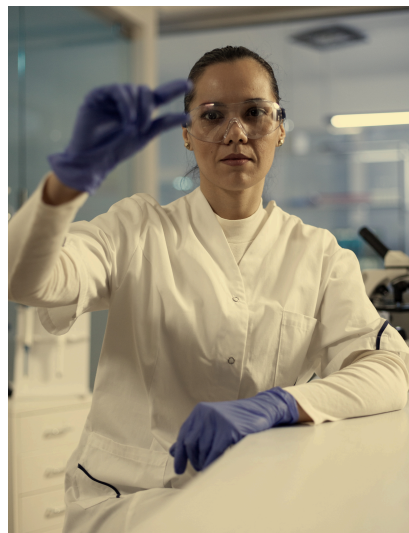


Microbiology

Course Description

Welcome to Microbiology! In this course, we will focus on a few learning objectives:

1. Characterize organisms that constitute the microbial world (bacteria, viruses, protozoa, algae, and fungi).
2. Understand the physiology and genetic of microbial organisms.
3. Recognize the importance of metabolic pathways on microbes.
4. Examine microbial systems and its impact on the overall populations.
5. Identify the effect of microorganisms on the hosts and pathogenesis.
6. Analyze and interpret range of scientific literature in microbiology.



Catalog Description

Prerequisites: BIOL 204, BIOL 208. Characterization and classification of organisms that constitute the microbial world (bacteria, viruses, protozoa, algae, fungi) with an emphasis on microbial physiology and cellular structure. The various roles of microorganisms in the environment and in disease are examined. This course includes a lecture and requires laboratory component held at different times. **4 credits**

Contact Info

Dr. Jean-Louis Bru
Email: bru@chapman.edu
Office: Keck Center 331

Class Meeting

Demille Hall 103
Tu/Th 11:30 AM - 12:45 PM



Office Hours

- **Keck 278:** Tu/Th 5:00 PM - 5:50 PM
- **Keck 230:** Wed 12:00 - 12:50 PM & 3:00 PM - 4:50 PM
- **Virtual Location:** <https://chapman.zoom.us/j/6171772283>
- **Appointment:** <https://calendar.app.google/FW88MisHfGUQSSXz5>





Schmid College of Science and Technology

COURSE OVERVIEW

Canvas

All course materials are available on Canvas. Everything needed for the course will be available on Canvas such as lectures, readings materials, assignments, etc. If there is any update, I will make an announcement on this platform as well. You are responsible for keeping up with these updates.

The discussion board is also available on Canvas. Feel free to post all questions related to this course on the discussion board. I highly encourage you to participate on the discussion board by posting questions or leaving comments to make our community active.



Textbook

**Microbiology: An
Introduction 14th Edition**

by Gerard J. Tortora, Berdell R.
Funke, Christine L. Case
Warner B. Bair, and Derek
Weber

ISBN-13: 978-0137941612
ISBN-10: 0137941617

The textbook is optional and is not required to succeed in this course. The textbook is available to help for some difficult concepts. Reading the textbook is not mandatory.

Lecture

Lectures are in-person. Lecture slides are posted on Canvas before each lecture. You will also have to complete lecture questions and submit them by Sunday night at 11:59 PM directly on Canvas.

You're the Professor! is an assignment that relates to the lecture of the week. You have until Sunday night at 11:59 PM to turn it in. More instructions can be found on Canvas.

In-Class Engagement Questions are awarded during lecture through a Canvas quiz based on timely submission and thoughtful responses rather than correctness. This is to encourage students to engage with the lecture material. Full credit requires presence during the designated quiz windows and submission of complete responses.

Quizzes & Exams

All quizzes and exams in this course may be taken only in-person. These assessments will test your knowledge on the lecture materials only.

The final exam may be taken only in-person on **Tuesday, December 9, 2025 from 1:30 PM to 4:00 PM. It will be cumulative.**

All quizzes and exams are to be completed individually without assistance from classmates or other people. Violation of these rules will result in a "0" on that quiz or exam and constitutes academic dishonesty (see section below for additional details concerning academic dishonesty).

The final exam may replace one of your three exams. This is possible if you score higher on your final exam in terms of percentage than one of your exams. It cannot replace a quiz with low score. This is your only chance to make-up any low exam grade. No additional extra credits will be given.

COURSE POLICIES

Attendance

Attendance is mandatory. The University recommends as a minimal policy that students who are absent 20 percent of the course should be failed. Students who do not attend the first class meeting of a course in which they are registered may be administratively dropped, unless they make arrangements with the instructor prior to the first day of class. Please refer to the Academic Policies and Procedures for additional information. Although attendance does not count toward the total points grade, it is still recorded through In-Class Engagement Questions. The lecture will be recorded on Zoom and posted on Canvas after each lecture.

Late Work Policy

For all assignments, late submission results in a minus 50% penalty. However, you have until Sunday, December 7, 2025 to submit late work without further penalty.

For quizzes and exams, there are no make-up assessments. Therefore, if you have an emergency that prevents you from taking any of the assessment, you must contact me through email (bru@chapman.edu) before Wednesday 11:59 PM to receive an excused absence. If you miss an assessment due to an excuse absence, I reserve the right to give you supplementary assignments and/or assessments to satisfy the course requirements. If you miss an assessment due to an unexcused absence, you will receive a "0" score.

Office Hours

I am available to talk about any materials related to the course. It is recommended that you take advantage of this time to ask me questions or get to know each other. If you cannot make it to any of these times, please reach out to me via email bru@chapman.edu.

- **Keck 278:** Tu/Th 5:00 PM - 5:50 PM
 - **Keck 230:** Wed 12:00 - 12:50 PM & 3:00 PM - 4:50 PM
 - **Virtual Location:** <https://chapman.zoom.us/j/6171772283>
 - **1-on-1 Appointment:** <https://calendar.app.google/FW88MisHfGUQSSXz5>
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Communication Expectations

I usually respond to emails within 24 hours from Monday to Friday. Saturday and Sunday emails might take longer than 24 hours to be answered. It is recommended that you ask questions on the Canvas discussion board for anything related to the course, so that other classmates can also help answer your questions.

Expectations

One of the best things about college is the opportunity to meet and work with people from diverse places, with diverse cultures, languages, beliefs, and values. Our classroom is a space where we are free to share ideas and welcome diversity. For effective learning, we must respect each other and refrain from using offensive language or making jokes that discriminate against an individual's gender, race, class, language, ethnicity, disability, religion, or sexual orientation. To this end, I also expect us to have a fun semester while we engage in academic conversations and learning.

Expect from me

- Be prepared.
- Provide you with constructive criticism.
- Respond to your messages within 24 to 48 hours.
- Be available to meet or speak with you online or in person upon request.
- Notify you when changes are made to the course.
- Treat you with respect.

Expect from you

- Be present and on time.
- Be prepared.
- Submit assignments on time.
- Take this course seriously by turning in quality work.
- Actively participate in class discussions.
- Treat me and others with respect.
- Communicate with me and ask any questions you may have.

Grading Scale

The course is graded on a **straight scale**. Therefore, collaborating with other students is advantageous in all aspects. The exception to this straight scale policy is if the overall class average at the end of the course is below 75%. In this case, I may apply a curve to raise the average. This is extremely unlikely. I will not apply a curve that lowers overall grades.

Grade	Score Range
A	100–93%
A-	92.99–90%
B+	89.99–87%
B	86.99–83%
B-	82.99–80%
C+	79.99–77%
C	76.99–73%
C-	72.99–70%
D+	69.99–67%
D	66.99–63%
D-	62.99–60%
F	60% and below

COURSE GRADING

Grading Breakdown

Each assignment is worth a certain number of points. Each point contributes to the overall grade for this course. At the end of the course, a letter grade will be given depending on the total number of points.

Assignment	Points
Lecture Questions	11 x 2 pts = 22 pts (MAX: 20 pts)
In-Class Engagement Questions	21 x 2 pts = 22 pts (MAX: 20 pts)
You're the Professor!	11 x 1 pts = 11 pts (MAX: 10 pts)
Quizzes	4 x 40 pts = 160 pts
Exams	3 x 90 pts = 270 pts
Final Exam	1 x 120 pts = 120 pts
Laboratory Grade	400 pts
Total	1000 pts

Regrade Policy

Requests for regrades must be submitted directly on Gradescope.

In your request, you are required to provide an explanation to why you are requesting a regrade. Failure to follow these guidelines may result in a rejected or missed regrade request. I also reserve the right to regrade the entire assignment, assessment, or exam. This may result in a higher grade, but it may also result in a lower grade.

UNIVERSITY POLICIES

Chapman University Academic Integrity Policy

Chapman University is a community of scholars that emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work and academic dishonesty of any kind will be subject to sanction by the instructor/administrator and referral to the university Academic Integrity Committee, which may impose additional sanctions including expulsion. Please review the full description of Chapman University's policy on Academic Integrity. Academic dishonesty can take several forms including, but not limited to the following:

Cheating: Using or attempting to use unauthorized assistance, information, or study aids in any academic exercise.

Facilitating Academic Dishonesty: Knowingly helping or attempting to help another to violate any provision of this policy.

Plagiarism: Representing the words, research findings or ideas of another person as your own in any academic exercise. At their discretion, faculty may submit student work to plagiarism-detection software, such as Turnitin for review without prior notice to students.

Chapman University's Anti-Discrimination Policy

Chapman University is committed to ensuring equality and valuing diversity, including of backgrounds, experiences and viewpoints. Students and professors are reminded to show respect at all times as outlined in Chapman's Harassment and Discrimination Policy. Please review the full description of the Harassment and Discrimination Policy. Any violations of this policy should be discussed with the professor, the Dean of Students and/or otherwise reported in accordance with this policy.

Chapman Considerations for Use of AI Tools

Within this class, you are welcome to use AI models (Gemini, Copilot, ChatGPT, etc) in a totally unrestricted fashion, for any purpose, at no penalty. However, you should note that all large language models still have a tendency to make up incorrect facts and fake citations, and image generation models can occasionally come up with highly offensive products. You will be responsible for any inaccurate, biased, offensive, or otherwise unethical content you submit regardless of whether it originally comes from you or a foundation model. Having said all these disclaimers, the use of foundation models is encouraged, as it may make it possible for you to submit assignments with higher quality, in less time. For more information, visit <https://www.chapman.edu/ai/>

Resources for Students Facing Financial Struggles

This page was created as a resource for students who are facing financial challenges. Resources include map for campus amenities, the laptop rental program, Chapman Food Pantry, and much more. For more information, visit <https://www.chapman.edu/admission/undergraduate/financing/financial-assistance-current-students.aspx>



Religious Accommodation at Chapman University

Consistent with our commitment of creating an academic community that is respectful of and welcoming to persons of all backgrounds, we believe that every reasonable effort should be made to allow members of the university community to fulfill their obligations to the university without jeopardizing the fulfillment of their sincerely held religious obligations. Please review the syllabus early in the semester and consult with your faculty member promptly regarding any possible conflicts with major religious holidays, being as specific as possible regarding when those holidays are scheduled in advance and where those holidays constitute the fulfillment of your sincerely held religious beliefs.



A Statement on Chapman University's Values

At Chapman University, we strive to make meaningful and lasting connections – with one another and with our broader community and world. We aim to cultivate a welcoming environment, helping every person feel valued and empowered to engage and contribute. Our community members are part of the Chapman Family, where relationships matter – and so do ideas. We strive for a vibrant intellectual community where different perspectives are sought and encouraged freely – to enable new thinking to emerge and interdisciplinary dots to be connected. Through these connections, we advance as individuals, as a campus, and as a society.



**Schmid College of
Science and Technology**

UNIVERSITY POLICIES

Chapman University Students w/ Disability Policy

In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to contact the Office of Disability Services. If you will need to utilize your approved accommodations in this class, please follow the proper notification procedure for informing your professor(s). This notification process must occur more than a week before any accommodation can be utilized.

Please contact Disability Services at (714) 516-4520 if you have questions regarding this procedure, or for information and to make an appointment to discuss and/or request potential accommodations based on documentation of your disability. Once formal approval of your need for an accommodation has been granted, you are encouraged to talk with your professor(s) about your accommodation options. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.

Chapman University Student Support

Chapman University's Student Psychological Counseling Services

Over the course of the semester, you may experience a range of challenges that interfere with your learning, such as problems with friend, family, and or significant other relationships; substance use; concerns about personal adequacy; feeling overwhelmed; or feeling sad or anxious without knowing why. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. You can learn more about the resources available through Chapman University's Student Psychological Counseling Services. For more information, visit [Chapman University's Student Psychological Counseling Services](#).

Chapman University Student Concern Intervention Team

Fostering a community of care that supports the success of students is essential to the values of Chapman University. Occasionally, you may come across a student whose personal behavior concerns or worries you, either for the student's well-being or yours. In these instances, you are encouraged to contact the Chapman University Student Concern Intervention Team who can respond to these concerns and offer assistance. While it is preferred that you include your contact information so this team can follow up with you, you can submit a report anonymously. 24-hour emergency help is also available through Public Safety at 714-997-6763. For more information, visit [Chapman University Student Concern Intervention Team](#).

You can also submit a student concern informational report on your own behalf or ask your instructor to submit a report for you. For more information, visit [Chapman University Student Outreach and Support](#). This will put you immediately in touch with the Dean of Students who can connect you with campus resources and communicate with your professors about accommodations or flexibility that is needed in your class(es).

BIOL 317 – Microbiology Schedule Fall 2025

Week	Topics	Assessments Thursdays	Lecture Activities Due: Sundays by 11:59 PM
Week 1 8/25-8/31	08/26 - Intro to Microbes 08/28 - Prokaryotes & Eukaryotes		1. Lecture Questions #1 2. You're the Professor! #1
Week 2 9/1-9/8	09/02 - Microbial Genetics I 09/04 - Quiz #1 & Microbial Genetics II	Quiz #1	1. Lecture Questions #2 2. You're the Professor! #2
Week 3 9/8-9/14	09/09 - Bacterial Genes Regulation 09/11 - Modern Applications of Microbial Genetics		1. Lecture Questions #3 2. You're the Professor! #3
Week 4 9/15-9/21	09/16 - CRISPR Technology & Ethics in Biology 09/18 - Exam #1	Exam #1	
Week 5 9/22-9/28	09/23 - Microbial Metabolism I 09/25 - Microbial Metabolism II		1. Lecture Questions #5 2. You're the Professor! #5
Week 6 9/29-10/5	09/30 - Microbial Growth & Control 10/02 - Quiz #2 & Antimicrobial Drugs: Antibiotics	Quiz #2	1. Lecture Questions #6 2. You're the Professor! #6
Week 7 10/6-10/12	10/07 - Antibiotic Resistant Infection 10/09 - Viruses & Vaccines		1. Lecture Questions #7 2. You're the Professor! #7
Week 8 10/13-10/19	10/14 - Viral Infections & Bacteriophages 10/16 - Exam #2	Exam #2	
Week 9 10/20-10/26	10/21 - Person-to-Person Microbial Diseases 10/23 - Innate Host Defenses I		1. Lecture Questions #9 2. You're the Professor! #9
Week 10 10/27-11/2	10/28 - Innate Host Defenses II 10/30 - Quiz #3 & Adaptive Host Defenses I	Quiz #3	1. Lecture Questions #10 2. You're the Professor! #10
Week 11 11/3-11/9	11/04 - Adaptive Host Defenses II 11/06 - Human Microbiomes & Allergies		1. Lecture Questions #11 2. You're the Professor! #11
Week 12 11/10-11/18	11/11 - Fungal Infectious Diseases 11/13 - Exam #3	Exam #3	
Week 13 11/17-11/23	11/18 - Parasitic Infectious Diseases 11/20 - Foodborne Microbial Diseases		1. Lecture Questions #14 2. You're the Professor! #14
Week 14 11/24-11/30	THANKSGIVING BREAK		
Week 15 12/1-12/7	12/02 - Waterborne Microbial Disease 12/04 - Quiz #4	Quiz #4	1. Lecture Questions #15 2. You're the Professor! #15
Final 12/8-12/14	FINAL EXAM: Tuesday, December 9, 2025, at 1:30 PM		