

Fall 2023 Concepts in Biology Laboratory (BIOL 1103L) Syllabus

Lab Schedule and Assignment Overview

*Unless specified, assignments are due on the day of lab by 9 pm.
Quizzes are due by 9 pm EST the evening before lab the following week.*

	Week of Lab	Lab Topics & Assignments
eLC	Online content Aug 16 – 27	Online Lab Content: Introduction to Scientific Literature
		Assignment Due Sunday 9 pm Aug 27: Exploring Scientific Literature (20 pts)
Lab 1	Aug 21 - 25	Lab: Course Introduction and Using eLC
		Assignment: Accuracy vs Precision (10 pts) Quiz: eLC Quiz Feature Introduction (5 pts)
Lab 2	Aug 28 – Sep 1	Lab: Nature of Science, & Scientific Questions
		Assignment: Nature of Science and Scientific Questions (15 pts)
	Sep 4 - 8	NO LABS – LABOR DAY WEEK
Lab 3	Sep 11 - 15	Lab: Science in the News & Qualitative and Quantitative Analysis
		Assignment: Qualitative and Quantitative Analysis (10pts) Assignment Due Week of Lab 4: Scientific Literature Search (5 pts)
Lab 4	Sep 18 - 22	Lab: Antibiotic Resistance I
		Assignment Due in Lab: Antibiotic Resistance Experimental Design (5pts) Quiz: Antibiotic Resistance (10 pts)
Lab 5	Sep 25 - 29	Lab: Antibiotic Resistance II
		Assignment Due Week of Lab 7: Antibiotic Resistance Report (20 pts) Assignment: Antibiotic Resistance Infographic (10 pts)
Lab 6	Oct 2 - 6	Lab: Data Analysis and Using Excel
		Assignment: Science Writing Figures (10 pts)
Lab 7	Oct 9 - 13	Lab: Gene Transfer
		Quiz: Genetic Transformation (10 pts)
Lab 8	Oct 16 - 20	Lab: Gene Expression
		Assignment: Genetic Expression Results (10 pts)
	Oct 23 - 27	NO LABS – FALL BREAK
Lab 9	Oct 30 – Nov 3	Lab: Introduction to PCR and Genetic Modifications
		Quiz: Introduction to PCR (10 pts)
Lab 10	Nov 6 - 10	Lab: Genetic Application: DNA Extraction and PCR Assignment: GMO Experimental Design (5 pts) Quiz: Understanding Genetic Modification (10pts)
Lab 11	Nov 13 - 17	Lab: GMO Results - Gel Electrophoresis
		Assignment: Gel Analysis (10 pts) Assignment: Antibiotic Resistance Report Revisions (30 pts)
	Nov 20 - 24	NO LABS – THANKSGIVING BREAK
Lab 12	Nov 27 – Dec 1	Lab: GMO Presentations
		Assignment: GMO Group Presentation (30 pts)

Total Points Possible 235

The course syllabus is a general plan for the course; deviations may be necessary and will be announced in class and/or posted on eLC.

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BIOL 1103L is a one-credit hour course that provides non-science major students with an introduction to the scientific process through an inquiry-based curriculum that features cooperative learning and uses peer reviewed literature, and writing to encourage critical thinking skills. The nature of science is presented through hands-on lab activities allowing students to explore the scientific process and how it relates to everyday life.

BIOL 1103 is a co-requisite or pre-requisite of this course.

Course Objectives

An introduction to experimental design will allow students to demonstrate skills commonly associated with biological techniques. Students will apply their understanding of the scientific process through qualitative and quantitative analysis. Students will also demonstrate understanding of science literacy as applied to the use of genetic engineering techniques.

Topics Covered

Throughout the semester we'll explore these topics while practicing stages of the scientific process within each one.

- Qualitative Analysis
- Quantitative Analysis
- Experimental Design
- Scientific Writing
- Communicating Science

Writing Intensive Course

BIOL 1103L is a *Writing Intensive Course*. It closely follows the guidelines established by The University of Georgia's Writing Intensive Program (WIP). Our goal in following these guidelines is to help you become better writers in your academic field of science, as writing and thinking are parallel cognitive (learning) processes. Writing engages individuals in the information being studied and therefore results in better retention of this subject material.

Need Help?

For specific class/content questions your GLA will be your first point of contact. You can find your GLA and their contact information in the Course Syllabus & Information module in eLC. If you are unable to reach your GLA and need further assistance you should contact biolabhelp@uga.edu. Please include your course and CRN in the subject line, this will help in assisting you and answering your questions.

Who's Who

BIOL 1103L Lab Managers:

Amy D'Arcey – Room 335 SLC
Summerlin Courchaine – Room 337 SLC

BIOL Lab Program Coordinator:

Kimberly Martin – Room 349 SLC
martinkim@uga.edu

For your GLA contact information see the schedule posted in eLC with GLA name and email for your specific CRN.

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General Lab Format

- All course content/materials will be available through eLC. Any announcements about lab as well as any changes to the syllabus and/or assignments will be posted in eLC. You are responsible for checking eLC regularly for announcements and updates to content.
- While you will be working in small groups during lab, students are expected to complete assignments independently unless otherwise instructed. While you are encouraged to engage in academic discussion with your peers, all work submitted should be the student's independent work.
- The labs promote collaborative learning and are inquiry-based which may be a different learning experience for students. The focus in lab is on the process of science and helping students develop critical thinking skills. Many of the labs require students to discuss and develop their approach to set up an experiment or solve a problem instead of following a set protocol and hoping to get a predetermined correct answer. Most assignments will require explanations for your reasoning based on the data you have collected, regardless of how different it may be from another group's data.

Dress Code: While in lab students must adhere to the dress code. *Feet and legs must be completely covered as well as the entire torso from neck down, including shoulders.* You must wear pants or a long skirt. The following are NOT allowed: tank tops, crop tops, shorts, skorts/skirts, and open-toed/heeled shoes. If you are dismissed from lab because of improper dress, it will count as an absence, refer to Attendance section for details. The BIOL Lab Program dress code is in compliance with the UGA policy found at <http://research.uga.edu/docs/units/safety/manuals/Chemical-Laboratory-Safety-Manual.pdf> on page 2-8, Section 2.III.K.

Course Materials

There are no additional texts/manuals needed for the course. A computer or tablet will be needed for the course. Students need to obtain the Microsoft Office software for course work as all documents must be submitted in Word format. We will also use Excel during the course. The software for Mac and PC is available free to UGA students through EITS. See the link below for assistance with technology.

<https://eits.uga.edu/>

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Attendance

As a 1 credit course meeting only 12 times through the semester, student success will be highly dependent on the engagement and participation in the class meetings and completing assignments in their entirety. Missing even one class is missing a significant portion of the course and attendance is required for all labs. We do understand that there are times you may be unable to attend class, however, no more than 2 absences are allowable for the course.

Arriving more than 10 minutes late to lab, or leaving early without prior permission, will also be recorded as an absence.

Students that have more than 2 absences may not continue in the course without permission. If you reach a 3rd absence, you should contact the Lab Coordinator to discuss the circumstances and plan for moving forward or otherwise receive an F due to incompleteness of the course.

If you are absent from class:

- If it is your third absence in the course you must contact the Lab Coordinator, Kim Martin at martinkim@uga.edu to discuss the situation, otherwise, contact your GLA directly for missed information from your specific lab section.
- Complete the makeup assignment posted in eLC for the week of the absence and submit to the makeup assignment drop box. The makeup assignment will take the place of the standard assignment unless otherwise instructed.
- Makeup assignments will have an automatic extension of 5 days, due dates will be shown in eLC. Other assignments associated with the lab that are not due in lab will have the same due date unless an extension is granted by the Lab Coordinator. This includes quizzes and the larger writing assignments.

Assignment Submission and Late Work

- All assignments should be submitted electronically by 9 pm EST on the designated due date to eLC drop boxes. Assignment submission should be as a word document (.docx) unless otherwise specified. ***Pages, PDFs, and other formats or blank/incorrect documents will not be graded and will receive a zero. It is the student's responsibility to review assignment submissions for accuracy and format.***
- Timely assignment submission is important in the assessment of student understanding of content and in the progression of learning for the course. Late assignments impact this and therefore will only be eligible for 50% of the assignment's total point value. Assignments will not be accepted for credit after 5 days past the due date
- Quizzes are not eligible for late submission unless there are extenuating circumstances and an exception is granted by the Lab Coordinator.
- Technical issues such as internet interruptions, formatting issues, not being familiar with software or using eLC, are not acceptable reasons to exempt late penalties. If you have technical issues, please reach out to EITS for assistance to resolve them as quickly as possible.

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Grading Policy

Final Grade Scale

A (≥93%)
A- (90-93%)
B+ (88-89%)
B (84-87%)
B- (80-83%)
C+ (76-79%)
C (70-75%)
D (60-69%)
F (<60%)

You can earn a **total of 235** possible points in this lab. More detailed assignment points are given in the Lab Outline on the first page. The final letter grade is equal to *your accumulated total points earned (including unexcused absence deductions) divided by 235 possible points*. There will be no extra credit or bonus points given.

Any complaint about a grade must be brought to your GLA's attention, in written form with a thorough explanation as to why you disagree with the grade, within one week of the grade being posted. *Under no circumstance will an assignment grade be changed after the last day of classes.*

Communication: To comply with the Family Educational Rights and Privacy Act (FERPA), all communication that refers to individual students must be through UGA supported platforms and accounts. This would include written communication to be done via UGAMail and/or eLC and for video conferencing the use of Zoom. Instructors are not allowed to respond to messages that refer to individual students or student progress in the course through non-UGA accounts, phone calls, or social media.

Accommodations for Disabilities

If you plan to request accommodations for a disability, please register with the Disability Resource Center. They can be reached by visiting Clark Howell Hall, calling 706-542-8719 (voice) or 706-542-8778 (TTY), or by visiting <http://drc.uga.edu>. You will need to send a separate notification of academic support services for the lab course through the AIM Portal. Receipt of notification provides documentation of eligibility for accommodations however, students must request accommodations for class directly to the GLA or Lab Coordinator, accommodations are not implemented unless a student request has been made.

The Role of Graduate Laboratory Assistants (GLA)

This laboratory course provides graduate students an opportunity to expand their education and gain teaching experience by instructing undergraduate students. The GLAs are supported and supervised by the Lab Coordinator and their primary role is to facilitate learning and engagement in the lab course and guide students through the scientific inquiry process.

It is outside the position of the GLAs to exempt rules, change syllabus policies, alter deadlines for submission of assignments, or make other changes which may impact the academic fairness of the experiences offered to the undergraduate students enrolled in all BIOL lab sections. The policies outlined in the syllabus have been established to maintain the continuity and integrity of the lab course. However, if circumstances arise where considerations could be made, please contact your GLA to discuss the situation with the Lab Coordinator.

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Academic Honesty

UGA Student Honor Code: "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others." All academic work must meet the standards contained in "A Culture of Honesty", the University's policy and procedures for handling cases of suspected dishonesty, can be found at <http://honesty.uga.edu>. Students are responsible for informing themselves about those standards before performing any academic work. This includes using social media to share answers to course assignments, obtaining and/or using a previous student's assignment for reference (examples of Unauthorized Assistance). Any form of possible academic dishonesty will be reported to the UGA Office of the Vice President for Instruction.

All necessary information to complete the course work can be found within eLC. Use of outside website sources or other individuals is not allowed unless specifically required for the assignment (such as obtaining peer reviewed research articles for use in assignments). ***Use of generative artificial intelligence or word mixing software to write your paper or disguise plagiarized work is considered unauthorized assistance in this course.***

*The use of Google, Course Hero, StuDoc, Chegg, and other student file sharing resources is prohibited and a violation of the Academic Honesty policy. **The uploading and sharing of course content, including the course syllabus and assignments, to any website outside of eLC or to a shared resource database is not allowed and is considered a violation of the Academic Honesty Policy.***

We Care About YOU!

Health and Wellness Resources

- *If you or someone you know is experiencing a hardship and needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.*
- *UGA has several resources for student health and well-being support and crisis support at <https://well-being.uga.edu/>.*
- *If you need help managing stress, anxiety, relationships, or other difficulties affecting your health please visit the University Health Center (<https://healthcenter.uga.edu/>) for resources and information and the next steps to making informed health decisions.*
- *Additional resources can be accessed through the UGA App.*

If there are circumstances interfering with your completion of academic work please contact your GLA or the Lab Coordinator for assistance. The success of our students is a priority and we want to offer our students any available resources to assist with that and help support our students' success as best we can.

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