

MCELLBI C112 General Microbiology | 4 Units

Lectures

Lectures attendance is required, and students who have time conflicts with another course will not be allowed to enroll. If we are forced to change to remote learning due to COVID or fires, lectures will be held during the scheduled time on Zoom. Login information will be placed on the bCourses calendar.

Instructor

Professor Kathleen Ryan

GSIs

TBA

Course Description

This course will explore the molecular bases of structural, behavioral, and metabolic diversity among the Bacteria and Archaea. We will discuss cell organization and life cycles, metabolic capacities of individual species and communities, interactions among bacteria, plants, and animals, and the impact of bacteria upon the environment.

Course Communication

Announcements to the class and all other information will be distributed through bCourses, so check bCourses often or change your settings so that announcements are emailed to you automatically. You are expected to check for announcements daily. Lecture slides, assignments, practice problems, and answer keys will be posted in folders under the Files tab of bCourses.

Access to bCourses uses CalNet 2-step verification. You are responsible for being able to access bCourses, and you should be prepared if (for example) your phone is lost or stops working. To prevent sudden losses of access, we recommend that you print out backup passcodes. See <https://calnetweb.berkeley.edu/calnet-2-step/how-enroll-device> for help.

Attendance Expectations and Policy

You will be responsible for all material covered in lectures, much of which is not directly available in the textbook. Lecture attendance is a important factor in success in this course. I will be using iClicker questions to make lectures more interactive. This will help me understand what you know and give everyone a chance to practice problem-solving. It will also provide you with feedback on how well you are comprehending course concepts.

Lecture recordings will be released for viewing one week prior to the exam where the content is covered. If we are forced to change to remote learning due to COVID or fires, lectures will be held during the scheduled time on Zoom. Login information will be placed on the bCourses calendar.

Answering iClicker questions (usually 1-2 per lecture) will be counted toward your grade, but answers do not need to be correct. The purpose of iClicker questions is practice and learning. You are required to participate with the iClicker student app (no cost to students) on a smartphone, tablet, or laptop. It is your responsibility to follow the steps at the end of the

syllabus to be added to my iClicker course before the first meeting on Wednesday, August 23. It is also your responsibility to regularly check your iClicker records for any discrepancies and bring them to the attention of your GSI within 48 hours. **See the end of the syllabus for information on how to sign up for and use iClicker.**

Attendance at discussion sections will be monitored and will constitute a small fraction of your grade. GSIs will not deliver lectures that repeat material from class. Discussion sections will be used to learn critical reading skills, solve practice problems, and prepare for exams.

Recommended Textbook

Reading assignments on the Lecture Schedule refer to Microbiology, An Evolving Science, 6th edition, by Slonczewski, Foster, and Zinser; W.W. Norton. The readings provide an alternative presentation of material covered in lecture. You will not be tested on material that is only in the textbook. However, all material in the lectures is required, whether or not it is repeated in the textbook.

This ebook version can be purchased here: <https://www.norton.com/books/9781324033523>

For more information on ordering the textbook, please see the last page of the syllabus.

Exams, Attendance, and Grading Policy

Exams:

Midterm 1 (70 pts): Wed Oct 4, 105 minute evening exam, covers material Aug 23-Sep 25

Midterm 2 (70 pts): Wed Nov 1, 105 minute evening exam, covers material Sep 27-Oct 23

Final exam (140 pts): Mon Dec 11, 11:30 am-2:30 pm 50 points on material covered Oct 28-Dec 1, and 50 points of exam comprehensive, covering all parts of the class

Exam questions will be a mixture of short answer and short essay. For the short answer questions covering course material, you can expect to solve problems, design experiments, interpret hypothetical results, and explain what is known at the molecular level about various bacterial processes. These exam questions will be similar in format to practice questions and practice exams.

Part of each exam will also be in short essay format covering a research article that will be distributed one week in advance of the exam. You will be allowed to use any methods to read, understand, and discuss the article before the exam. At the exam, you will be given a fresh copy of the article, which you may use to answer the questions. These exam questions will be similar in type to questions that you will practice on in discussion sections.

You will not be allowed to use the textbook, notes, or any materials other than those we distribute to answer the exam questions.

If we are forced by COVID or fires to hold remote exams, the exam policy may change, and we will announce the new policy at that time.

Lecture attendance/participation

iClicker: (18 points total)

There are 40 scheduled lectures for the course. iClicker participation in each lecture will be worth ½ point, up to a maximum of 18 points. Therefore, you can miss 4 lectures this term with no direct effect on your grade.

Discussion attendance:

(10 points total)

There are 13 weeks in the semester with scheduled discussion meetings. Attendance will be recorded and counted toward your grade. Each discussion section will be worth 1 point, to a maximum of 10. Therefore, you can miss three sections this term with no direct effect on your grade. If in a particular week you have a conflict and need to attend a different discussion section, please alert one or both GSIs by email so that you receive appropriate credit.

Total points for class: 308

Extra credit will be awarded for completing one GSI and one Instructor course evaluation. Your evaluations will remain anonymous, and each one will be worth 3 points.

Grading Policy:

We do not grade on a curve, but use the following scale:

97% - 100%	A+
89% - 97%	A
85% - 88%	B+
76% - 84%	B
72% - 75%	C+
63% - 71%	C
59% - 62%	C-
54% - 58%	D+
50%-53%	D
0% - 49%	F

Every student in this class can earn a good grade. No individual grade will be affected by the number of other students earning that grade. You are not in competition with other students.

Academic Integrity

You are a member of an academic community at a leading research university. Universities like Berkeley create knowledge that has a lasting impact in the world of ideas and on the lives of others; such knowledge can come from an undergraduate paper as well as the lab of an internationally known professor. One of the most important values of an academic community is the balance between the free flow of ideas and the respect for the intellectual property of others. Researchers don't use one another's research without permission; scholars and students always use proper citations in papers; professors may not circulate or publish student papers without the writer's permission; and students may not circulate or post materials (handouts, exams, syllabi--any class materials) from their classes without the written permission of the instructor. I own the copyright to all course materials that I have created. Therefore it is unethical for you to distribute them to Course Hero or any other website.

Any test, paper or report submitted by you and that bears your name is presumed to be your own original work, which was not generated by AI, and that has not previously been submitted for credit in another course unless you obtain prior written approval to do so from your instructor. In all of your work, you may use words or ideas written by other individuals in publications, web sites, or other sources, but only with proper attribution.

Any evidence of cheating or plagiarism will result in a score of zero (0) on that exam or assignment. In addition, cheating on the final exam results in an "F" for the course. Cheating includes but is not limited to using prohibited sources of information during an exam, having any contact with other students during an exam, providing answers or help to another student during an exam, having someone take an exam in your place, copying directly from published materials without proper citation, or submitting substantively the same work as another student. Suspected incidences of cheating will be reported to Center for Student Conduct.

If you are not clear about the expectations for completing an assignment or taking an exam, it is YOUR RESPONSIBILITY to seek clarification from the instructor or GSIs beforehand. Asserting that you didn't know the rules is not an excuse for the unethical behaviors described above.

Accommodations

The purpose of accommodations is to ensure that all students have a fair chance at academic success. Disability, or hardships such as basic needs insecurity, uncertain documentation and immigration status, medical and mental health concerns, pregnancy and parenting, significant familial distress, and experiencing sexual violence or harassment, can affect a student's ability to satisfy particular course requirements. Students who need academic accommodations should request them from the Disabled Students' Program (DSP), 260 César Chávez Center, 642-0518 (voice or TTY), <https://dsp.berkeley.edu>.

DSP is the campus office responsible for verifying disability-related need for academic accommodations, assessing that need, and for planning accommodations in cooperation with students and instructors as needed and consistent with course requirements. We are committed to fully supporting our students with disabilities, including meeting accommodations listed in a DSP letter. For more information about accommodations and scheduling conflicts related to religious creed or extracurricular activities, please see the Academic Accommodations hub: <https://evcp.berkeley.edu/programs-resources/academic-accommodationshub#accommodations> (link is external). This website also provides a range of helpful campus resources.

Safe, Supportive, and Inclusive Environment

Whenever a faculty member, staff member, post-doc, or GSI is responsible for the supervision of a student, a personal relationship between them of a romantic or sexual nature, even if consensual, is against university policy. Although faculty and staff can act as excellent resources for students, you should be aware that they are required to report any violations of this campus policy. If you wish to have a confidential discussion on matters related to this policy, you may contact the Confidential Care Advocates on campus for support related to counseling or sensitive issues. Appointments can be made by calling (510) 642-1988.

The classroom, lab, and work place should be safe and inclusive environments for everyone. The Office for the Prevention of Harassment and Discrimination (OPHD) is responsible for ensuring the University provides an environment for faculty, staff and students that is free from discrimination and harassment on the basis of categories including race, color, national origin, age, sex, gender, gender identity, and sexual orientation. If you have questions or concerns, call (510) 643-7985, email ask_ophd@berkeley.edu, or go to <http://survivorsupport.berkeley.edu/>.

Diversity statement

The University of California considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Our community is enriched and enhanced by diversity along a number of dimensions, including race, ethnicity, national origins, gender,

sexuality, class and religion. We welcome all our students in class and hope that you always feel included. If there are aspects of the instruction within this course that result in barriers to your inclusion, please let us know. Your suggestions are encouraged and appreciated.

Mental Health and Wellness

All students – regardless of background or identity – may experience a range of issues that can become barriers to learning. These issues include, but are not limited to, strained relationships, anxiety, depression, alcohol and other drug problems, difficulties with concentration, sleep, and eating, and/or lack of motivation. Such mental health concerns can diminish both academic performance and the capacity to participate in daily activities. If you need mental health support or are concerned about a friend, UC Berkeley offers many services, such as free short-term counseling at University Health Services. A list of resources can be found here:

<https://uhs.berkeley.edu/sites/default/files/mhresources.pdf>

A campus website having links to many resources is: <https://recalibrate.berkeley.edu/>

Remember that seeking help is a good and courageous thing to do.

Services for Students Encountering Food and Housing Insecurity

If you are in a situation where you are facing challenges in gaining access to nutritious, affordable food during the semester, you can find help by going to the UC Berkeley basic needs program at <http://basicneeds.berkeley.edu/> or the UC Berkeley Food Pantry at <https://pantry.berkeley.edu/>. You may be eligible for the CalFresh program as well.

Instructions for using iClicker:

I have set up an iClicker integration with bCourses, which will pull your name directly into the iClicker roster.

- 1. If you have an existing iClicker student account that uses an official UC Berkeley email address (@berkeley.edu) and/or your UID, you will automatically be added to the iClicker course.**
 - If the iClicker system does not find a matching iClicker student account, you will receive an email from iClicker Support with instructions to [update your existing account's profile](#) or [create a new account](#).
 - Please note that this email may appear in your Spam or Junk folders.
- 2. If you receive an email prompting you to create or update your iClicker student account, make sure you include the correct account information.**
 - If you already have an iClicker account, do **not** create a new account. Instead, log in and edit your existing account's profile to avoid confusion and potential loss of points due to multiple accounts.
 - Ensure that your iClicker profile includes the following information:
 - Your official UC Berkeley email address (@berkeley.edu)
 - Your UID, and not your SID/student ID (You can find your UID in your CalCentral profile or if you look yourself up the campus directory, <https://www.berkeley.edu/directory>)
- 3. Make sure PMB/MCB C112L General Microbiology is in your Courses list in iClicker.**
 - If you do not see it in your Courses list, use the + sign to search for it in iClicker. In the "Find Your Institution" field, enter University of California Berkeley.

- In the “Find Your Course” field, enter **General Microbiology**
- Double-check the details you see to make sure you select this course:
 - § Course name: PMB/MCB C112L General Microbiology
 - § Instructor: Kathleen Ryan
- Course meeting times: MWF 11 am-12 pm
- Select “Add This Course” and it will be added to the main Courses screen of iClicker.

4. Do NOT pay for an iClicker subscription.

- UC Berkeley has an iClicker site license and all student costs are waived as long as you have indicated that your institution is University of California Berkeley. (*If* you are prompted to pay for a subscription or enter an access code, and you are sure that your institution is listed correctly, send email to studentresponse@berkeley.edu with a screenshot of the page/screen asking you to pay for a subscription.)

5. Set up the device(s) you'll use to participate in our class sessions.

- You can download the iClicker student mobile app via the App Store or Google Play, or you can use the iClicker web app by signing in as a student at iclicker.com.
 - [For in-person classes]: Connect to our classroom's Wi-Fi:
The wireless network you should use in our classroom is EduRoam. You'll want to be sure to set up Eduroam as your Wi-Fi connection (and remove AirBears). Watch this short video for help. If you are new to campus, be sure to enter [\[YourCalNetID\]@berkeley.edu](mailto:[YourCalNetID]@berkeley.edu) as your username.
 - If you do not have a personal device you are comfortable bringing to class, you can check one out for the Fall 2022 semester via the STEP Program, or for a couple of weeks at a time from the Library Technology Lending program. See the [Student Technology Services Device Lending Program page](#).

6. Participate in iClicker class activities.

- When it's time for class, make sure you have selected this course from the main screen of iClicker.
- Select the **Join** button that appears on your screen, then answer each question I ask in iClicker.
- For short answer, numeric, and target questions, make sure you select **Send**.
- I have turned on a GPS location requirement for iClicker in Gen Micro. If you are not physically in class when you try to join with iClicker, you will not be counted as present, and you will not be able to respond to polling questions.
 - You will need to allow the device you are using to reveal your location in order to check in successfully.
 - If you have issues with your device's location settings, refer to the [Attendance Geolocation Troubleshooting Guide](#).
- If we are forced to have class remotely, I will still use iClicker for attendance (though not in GPS mode) and participation. The educational technology folks recommend that if you have multiple devices, you should access the class using your computer and use your mobile device for iClicker questions. If you have only one device,

open a new browser tab for the iClicker student web app, or switch back and forth between the virtual class and the iClicker student mobile app.

7. Keep track of your participation score in iClicker.

You will earn 0.5 points for each lecture where you participate in the poll/s. If you see a mistake, contact the instructor within 48 hours.

Academic Integrity Information iClicker activities fall under the provisions of our campus academic honesty policy. Students must not engage in academic dishonesty while participating in iClicker activities. This includes but is not limited to:

- Checking in/answering polling questions while not physically in class
- Having another student check you into class/answer polling questions on your behalf
- Using more than one iClicker account at a time

Any student found to be in violation of these rules will lose their iClicker points for the entire term and may be reported to the Center for Student Conduct.

Need help with the iClicker student app?

- If you are having issues connecting to the iClicker student app, check out these [iClicker connectivity tips](#).
- If you are having issues seeing your iClicker points, check out this [troubleshooting guide](#). Find answers to many of your questions and contact the iClicker Tech Support Team by visiting iclicker.com/support at any time.