

BI 234 Microbiology Syllabus

4 credits, CRN: 40085, 40086

SPRING 2019

Instructor: Dr. Gail M. Moraru

email: morarug@linnbenton.edu

Class time: IA 212, MWF 11:00–11:50 a.m.

Labs: IA 235, WF 10:00–10:50 a.m. **OR** WF 1:00–1:50 p.m.

Office Hours: WOH 219, **M 1:00–3:00 p.m., TR 2:00–3:00 p.m.**, or by appointment

Materials:

1. BI 234 lab manual, available at the campus store
2. access to Moodle course and readings online

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 covering all microbial life, with emphasis on bacterial forms. This course covers cell structure, metabolism, genetics, growth, and control of growth. We will investigate host-pathogen relationships that lead to disease and health. We will also include a brief introduction of biotechnology, viruses, parasites, and immunology.

Method of evaluation:

Assignments	90 pts
Lab exercises	50 pts
Quizzes	40 pts (10 pts per quiz)
Exams	150 pts (75 pts per exam)
Final Exam	120 pts
TOTAL	450 pts

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 need to be turned in on the assigned due date (shown on syllabus calendar). I do not accept late assignments.

Lab: Labs are a critical component for the learning processes in any science class. They provide hands-on experience requiring students to make critical thinking decisions that may influence the outcome of the lab. It is important you attend labs as you will often work with a partner and experiments will frequently carry over from one lab period to the next. You will have exercises to complete in lab; these are due Friday (no late labs accepted), unless otherwise noted. You cannot earn full points on a lab if you are not present for both lab periods that week; however, I will drop your lowest lab grade at the end of the term.

Quizzes: Quizzes will be given throughout the term to assess how you are doing before we get to an exam. These will be given at the beginning of class, so if you arrive late you will have less time to complete them.

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). If I am notified in advance that you cannot make it to an exam because of an unforeseen emergency, you will be given a makeup exam. Note, however, that a makeup exam cannot be given once exams have been handed back.

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 (second floor of Willamette Hall) and Writing Center are also 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. I do not require attendance, but that means it is up to you to decide what is in your best interest. This course will cover a lot of ground very quickly and the exams will draw from all class material: readings, lectures, and classroom discussion. Participating in discussions in class is a good way to get thinking about the material and is part of your grade 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 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 that the instructor should know, or who need special arrangements in an emergency should speak with me during the first week of class. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR website at www.linnbenton.edu/cfar 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. Any discovery of academic dishonesty will result in a grade of zero for the assignment and possible recommendation to the administration for further consequences.

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.

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

Tentative schedule

	Monday	Wednesday	Friday	Sunday
Week 1	4/1 no class	4/3 Introduction, history	4/5 Diversity of microorganisms	4/7 assignment 1
		LAB: Safety, microscopy	LAB: Microscopy	
Week 2	4/8 Structure, function	4/10 Structure, function	4/12 Structure, function	4/14 assignment 2
		LAB: Motility	LAB: Motility	
Week 3	4/15 quiz 1 Microbial metabolism	4/17 Microbial metabolism	4/19 Microbial metabolism	4/21 assignment 3
		LAB: Isolating, staining	LAB: Isolating, staining	
Week 4	4/22 exam 1	4/24 Microbial genetics	4/26 Microbial genetics	4/28 assignment 4
		LAB: Temp & oxygen	LAB: Temp & oxygen	
Week 5	4/29 Microbial genetics	5/1 quiz 2 Microbial growth	5/3 Microbial growth	5/5 assignment 5
		LAB: Metabolism	LAB: Metabolism	
Week 6	5/6 Microbial growth	5/8 Microbial ecology	5/10 exam 2	5/12 assignment 6
		LAB: Chem control	LAB: Chem control	
Week 7	5/13 Infectious diseases	5/15 Infectious diseases	5/17 Infectious diseases	5/19 assignment 7
		LAB: Physical control	LAB: Physical control	
Week 8	5/20 quiz 3 Infectious diseases: viruses	5/22 Infectious diseases: viruses	5/24 Infectious diseases: bacteria	5/26
		LAB: Normal flora	LAB: Normal flora	
Week 9	5/27 no class	5/29 Infectious diseases: parasites	5/31 quiz 4 Immunity, treatment	6/2 assignment 8
		LAB: Viruses	LAB: Viruses	
Week 10	6/3 Immunity, treatment	6/5 Immunity, treatment	6/7 Review	6/9 assignment 9
		LAB: Parasites	LAB: Fungi	

Final exam is June 12 from 10:00 to 11:50 a.m.

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