location.

Because this is a laboratory section, you will spend most of your time doing hands-on activities.

Engagement Plan

The best way to contact me is via the Canvas Inbox, as I will prioritize this over other modes of communication for anything course-related. I should respond within 2 business days.

Expected grading timelines:

- Quizzes are graded immediately upon submission by Canvas.
- Exams will graded within 2 days of the exam date.
- In-class assignments will be graded within 1 week of the class date.
- Project-related assignments will be graded within 1 week of the close date.

Course Student Learning Outcomes

- Use a microscope to observe, measure, and image biological specimens.
- Demonstrate proficiency in basic laboratory skills, including techniques used to identify and study organisms.
- Use morphological and molecular data to construct phylogenetic trees.
- Describe the major groups of organisms, their characteristics, and representative examples of each group.
- Generate and/or evaluate hypotheses and make predictions.
- Design experiments to test a hypothesis.
- Analyze data and draw appropriate conclusions.
- Construct a scientific figure.
- Report their findings in a discipline-appropriate format, such as an oral presentation or poster presentation.

Course Prerequisites

BIOL 1620 w/C or better or BIOL 1620 must be concurrent.

Required Textbook or Materials

Title: BIOL 1625 Lab Manual
Subtitle: This is an OER (free, online text).
Authors: Melissa Hardy, Bill Tanner
Publisher: Wordpress
Publication Date: April 2019
OID: https://slccbiol1625.wordpress.com/

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

Course Learning Environment

I want the classroom environment (even the digital parts) to be welcoming, inclusive, and suitable for learning. Therefore, any behavior that is disruptive for a successful learning

environment will not be tolerated. Unacceptably disruptive behaviors typically involve excessive audio and visual distractions, and may include chatting with your neighbor, playing music, or watching videos on an electronic device. Students that persist in unwelcome behavior may be asked to leave the classroom

My hope is that all of us together will create a learning environment that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.) To help accomplish this:

- No discrimination is tolerated based on anyone's race, gender, sexuality, religion, abilities, English language proficiency, or socio-economic circumstances. Please always choose kindness and patience in our class communications, there is space for all of us here.

- If you have a name and/or set of pronouns that differ from those that appear in your Canvas handle, please let me know so I can address everyone in a way that makes them feel comfortable and safe.

- I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in any of the class materials and discussions (by anyone) that made you feel uncomfortable, please talk to me about it. You can email me directly or send feedback via the anonymous open survey on our Canvas site.

- If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to let me know and request extra time on your course work. I want to be a resource for you and help you learn these materials without adding to anyone's level of stress and I promise to treat everyone with compassion.

General Course Policies

Communication: I will post about one Canvas announcement per week regarding course happenings and due dates. To make sure you're receiving those in a timely manner, you should go to Account > Notifications > Announcement and set it to either 'Notify

immediately' or 'Daily summary'. The best and fastest way for you to reach me about class-related stuff is through the Canvas email system. You should expect a response within 2 business days.

Attendance: Being present and actively engaged in the materials and activities is one of the best ways to learn. This is not an optional attendance class. I expect students to attend and participate in all laboratory activities, but I try to be flexible because on occasion other things may interfere. This is why I will drop two lab assignment (worksheet scores).

Late Work: It is your responsibility to plan ahead and allocate enough time to complete quizzes and assignments. Don't wait until the very last minute to attempt to submit something – you could encounter technical or other unexpected issues. Late work will not be accepted except for unusual circumstances, subject to instructor approval.

Makeup Labs: Constraints on lab, specimen, and equipment availability mean that make-up labs generally cannot be arranged at alternate times. However, your two lowest lab assignment scores will be dropped, to allow some accommodation for things outside your control (for example: family, work, or health issues).

Electronic Devices & Recordings: You may use electronic devices (phones, tablets, laptops, etc.) during class as long as you mute sounds and do not talk on the phone. However, if your use of an electronic device is unrelated to class and/or distracting other students, you may be asked to turn it off. You are permitted to make audio recordings (but not video) during class for study purposes only. However, those recordings may not be posted online or published in any format. Such action would violate individual privacy and intellectual property rights.

Accessibility: SLCC values inclusive learning environments and strives to make all aspects of the College accessible to our students. If you need accommodations to improve access to learning materials or the learning environment, please contact the Accessibility and Disability Services: (phone) 801-957-4659; (email) drc@slcc.edu; (website) www.slcc.edu/drc.

Emergency Procedures: We will follow school guidelines (http://i.slcc.edu/emergency-prepare/emergency-procedures.aspx). If we need to evacuate the classroom, please follow the instructor's directions.

Drop, Withdraw, or Incomplete Grade: It is the student's responsibility to withdraw from the course, if they do not plan to complete it. 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. ~75%) with a passing grade.

SLCC Academic Policies: SLCC academic policies may be found in the SLCC 2023-2024 Catalog, and the Code of Student Rights and Responsibilities.

Academic Integrity

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.

Academic dishonesty, or cheating, will not be tolerated. A student caught participating in any form of academic dishonesty may receive a zero on the work in question, be subject to academic discipline, and be given a course grade of E. If a cheating-related infraction results in a zero for a quiz or exam score instead of expulsion from the class, the zero grade will not count as a low score that can be dropped. Examples of academic dishonesty include, but are not limited to:

- Asking for or receiving help from another person on an exam.
- Claiming another person's work as your own (this includes copying materials found on the internet).
- Communicating about exam content with a student who has not yet taken that exam.
- Accessing materials not allowed during a quiz or exam.

Keys to Success

You will need to put in considerable time and effort to succeed in this course. You should expect to spend 4-6 hours studying and preparing outside of class for every hour in lab. I

highly recommend you:

- Attend every lab session and participate in all activities.
- Read or watch relevant materials before they are covered in class.
- Take all quizzes and complete all assignments.
- Seek help with understanding materials/concepts, when needed. In other words, ask questions.
- Form study groups. Helping your peers will reinforce your learning.
- Make use of open lab times, if needed.

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!

Description of Assignments/Exams

Lab Assignments (Worksheets): There will be a worksheet for each lab that must be submitted when you leave. Paper copies of the worksheet will only be provided for the first lab, so for subsequent labs students must print a copy of the worksheet before coming to lab. If you prefer, you can complete the worksheet on a digital device, but it still must be submitted on Canvas when you leave.

Pre-lab Quizzes: You must complete a quiz prior to lab each week. These pre-lab quizzes will cover background material to help ensure that you are familiar with the material before coming to lab. Quizzes will be taken in Canvas (no time limit) and will be open for about one week. You will have two attempts at each quiz.

Examinations: Exams in lab are practical, requiring your to move around the room to look at materials that have been set up specifically for the exam. For example, you may need to view a sample in a microscope to answer an exam question. Question types will vary,

but most of them will be fill-in-the-blank or short response. Exam questions will cover background materials and in-lab activities. Each exam will be scheduled for about 35 minutes at the beginning of a lab session. Exam 1 will cover labs 1-6, and Exam 2 will cover labs 7-13.

Research Project: You will be required to delve into scientific research by generating and testing a hypothesis, recording and interpreting data, and presenting results. These projects can be conducted individually or in small groups. More details will be provided on Canvas and in class, but here are main components with due dates:

ITEM	DUE DATE	POINTS
Question and Hypothesis	29 Aug	10
Methods	5 Sep	10
Materials	12 Sep	10
Conduct experiment	Sep, Oct	--
Preliminary Data	12 Oct	15
Poster (optional draft)	29 Oct	--
Poster (final draft)	12 Nov	30
Presentation	10/11 Dec	15
Reflection	12 Dec	10

Grading Scale

This table shows what assessments are included in determining your course grade. Please note that labs with field trips will still have quizzes and worksheets.

Item	Items	Number Dropped	Percentage
Lab	13	2	40%

Assignments			
Pre-lab Quizzes	13	0	15%
Exams	2	0	20%
Research Project	7	0	25%
		TOTAL	100%

This table shows how letter grades will be determined at the end of the semester. Keep in mind that the percentage that Canvas automatically calculates may be a little off.

Grade	**Range**
A	≥ 93%
A-	90-92.99%
B+	88-89.99%
B	83-87.99%
B-	80-82.99%
C+	78-79.99%
C	73-77.99%
C-	70-72.99%
D+	68-69.99%
D	63-67.99%
D-	60-62.99%
E	< 60%

Extra Credit: Several opportunities may be offered, but the maximum increase from extra credit is 5%.

How to Navigate to Canvas

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

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.

For more information, navigate to the Institutional Policies tab on the Institutional Syllabus page.

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, visit the Institutional Syllabus page under the Tutoring and Learning Support tab. 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, visit the Institutional Syllabus page under the Advising and Counseling Support Services tab. 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

Due Date	Assignment Name	Assignment Type	Points
	Practical Exam 1	Assignment	25
	Practical Exam 2	Assignment	25
8/27/25	Lab Safety Agreement	Assignment	1
8/27/25	Worksheet 01: Measurements	Assignment	10
8/29/25	RP: Question & Hypothesis	Quiz	10
9/2/25	Quiz 01: Lab Intro	Quiz	10
9/2/25	Quiz 02: Microscopy	Quiz	10
9/3/25	Worksheet 02: Microscopy	Assignment	10
9/5/25	RP: Experimental Design	Quiz	10
9/9/25	Quiz 03: History of Life	Quiz	10
9/10/25	Worksheet 03: History of Life	Assignment	10
9/12/25	RP: Materials	Quiz	10
9/16/25	Quiz 04: Phylogeny	Quiz	10
9/17/25	Worksheet 04: Phylogeny	Assignment	10
9/23/25	Quiz 05: Prokaryotes	Quiz	10
9/24/25	Worksheet 05: Prokaryotes	Assignment	10

Due Date	Assignment Name	Assignment Type	Points
9/30/25	Quiz 06: Supergroups Excavata, Amoebozoa, and SAR	Quiz	10
10/1/25	Worksheet 06: Supergroup Excavata, Amoebozoa, and SAR	Assignment	10
10/7/25	Quiz 07: Museum Field Trip	Quiz	10
10/8/25	Worksheet 07: Museum Field Trip	Assignment	10
10/12/25	RP: Preliminary Data	Assignment	15
10/21/25	Quiz 08: Archaeplastids part 1	Quiz	10
10/22/25	Worksheet 08: Archaeplastida part 1	Assignment	10
10/28/25	Quiz 09: Archaeplastids part 2	Quiz	10
10/29/25	RP: Poster (optional draft)	Assignment	0
10/29/25	Worksheet 09: Archaeplastida part 2	Assignment	10
11/4/25	Quiz 10: Fungi	Quiz	10
11/5/25	Worksheet 10: Fungi	Assignment	10
11/11/25	Quiz 11: Aquarium Field Trip	Quiz	10

Due Date	Assignment Name	Assignment Type	Points
11/12/25	RP: Poster (PLO-BIOL-07)	Assignment	30
11/12/25	Worksheet 11: Aquarium Field Trip	Assignment	10
11/18/25	Quiz 12: Basal Animals and Deuterostomes	Quiz	10
11/19/25	Worksheet 12: Basal Animals and Deuterostomes	Assignment	10
12/2/25	Quiz 13: Protostomes	Quiz	10
12/3/25	Worksheet 13: Protostomes	Assignment	10
12/11/25	RP: Presentation	Assignment	15
12/12/25	RP: Reflection	Assignment	10