

BIMM 120 - Microbiology- *Pandemic Fall edition*

Course Syllabus*

Fall 2021 – Lectures, Tuesdays & Thursdays, 11:00AM-12:20 PM via Zoom.

Course expectations: *Your well-being and learning* are my top priorities. Thus, in the event that any of us needs to quarantine (which, unfortunately, it will likely happen), this remote format will allow the least number of disruptions to your learning, and will allow all of us to succeed without the fear of missing classes and assignments. We are making this class as flexible as possible to accommodate any unforeseen circumstances that may occur in these uncertain times.

Instructor: Giorgia Pirino, Ph.D.

Email: gpirino@ucsd.edu

Please include BIMM120, your full name, ID, and IA name in all emails to Dr. Pirino. Inquiries about course material will not be answered via email.

Touch-base hours: Fridays, from 10 to 11AM via Zoom, and will start in week 2. Touch-base hours are informal ways to ask questions about the course material or just to chat. I'd love to know all of you!

Discussion Sections (via Zoom)

Discussion #	Day/time	IA	IA email
A01	Monday, 1-1:50PM	Sean Wu	s7wu@ucsd.edu
A02	A02, Monday, 9-9:50AM	Justin Lee	jjl003@ucsd.edu
A03	A03, Monday, 12-12:50PM	Jackie Zhao	jiz065@ucsd.edu
A04	A04, Monday, 2-2:50PM	Neil Shende	nshende@ucsd.edu
A05	A05, Monday, 3-3:50PM	Daniel Quach	d2quach@ucsd.edu
A06	A06, Monday, 1-1:50PM	Daniel Quach	d2quach@ucsd.edu
A07	A07, Wednesday, 6-6:50PM	Asama Lekbua	alekbua@ucsd.edu
A08	A08, Wednesday, 3-3:50PM	Neil Shende	nshende@ucsd.edu
A09	A09, Tuesday, 7-7:50PM	Theodore Vuong	tqvuong@ucsd.edu
A10	A10, Wednesday, 1-1:50PM	Asama Lekbua	alekbua@ucsd.edu

Discussion Sections will start in week 2.

IA's touch-base hours will be communicated later.

Course description: This is an introductory course in general microbiology designed for Biology majors. The overall themes of this course are: 1) microbial biology, biochemistry and genetics 2) microbial evolution and diversity, 3) interactions of microorganisms with humans and their environment. **Prerequisites:** BLD1, BILD 3, BIBC 100 or BIBC 102, and BIMM 100. Due to the current pandemic, all lectures and discussion sections will be available via Zoom *synchronously*, they will be recorded, and recordings can be found on Canvas > Media Gallery asynchronously.

Learning goals: At the end of the course students will be able to appreciate microbial diversity, understand microbial genetics, microbial metabolism. microbial evolution, how microbes regulate genes, and how microbes interact with the environment.

Course preparation: To do well in BIMM 120, students should have a strong background in general biology and organic chemistry. It is assumed that students know basic biochemistry (the major types of molecules found in cells, cell metabolism), as well as basic (introductory) cell biology, molecular biology, genetics, and the importance of scientific method. Although this is not a lab course, and no lab skills are required, it is expected that students know how a general biology research lab functions and how the scientific method is applied to research, based on information acquired in previous courses and scientific publications. Students should review this material before the start of the quarter or during the first week. We will not specifically cover these principles in class because students should already know this material from their prerequisites. Students are responsible for any remedial learning required to understand the material presented in this course. Due to the current pandemic, the assignments of the course will focus more on data analysis. *Lastly, I suggest you to read the document in Canvas that includes tips to succeed in this course.*

Textbook: There is a *required* textbook and other optional ones.

Required: we re going to use an online textbook that contains mini-reviews on specific microbiology topics that have been written by experts on the subject. We will use the readings from this textbook throughout the course, in particular for the homework. It is available at the cost of \$15 for the whole quarter. To access it, navigate to the following website:

www.veloxsci.com/texts/IJ14KU99-1632266-1-linked

Alternatively, you can do the following:

1. After signing up for a Veloxsci student account (>Main page > Scroll down > Log in (bottom right) > Sign up), navigate to the "Find a Text" tab.
2. Here, the easiest way to find the correct text is to copy & paste the following code into the "Text ID" box:

IJ14KU99-1632266-1-linked

3. Click "Fetch!"
4. Click "Purchase This Text," and complete the payment form.
5. The text can then be accessed by navigating to the "My Texts" page.

Optional textbooks: There are other textbooks that you may find useful during the course. “Microbiology, an evolving science”, 5th or 4th editions, by Foster & Slonczewski is highly recommended, but not required. In Canvas, you can find a list of the reading for this class from the online textbook and the Foster & Slonczewski. If you are using a different textbook than this optional one, it is perfectly fine, but make sure that the course topics are covered.

Another textbook you may consider: Todar’s Online textbook of Bacteriology

- http://www.textbookofbacteriology.net/kt_toc.html

Final grade: Your final grade will be determined by the following assignments:

- Homework: 35% (70 points)
- Quizzes: 20% (40 points; 20 points each; 2 in total)
- Take - Home Exam: 40 % of final grade (80 points)
- Reflections: 5% (10 points)

Total points available: 200 points (100%)

Extra credit: there are extra credit opportunities and will be discussed later.

Grading scale: Please assume this class is NOT curved and use the raw score (rounded up to nearest 0.01%) that you receive to calculate your grades.

For example, <60/100 is a F; <70/100 is a D; 70/100 is a 70 or C-; 73/100 is a 73 or C; 78.5/100 is a 78.5 or a C+; 80/100 is an 80 or B-; 83/100 is an 83 or a B; 88.5/100 is an 88.5 or B+; 90/100 is a 90 or A-; 93/100 is a 93 or A.

Exam: We will have 1 take - home exam administered in final week. The take- home exam, which will be accessible to students on December 8, 2021, at 11:30AM, will consist in questions related to a scientific article (provided with the exam) and questions on the overall course material. Students will have 24 hours to complete and submit the exam through Canvas > Home > Final Exam for credit. No exams will be accepted past the deadline. More details will be provided during the course. Students will practice for it during lecture, discussion sections, and quizzes.

Make-up Exam: *There is no make-up exam. No exceptions! The final take - home exam cannot be rescheduled or its grade substituted with a different assignment for any reason. In case of a dare emergency, please contact the instructor within 24 hours. After review by the instructor, the student may take a different exam as a substitution, which most likely will consist in an oral exam administered live via Zoom.*

Class Participation in an Inclusive Learning Environment during an emergency online course: This quarter BIMM 120 is a remote course, created online to minimize disruptions due to COVID- 19. Thus, it will not be able to reproduce the social experience that you would have had in person. To create community, we will have discussions and activities during lectures.

Lectures: Although not mandatory, students who attend and participate for *at least 75%* of the lectures will receive 8 points of extra credit (4%) that will be added to their final grade. Participating for less than 75% won't earn any extra credit. Attendance will be taken via Zoom polls. Make sure to have the last version of Zoom and log into lectures with your UCSD credentials. *We appreciate it if you keep your video on during the meetings, as it is better to interact with a live person, than a black screen or a photo! I would like to get to know you!*

Discussion sections: Although not mandatory, you are encouraged to take advantage of discussion sections; they represent a great opportunity to ask for clarification and discuss course content. During discussion sections, whether the students attend them synchronously or asynchronously, IAs will review the course material, review scientific articles, share tips on how to read them, and provide questions, when appropriate. Two quizzes (see course schedule) will be turned into Canvas, according to the deadlines in the course schedule in Canvas. After the deadline, IAs will go over them at discussion. No rubric will be posted.

Although discussion sections are not mandatory, students who attend and *actively* participate in *at least 75%* of the discussion sections (6 discussion sections out of 8) will receive 4 extra credit points (2%). Participating for less than 75% won't earn any extra credit. *We appreciate it if you keep your video on during the meetings, as it is better to interact with a live person, than a black screen or a photo! Your IA would like to get to know you!*

If you have a reasonable conflict with the discussion section you enrolled into, you can switch discussion section by Friday of week 1 (only!). To do so, **DO NOT officially switch discussion** (aka **DO NOT DROP one discussion and enroll into another**). Instead, **EMAIL IA Justin** (email in the 1st page of this document) and let him know 1) the discussion you are officially enrolled into; 2) the discussion you would like to join. Do so by Friday of week 1, and then attend the new discussion at its assigned time.

Homework & Quizzes: Students enrolled in BIMM120 will complete homework & quizzes assigned in advance by the instructor. Homework and Quizzes will be completed via the course website on Canvas (more information will be provided later).

Quizzes - Each quiz will be open for one week. Quizzes represent an excellent opportunity to practice for the take home exam. They will have the same format of the take home exam: true/false, multiple choice, and short essay questions. Questions will cover material covered in lecture, readings when appropriate, and a scientific article, and are not cumulative. Since they mimic the take home exam, you will not be able to ask your classmates or instructors for the answers. Deadlines for all of the assignments for this class are in considered as Pacific Time.

Homework - all homework will be graded for completion and good effort. More details will be provided.

All quizzes and homework submitted after the deadline will receive a penalty. Any submission within the first hour past the deadline is automatically late and loses 20% of the points. Any submission submitted after the first hour past the deadline and by 9:00AM of the next day will lose 50% of the points. No assignment will be accepted after 9:00AM of the next day past the deadline.

Note on quizzes, homework, and exam : *The quizzes, homework, and final exam will be open-book, open-notes. You canNOT collaborate with anyone else, in ANY way. You must do your OWN work. You cannot provide or receive any aid for completing them. Further, your answers (that are more than a few words) must be uniquely composed in your OWN words. You may NOT copy and paste answers from any source, rephrase from other sources, do not use quotation marks. Otherwise, it would be considered plagiarism. If you cannot explain a concept in your own words, then you do not really understand it. This policy does not apply to fill-in-the-blank or very short answers.*

Regrade Requests: All regrade requests should be submitted in writing (by email to Dr. Pirino or IAs) *within 5 days* of receiving the graded material (aka, the day that scores are posted on Canvas) with an *explanation of why their assignment requires a regrade*. More details will be provided.

Scientific articles: We will read several articles throughout the course and they are fair game for the exam and quizzes, unless otherwise instructed . As you read the scientific papers, focus on the big picture and look for the following points:

1. What were the main goals this paper? What was/were the hypothesis/es?
2. What experiments were performed to test the hypothesis/es?
3. Did the results confirm or refute the hypothesis/es?
4. What do the figures/table communicate?
5. What were the main conclusions of the paper?

If there is something that you do not understand, skip it temporarily, you can return to it later.

More resources: To create community, we will use a discussion forum called Piazza so everybody can share her/his opinions, pertinent information regarding subjects covered in class, or things that students have read, examples from their experience, and incorporate responses of their peers. Our Piazza page, which can be accessed directly via Canvas, should work as a message board: students may post/ask/answer questions on that page. Students who have a specific question about the course/course material are encourage to post it on the Piazza page. Other students may wonder the same and the answers will provide an instant clarification to the entire class without misunderstandings. Even though there are no points associated with Piazza,

this discussion forum is a tool for everyone to ask for help: the IAs and myself will post, answer and ask questions, and students may do the same.

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 have 24 hours to complete the final take-home exam, no extra time will be given to students .

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>

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: <http://www.ucsd.edu/current-students/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 invited to Zoom follow-up meetings where they will be asked to (in real time, on video) justify their answers (before the graded exams or solutions are released). If the instructor isn't convinced during the meeting, or the student refuses to participate, they're submitted for AI violations. Cheaters will receive a failing grade on the exam or assignment, and/or in the course. They may also be suspended from UCSD pursuant to University guidelines.

All class material, such as syllabus, readings, homework, scientific articles, lecture slides, etc. are copyrighted and cannot be posted to websites and/or distributed without instructor's approval for any reason. Students 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. **Cheating**, such as using "crib notes", copying answers from another student, or forge assignments.
2. **Plagiarism**, 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. Copying anything from any source is plagiarism if the source is not clearly cited. Plagiarism is stealing someone else's ideas and presenting them as your own.
3. **Collusion**, 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, providing or accepting materials that contain questions or answers to an exam or assignment to be given at a subsequent time.

*tentative.