UCSD BIMM 120: Microbiology Lecture
Lecture Schedule **Summer** 2023

Professor: **Dr. Brooke Pickett**   Quarter start: **7/3/23**
Professor contact: bpickett@ucsd.edu   Quarter end: 8/4/23
Office Hour: Tuesday at 1pm via OH zoom link

Overview: Welcome to BIMM 120! In this class, we'll discuss the structure, growth, physiology, molecular genetics, genomics, ecology, and host-interactions of prokaryotic microorganisms. Please keep in mind that this summer microbiology course is a relatively advanced, fast-paced course, so it is imperative to keep up with the material. **This means students should plan on spending two to three hours of studying for every hour of class.** We're in this together, so if you have any issues or concerns, please let me know right away.

COURSE MEETING TIMES

This class is fully remote and synchronous. Please look closely at the following course meeting times and the more detailed schedule in this syllabus. The Zoom links for lecture, discussion section, and all office hours can be found on CANVAS.

Lecture:

Section	Day	Time
All	TuTh	2:00pm – 4:50pm

Discussion Sections: <u>check WebReg to see which section you are assigned to.</u>

Section	Day	Time	IA Name
A01	F	8:00am – 9:50am	Patricia
A02	F	10:00am – 11:50pm	Joseph
A03	F	12:00pm – 1:50pm	Joseph

IA Information:

IA Name	IA Email	Office Hour
Joseph Oh	juo014@ucsd.edu	TBD
Patricia Chen	pjchen@ucsd.edu	by appointment

COURSE DESCRIPTION

Required Materials: access to CANVAS, access to Zoom, a **working** camera (either on a laptop or phone) for exams – **you will not be allowed to take exams without this, no exceptions**. If you do not have access to a computer, please see UCSD student resources to request a loaner.

Recommended Textbook: "Brock Biology of Microorganisms", Madigan et al., 16th edition (*the textbook our lecture material is based on*) or "Microbiology: An Introduction", Tortora et al., 13th edition. I've also posted a free textbook on CANVAS - "Microbiology" by OpenStax. The free textbook is not a very in-depth source, but still provides good information. These books are a very useful resource to supplement lecture material, but they are <u>not required</u>.

Prerequisites: BILD 3 and BIBC 100 or BIBC 102 or CHEM 114A or CHEM 114B and BIMM 100

Lecture Structure: Lecture will be presented via Zoom (https://zoom.us/). The most important aspects of the material are presented in lecture. Lecture attendance is required, as concepts will be presented in a step-wise fashion designed to help you learn the material. Lecture slides are available for download from CANVAS prior to the lectures and lecture recordings will be posted to CANVAS after lecture.

Discussion Section Structure: Discussion sections are an ideal time to ask your IA questions about course material, practice questions, exam preparation, post-exam questions, etc. In general, your IA will go over the 1) main slides from lecture, 2) the answers to practice questions, and 3) answer any other questions you may have. Practice questions will be available on CANVAS before the discussion section. They consist of questions designed to help you understand the material presented in lecture and are not to be turned in or graded. Discussion section attendance is highly recommended, but not mandatory.

DETAILED COURSE SCHEDULE

Below is the **tentative** lecture schedule; i.e. lecture schedule may be a little ahead or behind track as the course progresses. Review sessions are scheduled outside of class time via a Doodle poll and are not mandatory.

Week	Day	Date	Topic
1	T	4-July	*Vacation* – no lecture
	Th	6-July	Introduction to Microbiology Prokaryotic Cell Structure and Function (part 1)
2	T	11-July	Prokaryotic Cell Structure and Function (part 2) Prokaryotic Cell Structure and Function (part 3) Microbial Metabolism
	Th	13-July	Molecular Biology and Proteins (part 1) Molecular Biology and Proteins (part 2) Eukaryotic Microbes – Protists (*end of Exam 1 material*)
3	T	18-July	**Exam I** (1.5hrs) Eukaryotic Microbes – Fungi
	Th	20-July	Vaccines and Antibiotics Microbial Growth and Control
4	T	25-July	Viruses Horizontal Gene Transfer Epidemiology
	Th	27-July	Major Diseases Clinical Microbiology
5	T	1-Aug	**Exam II** (1.5hrs) Foodborne and Waterborne Diseases Innate Immunity (part 1)
	Th	3-Aug	Innate Immunity (part 2) Microbial Ecosystems Microbial Symbioses

			Frontiers in Microbiology (*if time*)
6	Sa	5-Aug	**Exam III** (1.5hrs, 3pm – 4:30pm)

GRADING CRITERIA AND SCALE

The grading scale for the course is standard (see second table below). **The course assignments are not curved and the final grades are not rounded.** For example, this means a grade of 89.9% will not be rounded up to a 90%.

Category	Points
Exam I	100
Exam II	100
Exam III	100
Study Guide Assignments (5, 10pts)	50
Lecture Participation (9, 3pts)	27
Discussion Section Participation (5, 3pts)	15
Extra Credit	5
Total for Course	**392**

Letter	Percent	GPA
A+	96-100	4.0
A	94-95	4.0
A-	90-93	3.7
B+	86-89	3.3
B	84-85	3.0
B-	80-83	2.7
C+	76-79	2.3
C	74-75	2.0
C-	70-73	1.7
D	60-69	1.0
F	<60	0

EXAMS

There will be three exams (see schedule above), none of which are cumulative (yay!). The exams are based solely on lecture material, they are closed-note and will be completed on Zoom, through CANVAS. In general, the exams will be 1.5hrs and consist of multiple choice, matching, T/F, fill-in, and short answer questions. We will have exam reviews before every test, each one will be scheduled via a Doodle poll and will take place outside of lecture hours. I highly suggest either making a study guide or digital flash cards (using the free Anki program – apps.ankiweb.net) after each lecture. This is a fast-paced course, so it is imperative to keep up with the material. None of the exam grades will be dropped and make-up exams will only be given with a doctor's note.

STUDY GUIDE ASSIGNMENTS

Creating study guides out of the lecture slides, is a great way to prepare for the exams. This allows you to study the study guide, rather than going through dozens of lecture slides. Each week, you will create at least 10 questions and answers per lecture that we covered that week. For example, if we covered two lectures that

week, you'll want to write 20 questions and answers in your study guide assignment. The questions must be short answer format and must relate to the main points from the lecture. These cannot be recycled practice questions. This way, before the exam, you will have a study guide to study for each lecture we went over. Note, that you are only required to write 10 questions and answers for each lecture, but I highly recommend writing more than that to make a more useful study guide. If students complete the study guide assignments with a strong attempt at correct answers and integrity, they will receive the full 10pts each week. Your questions and answers must be written in your own words, do not copy and paste from lecture slides or other sources. **Assignments with high Turnitin scores will not be accepted.** Note that none of the study guide grades will be dropped.

LECTURE AND DISCUSSION SECTION PARTICIPATION
At some point during every lecture and discussion section, a simple question will be asked based on the material we just went over. Students will scan a QR code and fill out their name and answer on a Google form. The participation answers are not graded for accuracy, just completion. Students must be present in lecture and discussion section the entire time to receive participation points. Each lecture is worth 3pts and each discussion section is worth 3pts. The lowest participation grade for lecture and discussion section will be dropped at the end of the quarter (to account for any Google form issues). See attendance policy below for further information regarding how to report an absence, excused, and unexcused absences.

EXTRA CREDIT
There are five points of possible extra credit in this course. Extra credit assignments may take the form of student surveys or paper analysis – these assignments will be announced during class and via email. Asking for extra credit points beyond this **or asking for added points to boost your grade** is inappropriate and not in line with the ethics of academia; any requests of this nature will be dismissed.

PRACTICE QUESTIONS
Practice questions will be posted on CANVAS each week and will pertain to the material we covered that week. They are **not turned in and not graded**. These questions are very useful for studying for the exams and your IAs will be going over them in discussion section each week.

WEEKLY CHECKLIST
Below is a helpful checklist that students can follow each week to make sure they are up to date on all tasks:

- ☐ Attend weekly remote lecture
- ☐ Answer the weekly practice questions
- ☐ Attend weekly remote discussion section
- ☐ Read the portions of the (recommended) textbook that correspond to that week's lectures
- ☐ Submit study guide assignments by Friday each week
- ☐ Study for tests as you go

COURSE POLICIES

Below you will find the class policies regarding attendance, late assignments, extra credit, accommodations, and cheating.

ATTENDANCE
Lecture and discussion section attendance is required and is essential to understanding the material and performing well on the exams. If lecture is missed, students can watch the lecture podcast (via the "Media Gallery" tab in CANVAS). If you will be absent from either lecture or discussion section, **please fill out this**

form (also linked on CANVAS): https://forms.gle/55d7yrRSoy5nz2eJ8. **Any emails regarding absences, will not be addressed, all absences must be entered into the above form.** Please fill out the form once for each day you will be absent. This form must be filled out before the absence will occur (except in emergencies). Your response will be sent directly to your professor and IAs. If the absence is excused, participation points will be awarded, if not, participation points will not be awarded. Please see the detailed guidelines below regarding unexcused and excused absences in lecture and discussion section:

Unexcused absences: will result in no participation points for that lecture/discussion. Unexcused absences include: 1) missing lecture/discussion without first notifying the professor or IA (except in emergencies), 2) arriving to lecture/discussion 15min late or more, 3) leaving lecture/discussion with 15min or more remaining, 4) absences due to scheduling conflicts (other coursework, vacations, etc.), or 5) attending a discussion section the student is not registered for.

Excused absences: will result in full participation points for that lecture/discussion. Excused absences include feeling sick, being COVID-positive, having COVID symptoms, unexpected occurrences, or events out of the student's control. Students must fill out the above absence form **ahead of time** (this excludes medical emergencies) in order for the absence to be excused.

Add/drop deadlines: The deadline to add or drop courses (with a late fee), the last day to drop a course with tuition reversal or refund, and the deadline for all students to pay enrollment fees before administrative cancellation from courses for non-payment is **July 7**. Deadline for all students to drop classes **without "W"** grade on transcript is **July 14**. Deadline for undergraduate students to drop **with "W"** grade on transcript is **July 21**, for graduate students it's Aug 1. More information can be found here: https://summersession.ucsd.edu/calendar/.

LATE ASSIGNMENTS
Late assignments are **not accepted** unless there is a doctor's note, a prior request for accommodations, or existing accommodations. If a student is struggling, it is their responsibility to seek out help and let the professor know of their circumstances before assignments are to take place (excepting emergencies). Students cannot ask for accommodations retroactively – this includes asking for an extension for work that has already been due.

LEARNING OUTCOMES (LOs)
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.

ACADEMIC INTEGRITY
Honesty is primarily the responsibility of each student. The College considers cheating to be a voluntary act for which there may be a reason, but for which there is no acceptable excuse. It is important to understand that collaborative learning is considered cheating unless specifically allowed for by the professor. The term cheating includes but is not limited to: plagiarism, receiving or knowingly supplying unauthorized information, using unauthorized material or sources, changing an answer after work has been graded and presenting it as improperly graded, illegally accessing confidential information through a computer, taking an examination for another student or having another student take an examination for you, and forging or altering grade documents. **This holds true for every assignment, regardless of the assignment's perceived magnitude or significance.** If any act of academic dishonesty is observed, **the professor is required to report it.** The student will **automatically receive a zero** on that test or assignment (the grade received as a result of an academic

integrity violation stays calculated into the student's GPA even if the student retakes the class). There will also be an AI Administrative Fee of $50 (posted to the student account), mandatory AI Training, **at least one Disciplinary Action**, and possibly other actions per the professional judgement of the Appropriate Administrative Authority (AAA). Discipline may include probation, suspension (from a Quarter to Two Years), or dismissal. Please do not risk your GPA and/or future career by cheating.

RESOURCES FOR STUDENTS

If a student is struggling, it is **their responsibility to seek out help and let the professor know of their circumstances before assignments are to take place** (excluding emergencies). **Students cannot ask for accommodations retroactively.** A complete list of student resources can be found on CANVAS.

1. ***Triton Food Pantry –*** (https://basicneeds.ucsd.edu/food-security/pantry/index.html) Don't go hungry! Triton Food Pantry is **free and available for any student.** The pantry has food staples such as oatmeal, canned soups, fresh produce, dry goods, and milk that students can access for free at Student Center A (next to The Hub) or Graduate Housing (a.k.a "OMS") on Miramar Street. For food pantry hours, please see the above website. In general, food items are assigned a point value and any registered student is able to pick up 15 points worth of food per week. The Triton Food Pantry also provides a range of services including care packages, emergency food relief, basic needs events, and various pop-up locations on campus.

2. ***The Hub Basic Needs Center –*** (https://basicneeds.ucsd.edu/index.html) If you are facing challenges with your access to adequate food, stable housing, or general resources, please complete this form so assistance can be provided: https://basicneeds.ucsd.edu/forms/basicneeds/index.html. The Basic Needs Center also provides free hygiene products on an emergency basis.

3. ***Teaching + Learning Commons –*** (https://commons.ucsd.edu/students/academic%20support.html) Made up of six unique, but integrated hubs, The Teaching + Learning Commons provides comprehensive academic support for students. Includes tutoring, writing help, learning strategy workshops, and study groups.

4. ***The Writing and Critical Expression Hub –*** (http://commons.ucsd.edu/students/writing/index.html) provides support for undergraduates working on course papers, i.e. lab reports as well as other independent writing projects. Writing mentors can help at any stage of the writing process, from brainstorming to final polishing. The Writing and Critical Expression Hub offers: one-on-one writing, tutoring by appointment, supportive and in-depth conversations about writing, help with every stage in the writing process, walk-in tutoring, and workshops on writing.

5. ***Office for Students with Disabilities (OSD) –*** (https://osd.ucsd.edu/) Assists students with documented disabilities (psychological, psychiatric, learning, attention, chronic health, physical, vision, hearing, brain injury) to provide accommodations in classrooms and labs. For example, if you think you may have test anxiety due to an underlying condition that interferes with your ability to learn, focus, or concentrate, OSD is a great resource. In many cases, students are entitled to assistance with test taking, such as extra time to complete a test, testing in a less distracting room or having questions read aloud. OSD's mission is to offer quality programs and services that empower students with disabilities to access and engage in educational activities at UCSD. Please notify your instructor immediately if you require special health or disability accommodations.

6. **Counseling and Psychological Services (CAPS) –** (https://wellness.ucsd.edu/CAPS/services/Pages/Appointments.aspx) This is an amazing resource for coping with anxiety and stress issues. For first-time appointments, you can now go directly to MyStudentChart.ucsd.edu and book an appointment online.

7. **The Office for the Prevention of Harassment & Discrimination (OPHD) –** (https://ophd.ucsd.edu/) OPHD provides assistance to students, faculty, and staff regarding reports of bias, harassment, and discrimination. OPHD is the UC San Diego Title IX office. Title IX of the Education Amendments of 1972 is the federal law that prohibits sex discrimination in educational institutions that are recipients of federal funds. Students have the right to an educational environment that is free from harassment and discrimination. Students have options for **reporting incidents of sexual violence and sexual harassment**. Sexual violence includes sexual assault, dating violence, domestic violence, and stalking.

   Information about reporting options may be obtained at OPHD at 858-534-8298, ophd@ucsd.edu, or http://ophd.ucsd.edu. Students may receive confidential assistance at CARE at the Sexual Assault Resource Center at 858-534-5793, sarc@ucsd.edu, or http://care.ucsd.edu , or Counseling and Psychological Services (CAPS) at 858-534-3755 or http://caps.ucsd.edu.

   Students may feel more comfortable discussing their particular concern with a trusted employee. This may be a student affairs staff member, a faculty member, a department chair, or other university official. These individuals have an obligation to report incidents of sexual violence and sexual harassment to OPHD. This does not necessarily mean that a formal complaint will be filed. If you find yourself in an uncomfortable situation, ask for help. The university is committed to upholding policies regarding nondiscrimination, sexual violence, and sexual harassment.

8. **If you want more microbiology**, I also teach BIMM 121 Microbiology Lab. There are also all kinds of microbial media (pun intended) out there. Here's a few I like: This Podcast Will Kill You (podcast), The Butchering Art by Lindsey Fitzharris (book), and Dr. Mutter's Marvels by Cristin O'Keefe Aptowicz (book). Have fun learning about microbes!

OTHER TIPS

Office hours
Office hours are a great resource if you have any questions about the course content. You can also consider office hours to be more like study sessions or free-formed fireside chats, where we can talk about anything related to your academic and general experiences on campus. Stop by for just a few minutes or stay for the entire duration – your choice! Join us with your own questions or come and see what other students have questions about. Please feel free to email me and set up a separate appointment if necessary. Office hours with instructional assistants are also available.

College Survival Skills
- Keep a calendar of all exam/assignment due dates and appointments
- Plan on spending two to three hours of studying for every hour of class
- Be on time to class, ask questions when needed, and participate
- Take notes in class
- Complete all assignments on time
- Take advantage of services on campus to help you succeed

- Arrange for needed accommodations early in the term
- Plan time to eat, sleep and have some fun
- Attend office hours if you have questions or concerns
- If trouble arises, seek assistance <u>as soon as possible</u>

Coping Skills for Test Anxiety
- Breathing techniques or holding something small to fidget with (like a hair band)
- Reframing thoughts: believing in yourself and remembering this is just one exam
- Doing the hardest questions (like short answer) first so you can relax a little bit
- Studying as you go, instead of all at once
- Studying in a place that is relaxing or familiar
- Making a routine – maybe adding a few questions to a study guide right after each lecture. Routine tends to decrease stress.
- Having breakfast and water (no coffee) right before a test

Self-Advocacy Tips
- Understand my disability and learn ways to compensate
- Learn how to explain my disability and needs to others
- Learn how to ask for appropriate accommodations
- Learn that it is OK to use appropriate accommodations
- Identify my strengths and weaknesses
- Learn that it is OK to ask for help
- Express my needs clearly to all college employees, especially the ACCESS staff and my instructors, early in the term
- Take responsibility and develop independence in coordinating your services
- Meet with instructors when needed

*** This syllabus is subject to change. Any changes will be announced in class and on CANVAS. Students will be responsible for all changes.