BIMM 121- Laboratory in Microbiology - Winter 2023 edition

Course Syllabus*

Weeks 1-10 – Lectures, Mondays & Wednesdays, 5:00-6:20 PM in HSS 1330 Weeks 8-10 only (see course schedule for details):

Lab C01 & C03: Wednesdays or Fridays, 9:00 AM-11:50 AM in Tata 2101; Lab C02 & C04: Wednesdays or Fridays, 1 PM-3:50 PM in Tata 2102.

Note: Despite being a lab class, BIMM 121 will be primarily lecture-based until week 7 (included). In weeks 8, 9, and 10, students will also have 3-sessions of lab, either on Wednesday or Friday, in which will cover essential hands-on lab microbiology skills.

Instructor: Giorgia Pirino, Ph.D.

Email: gpirino@ucsd.edu

Please include BIMM121, your full name, ID, and IA name in all emails to Dr. Pirino. Also, present your questions about course material in person during touch-base hours, not by email. I cannot guarantee an answer to your email, unless it is an urgent issue.

Touch-base hours/class discussion: see course schedule.

Instructional Assistants: Asama Lekbua (alekbua@ucsd.edu), Alex Zhou (azhou@ucsd.edu), Theodore Vuong (tqvuong@ucsd.edu), Aditi Dubey (adubey@ucsd.edu)

Course Description

This course is designed to illustrate processes central to microbiology and familiarize students with skills required for handling, working with, and characterizing different microorganisms. Emphasis will be on sterile techniques, cultivation of different microorganisms, their morphological, physiological, and genomic characterization. At the end, students will be able to appreciate microbes' involvement in health, industry, the environment, and everyday life. Throughout the course, students will receive training in data analysis, scientific reasoning, and scientific writing.

Textbook

There is not a required textbook for the class. Readings will be posted in Canvas every week.

Course Website/Canvas

This course is on Canvas (<u>https://coursefinder.ucsd.edu</u>) and should appear on your Canvas account in week 1. We will use Canvas to post information on experiments, homework, quizzes, schedules, readings and practice material, experimental data, assignment guidelines, etc. This website will also be used to post any announcements that pertain to the entire class. Please check the site regularly (enable Canvas notification) and update yourself on the information provided.

Lectures & Lab

- 1. Because of the current pandemic, *attendance in lecture is not mandatory*, and there are no points associated with it.
- 2. All the lectures will be in person, will be podcast, and available asynchronously in Canvas > Media Gallery.

- 3. Even though students may watch lectures asynchronously, they are still responsible for the material discussed in lecture and required to submit assignments by the deadline. No exceptions!
- 4. We will have one extra hour of class discussion starting in week 2 (*attendance not mandatory*)
- 5. In weeks 8, 9, and 10, **labs are mandatory**, thus, *lab attendance is required*. You will document each lab's accomplishments in a daily lab notebook.
- 6. However, anytime ill students are concerned that they would endanger others by attending lab, they should email Dr. Pirino as soon as possible to discuss their situation. There are exceptions to the general rules.
- 7. Concurrent enrollment in another class, conflicting exams with other classes, or graduate school/ job interviews do not constitute a reasonable excuse, and will be considered unexcused absences, and will affect your final grade
- 8. Students who are more than 10 minutes late to lab, leave the lab meetings before their team finishes the work for the day, or before the class is dismissed for the day, will be counted absent for the day.
- 9. In weeks 8-10, students will attend labs on Wednesday OR Friday, depending on which section they are officially enrolled.
 - At the moment of writing this syllabus, KN95/N95 masks are not mandatory, but they are strongly recommended.

Course % Breakdown	%
Writing assignments	27
Exams	70
Lab Notebook (weeks 8-10)	3
Total % for the course	100

Extra credit opportunities will be available later in the course.

Grading Scale

Letter Grade	%	Letter Grade	%
Α	(93.0-100%)		
А-	(90.0 - 92.99%)	B +	(87.5 - 89.99%)
В	(83.0 - 87.49%)	В-	(80.0 - 82.99%)
C+	(77.5 - 79.99%)	С	(73.0 - 77.49%)
C-	(70.0 - 72.99%)	D	(60.0 - 69.99%)
F	(X < 60%)		· · · · · · · · · · · · · · · · · · ·

Final grades are calculated on a straight scale and they are not curved.

Lab requirements (weeks 8-10 only):

For this <u>lab</u> you will need:

- Complete safety training BEFORE week 8 (no exceptions!): <u>https://biolabclass-safetyquiz.ucsd.edu/</u>
- > A paper notebook (with pages that can be detached for grading)
- A lab coat (extending to to your knees). Failure to do so will affect your grade and students will be sent home for the day. No exceptions!
- > long pants (not leggings, not anything tight-fitting, not cropped)
- closed-toed shoes (no sandals, flip-flops, or other open footwear)

- ➤ something to tie back long hair
- ➤ Eye protection (safety glasses preferred, standard prescription eye glasses are not sufficient) must be worn all the times while in the lab, unless otherwise instructed. You must be able to look through a microscope while wearing the safety glasses, so they should not bulge outward.
- At the moment of writing this syllabus, KN95/N95 masks are not mandatory, but they are strongly recommended.

Reading for the course

Reading ahead of the course:

I will assume that you all have a basic understanding of, and reasonably good memory of the following from lower division biology or from high school. If you don't remember, you may wish to read ahead:

- Scientific Method: brush up on this concept there are several online sites that do a good job of explaining dependent, independent, and controlled variables as well as the difference between a control experiment/group and an experimental group.
- Definition of microbes and an understanding of the different groups of microbes (e.g. bacteria, fungi, viruses). You are not required to memorize all the names you should, however, have at least a basic idea as to the types of organisms included in each category
- Eukaryotic vs. prokaryotic cells differences
- Metabolic pathways
- Metric system

Starting in week 1, I will post readings to Canvas for you to review, and they are fair game for the exams. As often as possible, I will give you questions/problems to think about that should apply the concepts you learned in class. Thinking about and attempting to answer these questions and participating in any classroom/discussion is the best practice you can have for exams, writing assignments, and practicing science in general.

Please read the document called "Tips to succeed in the course", which is posted in Canvas, and use the readings to succeed.

Exams

There will be 3 exams (in-person; closed-book; closed-notes; non-cumulative) throughout the course. Exams will consist in true/false and fill in the blank, and mostly short answer-questions. Students may use the lecture slides, learning outcomes and readings posted for each lecture, videos, as a guide to see what topics to focus for the exams. Exams require understanding of a topic and ability to apply them, not just memorization. *There are no make up exams*. However, only the best two exams will count toward your final grade. This policy takes into account any unforeseen circumstances that students may experience throughout the course, and no other accommodations will be granted.

Exams

Exam 1 (in lecture): Wed Feb 1 (week 4)	@5PM
Exam 2 (in lecture): Wed Feb 22 (week 7)	ä)5PM
Exam 3 (in lecture): Mon Mar 13. (Week 10)	@5PM

Homework/writing assignments - Deadlines and Submission:

- 1. All homework/writing assignments will be submitted as electronic copies to Canvas. All homework assignments must be submitted on time to be eligible for full credit.
- 2. All assignments submitted after the deadline will receive a penalty. Any submission within the first hour past the deadline is automatically late and loses 20%. Any homework

submitted after the first hour past the deadline and within 24 hours from the deadline will lose 50%. No homework will be accepted after the second calendar day. This policy applies to any assignment in the course.

3. It is your responsibility to verify that the submission has been successful. Do not procrastinate, since unforeseen circumstances may occur (computer problems, illness, Canvas not working, etc.). Check the deadline of the assignment submission and make sure you adhere to it. *Students agree that by taking this course all required assignments would be reviewed for textual similarity by Turnitin.com for the detection of plagiarism. All submitted assignments will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers; student names will never be stored in the Turnitin database. Use of the Turnitin.com service is subject to the terms of use agreement posted on the Turnitin.com site.*

Regrade Requests:

All regrade requests should be submitted <u>in writing</u> to Dr. Pirino within 5 days of receiving the graded material. Please follow the regrade policy in Canvas.

Statement on Academic Integrity: Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind. The consequences of being caught cheating can be severe. Information can be found here: <u>http://www.ucsd.edu/current-students/</u>academics/academic-integrity/index.html

Students are expected to do their own work, as outlined in the UCSD Policy on Integrity of Scholarship: http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2

Academic misconduct will NOT be tolerated. Students suspected of Academic Integrity (AI) violations on exams and/or homework will be reported for AI violations. Cheaters will receive a failing grade on the assignment, and in the course. They may also be suspended from UCSD pursuant to University guidelines.

<u>All class material, such as syllabus, readings, homework, lecture slides, etc. are copyrighted and cannot</u> <u>be shared, posted to websites, and/or distributed without instructor's approval for any reason. Students</u> that sell and distribute course materials not only violates the student code of conduct, but also violates UC's 2005 policy on the Use of Recordings of Course Presentations:

http://copyright.universityofcalifornia.edu/resources/recorded-presentations.html .

Academic misconduct includes but is not limited to:

- 1. <u>Cheating</u>, such as using "crib notes", copying answers from another student during the assignments, or forging assignments.
- 2. <u>Plagiarism</u>, such as using the writings or ideas of another person, either in whole or in part, without proper attribution to the author or the source. Plagiarism is stealing someone else's ideas and presenting them as your own. Copying anything from any source is plagiarism if the source is not clearly cited. Quotations are never used in scientific writing; we will practice on how to write in a student's own voice.
- 3. <u>Collusion</u>, such as engaging in unauthorized collaboration on exams or assignments, completing for another student any part or the whole of an exam or assignment, or procuring, showing, providing or accepting materials that contain questions or answers to an exam or assignment to be given at a subsequent time.

Student Responsibility:

Students are expected to complete the course in compliance with the instructor's standards. No student shall engage in any activity that involves attempting to receive a grade by means other than honest effort; for example:

- No student shall knowingly procure, provide, or accept any unauthorized material that contains questions or answers to any examination or assignment to be given at a subsequent time.
- No student shall complete, in part or in total, any examination, or assignment for another person.
- No student shall knowingly allow any examination or assignment to be completed, in part or in total, for themselves by another person.
- No student shall plagiarize or copy the work of another person or internet sources and submit it as their own work.
- If any work is plagiarized from that of another student, both students will be reported to the Office of Academic Integrity, even if one of the students has graduated already. Remember that most graduate schools check the undergraduate records for any indications of dishonesty before awarding a degree.
- No student shall alter/forge graded class assignments or examinations and then resubmit them for regrading.
- No student shall submit substantially the same material in more than one course without prior authorization.
- No student shall post any class material on online websites without instructor's approval

Statement on Office for Students with Disabilities (OSD): To receive accommodation, students must present or email their "Authorization for Accommodation" (AFA) form provided by the Office for Students with Disabilities (OSD) to the instructor. Considering that students will complete assignments from home, no extra time will be given.

Discrimination and Harassment: The University of California, in accordance with applicable federal and state laws and university policies, does not discriminate on the basis of race, color, national origin, religion, sex, gender, gender identity, gender expression, pregnancy (including pregnancy, childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition, genetic information, ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (including membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services). The university also prohibits harassment based on these protected categories, including sexual harassment, as well as sexual assault, domestic violence, dating violence, and stalking. The nondiscrimination policy covers admission, access, and treatment in university programs and activities.

If students have questions about student-related nondiscrimination policies or concerns about possible discrimination or harassment, they should contact the Office for the Prevention of Harassment & Discrimination (OPHD) at (858) 534-8298, https://ophd.ucsd.edu/ , or http://ophd.ucsd.edu/report-bias/ index.html

Campus policies provide for a prompt and effective response to student complaints. This response may include alternative resolution procedures or formal investigation. Students will be informed about complaint resolution options. A student who chooses not to report may still contact CARE at the Sexual Assault Resource Center for more information, emotional support, individual and group counseling, and/ or assistance with obtaining a medical exam. For off-campus support services, a student may contact the Center for Community Solutions. Other confidential resources on campus include Counseling and Psychological Services, Office of the Ombuds, and Student Health Services.

CARE at the Sexual Assault Resource Center: 858.534.5793 | sarc@ucsd.edu | https://care.ucsd.edu

Counseling and Psychological Services (CAPS): 858.534.3755 | https://caps.ucsd.edu

* tentative.