

MB 302 – General Microbiology

Instructor: Dr. Kimberly Halsey

Contact Info: halseyk@science.oregonstate.edu - 541-737-1831, Nash 354

Office Hours: Tuesdays at 10:00 and Thursdays at 1:00 or by appointment. Also available immediately after lecture MWF (for less involved questions)

Lecture: MWF 9:00-9:50 am (224 Gilbert Hall)

Course pre-requisites: CH 331/332 and BI 21X series

Text: Prescott's *Microbiology* by Willey, Sherwood, Woolverton, 11th edition. Copies are on reserve in the library and may be checked out for 3-hour increments.

Lectures: Slides will be available via Canvas – expect to take notes in this class.

PART 1: Friday, Sept 20 through Monday, Oct 14

Lecture subject	Associated reading (Chapter: Sections or pages)
Class Information, Introduction to Microbiology	1: All
Microscopy	2: All
<i>Bacteria & Archaea</i> : Introduction; Cell Envelopes	3: 40-47, Section 3.5, 4: 77-82
<i>Bacteria & Archaea</i> : Cell Walls	3: Section 3.4
<i>Bacteria & Archaea</i> : Cell Components	3: Section 3.6, 4: Section 4.3
Review sessions to be scheduled Thurs &/or Fri prior to Midterm	
Midterm 1: Monday, Oct 14	

PART 2: Wednesday, Oct 16 through Wednesday, Nov 13

Lecture subject	Associated reading (Chapter: Sections or pages)
<i>Bacteria & Archaea</i> : External Structures	3: Section 3.7 and 3.8, 4: Section 4.4
Viruses	6: Sections 6.1-6.4, 26: All (selected)
Microbial Growth	7: Sections 7.1-7.4, 7.6-7.9
Environmental factors	7: Section 7.5
Nutrition	3: 47-50, 11: Section 11.1, 11.2, 11.10
Microbial Metabolism	10: All
Review sessions to be scheduled Fri &/or Tues prior to Midterm	
Midterm 2: Wednesday, Nov 13	

PART 3: Friday Nov 15 through Friday, Dec 6

Lecture subject	Associated reading (Chapter: Sections or pages)
Respiration & Fermentation	11: Sections 11.2-11.9
Phototrophy	11: Section 11.12
The <i>Bacteria</i>	Selected sections of Chapters 19-23
The <i>Archaea</i>	

Final Exam:– Dec 10 Gilbert 224, 6:00 -7:50 pm

GRADING: Homework (6 of 7 x 20 points per assignment)	120 pts
Midterm I (Monday, Oct 14)	100 pts
Midterm II (Wednesday, Nov 13)	100 pts
Final Exam (Tuesday, Dec 10, 6:00-7:50 pm)	150 pts
TOTAL	470 pts

Homework:

- Homework will be given each week that does not also have an exam upcoming. The top six scores of the seven homework assignments will be used to calculate final grades.

Number	Assigned (CANVAS)	Due to be handed in (in class)
HW1	Wednesday, Sept 25	Monday, Sept 30
HW2	Wednesday, Oct 2	Monday, Oct 7
HW3	Wednesday, Oct 16	Monday, Oct 21
HW4	Wednesday, Oct 23	Monday, Oct 28
HW5	Wednesday, Oct 30	Monday, Nov 4
HW6	Wednesday, Nov 6	Tuesday, Nov 12
HW7	Wednesday, Nov 20	Monday, Nov 25

Exams: Each midterm is worth 100 pts. The final is worth 150 pts and is **~1/3 cumulative**. Keep in mind that many terms/concepts carry through the entire course. Final grades are curved at instructor discretion. Scores are totaled at the end of the term and curved. Experience shows that scores *typically* distribute as follows, but keep in mind that this term could result in slightly different distributions.

≥ 85% A- and A
 75 – 84.5% B-, B, B+
 65 – 74.5% C-, C, C+
 55 – 64.5% D-, D, D+
 <54.5% F

MB 302 Course Policies

- **No use of any electronic devices during exams**
- **The instructor reserves the right to assign seats, either for individual students or for the class as a whole, as deemed necessary during lecture or exams.**

HOW TO SUCCEED IN THIS COURSE:

1. Attend class, be on time, and stay the entire period.
2. Be organized. Keep track of when homework and exams are scheduled.
3. Read assignments before class.
4. In the 5-10 minutes before class, skim the previous day's notes to put you in the proper mindset. This will also help with in-class questions.
5. Listen during class and take notes. Expect that information will be given in lecture that is **not** printed on powerpoint slides.
6. After class re-read the text to fill in any gaps in your understanding.
7. Expect a fair degree of memorization. Microbiology is a discipline with it's own language.
8. Before the exams, review/rewrite notes. Practice redrawing cycles, tables, and equations. Do not wait until the night before to cram for these exams.

STUDENT OUTCOMES FOR THE COURSE:

1. Retain specialized language relevant to microbiology.
2. Acquire an understanding of the fundamental concepts of microbiology including a detailed understanding of bacterial and archaean structures and physical characteristics and how they relate to cell capabilities.
3. Acquire a detailed understanding of metabolic diversity found in *Bacteria & Archaea*, and how these organisms derive energy, electrons, and carbon from their environment.
4. Acquire an understanding of the fundamental concepts associated with viruses including a basic understanding of viral classification and replication.
5. Demonstrate an appreciation of the diversity of microorganisms, using specific examples.
6. Evaluate the benefits and detriments caused by microorganisms.
7. Demonstrate the ability to analyze and compare microbiological problems.

Statement Regarding Students with Disabilities: Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Student Conduct Expectations link: <http://studentlife.oregonstate.edu/code>

Reach Out for Success: University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about resources that assist with wellness and academic success at oregonstate.edu/ReachOut. If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255).