

BIOLOGY 349 Lab, sections 03, 04: Spring 2022

LAB SYLLABUS

Wednesdays 11:30-1:25, 2:00-3:55 ISC 302; 1 hr TBA

Instructor:

Harold Hoops

Office: ISC 356

Phone: x5378

Email: Hoops@geneseo.edu (generally preferred)

In person office hours: Monday 10:00-11:00, Thursday 2:00-3:00 (ISC 356).

Evening virtual office hr: Tues 8:00-9:00 pm

(<https://geneseo.zoom.us/j/91744204278?pwd=L0RDVGRhRVpCK3o5U3VuQTEvZW1yZz09>)

There are also special office hrs in the micro lab (ISC 302) Thursdays and Fridays in the same room (see below).

Course Description

The structure, cultivation, physiology, ecology, and importance of microorganisms (including bacteria, yeasts, and viruses) are studied. Laboratory activity complements lecture material.

Prerequisites: BIOL 222 or BIOL 271.

Required Texts

None, all laboratory materials are available on Canvas. Students are expected to print our laboratory materials before coming to class, and to check Canvas for materials.

Lab Schedule

This lab will meet once a week for 2 hours, and 1 hour of the lab will be TBA. The extra hour will need to be completed on Thurs or Friday of that same week. The logistics of this extra hour will be discussed the first week of lab. Note that each student is expected to stop by lab on Thurs or Fri of each week to view results, and to record these results in their notebook.

The lab is divided up into two parts. We will meet weekly during the scheduled class time. Most weeks there will be a second set of follow up activities to be carried out on Thursday or Friday. These activities will often be reading results of tests, platings etc. You might also use this time to practice or review lab activities. We encourage you to do these activities with your lab group if possible but we realize that this might sometimes be impractical. Your instructors will be available for consultation and help during the time slots listed below. Both lab instructors are committed to help students in all of the lab sections. You can also do your followup activities during other times on Thursday or Friday when the room is open.

Special office hrs dedicated to the follow-up activities of Microbiology lab:

Thursday 3:00-3:30 (Hoops)

Friday 10:00-11:00 (Hutchison); 11:00-12:30 (Hoops); 3:30-4:00 (Hoops)

This is a Face-to-face Lab

I greatly value the learning opportunities we'll have in our in-person class meetings and active participation in this important element of the learning process is required for this course. The COVID-19 pandemic presents challenges to in-person learning, but by working together we can make this a safe experience.

It is essential that all students in in-person classes follow some basic processes to help keep themselves, other students, and our faculty and staff safe. Please incorporate these essential health and safety measures into your normal routine, consider the ways that your actions may affect the health and wellbeing of those around you, and try to approach this semester with a spirit of empathy and compassion.

Attendance and Public Health in the time of COVID-19

In the context of the COVID-19 pandemic, it is vital that we all do what we can to protect the health and safety of each other. If you are feeling unwell on a day that class meets in-person, do not attend. Remember that it is better to stay home if you are not feeling well than to attend class and risk spreading illness to others. However, it is required that you communicate with me in advance about your absence so that we can schedule a make-up assignment. Throughout the semester, please be proactive in communicating about absences and contact the Dean of Students if you expect to be out for an extended period of time.

Face masks are required in all instructional spaces (including classrooms, lecture halls, and laboratories) and all common areas including residence halls and academic buildings. If you forget your mask, please be sure to pick up a disposable one before entering the classroom. Masks must be worn for the duration of class. If you do not have a mask or are unwilling to wear one, you will be asked to leave the classroom. I cannot safely hold class if all students are not wearing face masks.

Grading

Your lab grade is a component of your overall BIOL 349 grade; your final grade is a combination of your lecture and lab grade. See lecture syllabus for a full assignment/grading summary table.

Caption: this table summarizes the point breakdown for your semester grades.

Lab Notebook	5%
Lab Presentation	5%
Group Lab Reports and Biochemical Tests Assignment	15%
Final Lab Practical	10%

Grade disputes must be initiated within one week from when the assignment was handed back.

Attendance. Please note: unexcused absences from lab will result in a 5% deduction from your lab grade. If you have more than 2 unexcused absences, you will get a zero (0) for the lab section of the course.

Tips for Success

Laboratory activities will be posted on Canvas and you are required to read over them before coming to lab.

One of the components of success in the lab is keeping a good lab notebook. I will post guidelines for your lab notebooks, and assessment of lab notebooks will be done at random, so you'll need to keep up with your notebook throughout the semester.

To be a good microbiologist, there are some basic skills (aseptic technique, media making, plate streaking, microscopy, etc) that you need to learn, and these skills will be necessary in almost any microbiology or molecular biology lab. You'll have two opportunities to demonstrate your mastery of these skills in a lab practical. The first lab practical we do will be shorter, and will not be graded. This is meant to be a learning experience, and to help you prepare for the second lab practical, which occurs at the end of the semester. If we have any down time in lab, use this time to practice skills, or you can schedule some extra time outside of lab (for example during office hours) to practice.

Student Accommodations

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility will coordinate reasonable accommodations for persons with physical, emotional, or cognitive disabilities to ensure equal access to academic programs, activities, and services at Geneseo. Students with letters of accommodation should submit a letter to each faculty member and discuss their needs at the beginning of each semester. Please contact the Office of Accessibility Services for questions related to access and accommodations.

Office of Accessibility Services
Erwin Hall 22
(585) 245-5112 access@geneseo.edu; www.geneseo.edu/accessibility-office

Academic Dishonesty & Plagiarism

Students are expected to adhere to the University's policy on academic dishonesty and plagiarism, located in the student handbook. Academic dishonesty and plagiarism have serious consequences, and if you're struggling in class, please ask for help rather than resort to academic dishonesty! Academic dishonesty will result in a zero on the assignment or exam. In addition, a report will be filed to the department chair and Dean of the College, and a record of academic dishonesty will be placed in the student's file at the Dean of Students Office.

Tentative Schedule (subject to change at instructor's discretion)

It is expected that you check Canvas at the beginning of each week for lab materials and instructions).

Week	Date	Subject
1	(W) 01/26	Check-in and Intro; Aseptic Technique; Making Media
	(TBA)	
2	(W) 02/02	Isolating pure cultures; isolation of unknown bacterium
	(TBA)	
3	(W) 02/9	Introduction to Microscopy & Staining, purification of unknown bacterium, purple non-sulfurs
	(TBA)	

	(W) 02/16	No lab; Diversity Summit Symposium Day
	(TBA)	
4	(W) 02/23	PCR, Gram Stain
	(TBA)	
5	(W) 03/02	Electrophoresis, Gram Stain, KOH test continued
	(TBA)	Lab notebook checks begin
6	(W) 03/09	Methods to enumerate bacteria / Spectrometry and dilution series
	(TBA)	
	(W) 03/16	No lab - Spring Break

	(TBA)	No lab - Spring Break
7	(W) 03/23	Bacterial Growth Curve, Purple Nonsulfurs Group Lab Report 1 due (topic: Gram Stain & KOH test)
	(TBA)	
8	(W) 03/30	Biochemical Activities of Bacteria #1
	(TBA)	
9	(W) 04/06	Biochemical Activities of Bacteria #2
	(TBA)	
10	(W) 04/13	Finish Biochemical tests on unknowns, tentative ID of unknown & work on biochemical tests assignment, Isolation of antibiotic producers from soil
	(F) 04/15	Biochemical tests assignment due
11	(W) 04/20	Practice Practical

	(TBA)	
12	(W) 04/27	Bioinformatics Lab (BLAST) - Final ID of unknowns
	(TBA)	
13	(W) 05/04	Kirby-Bauer Antibiotics Lab; Final presentations on unknown bacterium due this week
	(F) 05/06	Group Lab Report 2 due (topic: Growth Curve)
14	(W) 05/11	Lab Practical
	(F) 05/13	