

BI 234 — MICROBIOLOGY!

LBCC, Fall 2021

4 credits, CRN: 20143, 21269

Instructor: Gail Miriam Moraru, Ph.D.

Office: WOH 219

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I expect you to use this frequently! We are meeting in person for labs, but that's only twice a week, so reaching me throughout the week is best via email. I am at my computer typically ~10am-3pm, except when in labs on Wednesday, Thursday, and Friday (but I'll check in between labs).

Study hours: Zoom, **Tuesdays TBD**

Class time: asynchronous lecture material throughout the week

labs in person, LIVE in IA 235, either WF 11:00 a.m.–12:20 p.m. (CRN 20143)

OR WF 1:00–2:20 p.m.(CRN 21269)

masks required!

My commitment to diversity and inclusion:

It is my goal to make our classes safe and respectful learning environments for everyone. Part of that is making everyone feel welcome, regardless of their background. The diversity of people in our class is an asset to our pursuit of scientific understanding. I broadly define diversity to include race, gender identity, national origin, ethnicity, religion, social class, age, sexual orientation, political background, and physical and learning ability. Please let me know if/how I can help you feel more welcome and supported in our class.

Materials (required):

- access to Moodle course online
- [textbook](#) (available for free!)

Course outcomes:

Upon successful completion of this course, students will be able to:

1. Distinguish between microorganisms and their characteristics.
2. Relate how metabolism and genetics contribute to the diversity of microorganisms.
3. Safely and effectively perform some fundamental techniques used in a microbiology laboratory.
4. Describe the important role of microorganisms in ecosystems.
5. Explain the dynamics of infectious diseases at the individual and population levels.

Nature of course content and topics covered: This is an introductory lecture/laboratory course to the wonders of microbial life. This course explores how microbes are structured and how they function in terms of metabolism, genetics, and population growth. We will use this information to better understand microbes' roles on this planet, both in sustaining life and in causing diseases.

Method of evaluation:

Assignments	40 pts
Forum/participation	10 pts
Lab exercises	36 pts
Quizzes	80 pts (15 points lecture quizzes, 10 points lab quizzes)
Exams	60 pts
Final Exam	100 pts
TOTAL	326 pts

note: distribution of points is approximate and may be slightly modified

Grading: A= 90–100%, B= 80–89%, C= 70–79%, D= 60–69%, F= 0–59%

Assignments: You will have weekly online (Moodle) assignments. These will need to be turned in on the assigned due date (shown on syllabus calendar).

Labs: Labs are a critical component for the learning processes in any science class. These will be due Sundays by 11:55pm on Moodle, unless otherwise noted. You'll attend lab on Wednesday AND Friday at the time you signed up for (your CRN). I recommend answering questions pertaining to lab in between labs (after Wednesday's and before Friday's) so that you have time when in lab to interact with the lab setup rather than worry about completing the lab questions. You can complete up to 2 labs remotely. **Masks will be required in labs**, as per the current Oregon Health Authority. This is a good chance to practice exactly what part of this class is about and what many of you are aiming to do as a career. Let's take care of each other!

Quizzes: Quizzes will be given throughout the term to assess how you are doing before we get to an exam. These will be online and timed (20min for lecture quizzes, 15min for lab quizzes).

Exams: There will be two exams during the course of the term and one partially comprehensive final exam. Exam dates are listed in the class schedule (last page of the syllabus). These will be online and timed (1hr for exams, 2hrs for final exam).

Study skills: Daily, you should be reading, practicing, critically thinking on what you learn, discussing the information with your classmates and friends, exploring the material with outside sources, and maybe even drawing, writing, singing, acting out, dancing, or any other means of helping yourself understand and remember the material that you may find works for you. Not every study method works for everyone. If you need help with study methods, please come

speak with me, and I will give some suggestions and examples (probably not of a singing method).

The Learning Center, Academic Coaching (<https://sites.google.com/linnbenton.edu/academic-coaching/>), the Writing Center, and Math Cafe are all great resources here at LBCC. Please speak with me if you want more information about these.

Policies

Attendance: You are college students, and a part of your college experience is determining how you learn best. This course will cover a lot of ground very quickly and the exams will draw from all class material: readings, lectures, labs, and classroom (forum) discussion. Participating in forums or in lab discussions is a good way to get thinking about the material and is part of your grade (forums) as well.

Classroom etiquette: Act like adults. Do not disrupt class. Respect others' desire to learn. I reserve the right to ask you to leave the classroom.

Late assignments/quizzes/labs are not accepted. Please turn in assignments and labs on time and fully complete. This means that your assignment needs to be ready on the due date.

Accommodations: Students who may need accommodations due to documented disabilities, who have medical information which the instructor should know, or who need special arrangements in an emergency should speak with their instructor during the first week of class. If you believe you may need accommodations but are not yet registered with the Center for Accessibility Resources (CFAR), please visit the [CFAR Website](#) for steps on how to apply for services or call (541) 917-4789.

Statement of inclusion: To promote academic excellence and learning environments that encourage multiple perspectives and the free exchange of ideas, all courses at LBCC will provide students the opportunity to interact with values, opinions, and/or beliefs different than their own in safe, positive, and nurturing learning environments. LBCC is committed to producing culturally literate individuals capable of interacting, collaborating, and problem-solving in an ever-changing community and diverse workforce.

To that end, if a pattern of disrespect develops, I reserve the right to discuss appropriate behavioral expectations with individuals who may not fully understand this responsibility. At no time will a hostile or condescending classroom environment or discussion be permitted.

Academic dishonesty: Please note that I take issues of academic and personal honesty very seriously. You are to treat assessments (quizzes and exams) like you would in an in-person class: *no notes*. Study as you would for an assessment in-person. **Any discovery of academic dishonesty will result in a grade of zero for the assessment and notification to the Dean** of our Division for further consequences.

"Today I am going to give you two examinations: one in trigonometry and one in honesty. I hope you will pass them both, but if you must fail one, let it be trigonometry."

-- Madison Sarratt (Vanderbilt University)

Incomplete grade: An incomplete (IN) grade will only be considered if a student has talked to me in advance and a signed agreement between the student and me is completed. IN grades are assigned only if the student has a good reason for making the request, has only a minor amount of coursework to complete, and has scored a C or better on work that has already been submitted.

Title IX: If you or another student are the victim of any form of sexual misconduct (including dating/domestic violence, stalking, sexual harassment) or any form of gender discrimination, LBCC can assist you. You can report a violation of our sexual misconduct policy directly to our Title IX Coordinator. You may also report the issue to a faculty member who is required to notify the Coordinator. You may additionally (or instead) make an appointment to speak confidentially to our Advising and Career Center by calling 541-917-4780.

Campus Police/Emergency Resources: You may review emergency services and resources at the LBCC Public Safety website. Campus Safety can be reached using the “code 2” button on any campus phone or by dialing x411 on campus or 541-917-4440 off campus. Dial 911 for off campus emergencies.

Basic Needs: Any student who has difficulty affording groceries or food, or who lacks a safe and stable place to live, is urged to contact a Student Resource Navigator in the Single Stop Office (T-112): Amanda Stanley, stanlea@linnbenton.edu, 541-917-4877. The navigator can connect students to resources.

I reserve the right to change the contents of this syllabus and schedule due to unforeseen circumstances. You will be given notice of relevant changes in class, on your online syllabus, or via email.

	Monday	Wednesday	Friday	Sunday
Week 1	9/27 Introduction, history	9/29 Diversity of microorganisms	10/1 Structure, function	10/3 assignment 1;
	Lab: Lab safety and microscopy			lab due
Week 2	10/4 Structure, function quiz 1 due	10/6 worksheet	10/8 Microbial metabolism	10/10 assignment 2;
	Lab: Taking a look at cells			lab due
Week 3	10/11 Microbial metabolism lab quiz 1 due	10/13 Microbial metabolism	10/15 Microbial genetics	10/17 assignment 3;
	Lab: Sampling microbes from the environment			lab due
Week 4	10/18 Microbial genetics exam 1 due	10/20 Microbial genetics	10/22 worksheet	10/24 assignment 4;
	Lab: Identifying microbes			lab due
Week 5	10/25 Microbial growth quiz 2 due	10/27 Microbial growth	10/29 Microbial growth	10/31 assignment 5
	Lab: Metabolic tests			lab due
Week 6	11/1 Microbial ecology	11/3 Microbial ecology	11/5 Microbial ecology	11/7
	Lab: Chemical control			lab due
Week 7	11/8 Infectious diseases exam 2 due	11/10 Infectious diseases	11/12 Infectious diseases	11/14 assignment 6;
	Lab: Physical control			lab due
Week 8	11/15 Infectious diseases: viruses quiz 3 due	11/17 Infectious diseases: viruses	11/19 Infectious diseases: bacteria	11/21 assignment 7;
	Lab: Microbiota			lab due
Week 9	11/22 Infectious diseases: parasites lab quiz 2 due	11/24 no lab	11/26 holiday	11/28 assignment 8 no lab due
Week 10	11/29 Immunity, treatment	12/1 Immunity, treatment	12/3 review	12/5
	Lab: Parasites & fungi			lab due

Final exam will be on Moodle December 6.

Note: Dates and topics are subject to change based on how we advance in the course.