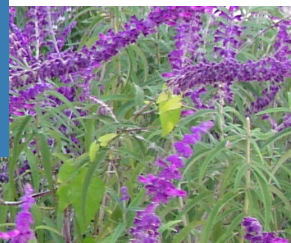


# Biology 2305: Microbiology for Health Science Majors



## UNM Valencia Campus

**Semester:** Spring

**Year:** 2020

**CRN #:** 50384 Section 501. Mondays & Wednesdays 9:00-10:15 in HS 101.

**Credits:** 4 credit hours

**Course Description:** This course is an introduction to microbiology for the Health Science major. It will focus on principles of infection and immunity.

**Instructor:** Dr. Ben Flicker

**Contact Information:** My office is HS 100B. My phone number on campus is 505-925-8726. My email address is benflicker@unm.edu. Email is the best way to contact me.

**Office hours:** Mondays 1:00-2:30, Tuesdays 10:30-12:30, Wednesdays 1:30-2:30, Thursdays 1:00-2:00, or by appointment.

**Textbook: Lecture:** *Nester's Microbiology: A Human Perspective*. Anderson, Denise; S, Allen, D, Nester E. 2019. 9th Edition. McGraw Hill Education, New York, NY.

**UNM Learn:** Course materials will be posted on the course website (<https://learn.unm.edu>) This includes the syllabus, all assignments and announcements, as well as links to email the instructor and other students in the course. You are responsible for all such communication on the learn course page, so please check regularly.

### Student Learning Objectives:

- 1.) Students will be able to compare and contrast various microbes with regards to infections, treatment and control.
- 2.) Students will be able to perform basic microbiology lab skills.
- 3.) Students will be able to describe genetic principles of bacteria.

4.) Students will be able to apply the proper methods of microbial control necessary in sample scenarios.

5.)( Students will be able to describe the role of the immune system in maintaining homeostasis and challenging infections.

**Attendance: Attendance is Required for all classes.** Students are responsible for getting information presented in any class missed. Students may be dropped from the class after 4 absences. Excessive tardiness (greater than 10 minutes) will be counted as an absence. Quizzes and Exams will begin promptly at the beginning of the period. **Arriving late for a quiz or exam could result in a score of zero.**

**Withdrawal:** If you drop the course after the drop deadline, you will receive a grade of 'W'.

**Title IX:** In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the department of Education (see pg 15 - <http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf>). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct, and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX coordinator at the Office of Equal Opportunity ([Oeo.unm.edu](http://Oeo.unm.edu)) For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>

**Citizenship and/or Immigration Status:** All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community. The Administration's welcome is found on our website: <http://undocumented.unm.edu/>.

**Missed exam/quiz policy:** Only official documentation of a medical or family emergency will excuse a missed exam or quiz. In such an instance please

contact me as soon as possible to arrange a potential make-up. Un-excused absences on an exam/ quiz date will result in a grade of zero for the assessment.

**Students with disabilities:** Qualified Students with disabilities should see me or the campus testing center as soon as possible so we can meet your needs suitably and quickly.

**Homework:** Weekly homework will be given out to reinforce class topics and to prepare you for in-class quizzes and exams.

**Class Participation:** Class participation; both in whole-class discussions and group work are essential to this course. As such, 100 of your points possible in the course will come from class participation. These points will be allotted based on: Regular attendance, being engaged in classwork, actively taking notes in class, and completion of group activities.

**Exams:** 4 exams will be given. The first 3 will be worth 100 points each. The final exam will be cumulative, comprised of new material covered since the third midterm as well as all previous material. The final exam will be worth 150 points.

**Quizzes:** 10 quizzes will be given during the semester. There will be one after each chapter we complete. They will be designed as exam prep, to prepare you for the types of questions on the forthcoming exams. These are worth 10 points each, with the lowest quiz score being dropped.

**Course Grading Policy:** Lecture grades will be based on the percentage of points earned (100% or higher = A+, 99-91% = A, 90% = A-, 88-89% = B+, 87-81% = B, 80% = B-, 79-78% = C+, 77-71% = C, 70% = C-, 69-68% = D+, 67-61% = D, 60% = D-, < 60% = F)

- 110 points: Chapter problem sets (11 assignments @ 10 points each)
- 100 points: In class activities/class participation/attendance
- 90 points: Quizzes (9 assignments @ 10 points each)
- 300 points: Exams (3 exams @ 100 points each)
- 150 points: Cumulative final exam
- 250 points: Lab Activities & Participation
- = 1000 Total points

Week	Subjects covered	Homework/ Quizzes
1/22/20	Course Introduction & Microbe Diversity	Ch. 1 Hwk.
1/27/20	Chapter 3: Microscopy and Cell Structure	Ch. 3 Hwk.
1/29/20	Chapter 3 part 2	
2/03/20	Chapter 11: Diversity of Bacteria and Archaea	Ch. 3 Quiz
2/05/20	Chapter 11 part 2	Ch. 11 Hwk.
2/10/20	Chapter 4: Dynamics of Microbial Growth	Ch. 11 Quiz
2/12/20	Chapter 4 part 2	Ch. 4 Hwk.
2/17/20	Exam Review	Ch. 4 Quiz
2/19/20	Exam 1	
2/24/20	Chapter 6: Microbial Metabolism	Ch. 6 Hwk.
2/26/20	Chapter 6 part 2	

3/02/20	Chapter 8: Microbial Genetics	Ch. 6 Quiz
3/04/20	Chapter 8 part 2	Ch. 8 Hwk.
3/09/20	Chapter 5 Control of Microbial Growth	Ch. 8 Quiz
3/11/20	Chapter 5 part 2	Ch. 5 Hwk.
3/16/20	Spring Break: No Class	
3/18/20	Spring Break!	
3/23/20	Exam Review	Ch. 5 Quiz
3/25/20	Exam 2	
3/30/20	Chapter 14: The Innate Immune Response	Ch. 14 Hwk.
4/01/20	Chapter 14 part2	
4/06/20	Chapter 15: The Adaptive Immune Response	Ch. 14 Quiz
4/08/20	Chapter 15 part 2	Ch. 15 Hwk.
4/13/20	Chapter 16: Host-Microbe Interactions	Ch. 15 Quiz
4/15/20	Chapter 16 part 2	Ch. 16 Hwk.
4/20/20	Exam Review	Ch. 16 Quiz
4/22/20	Exam 3	
4/27/20	Chapter 10: Identifying and Classifying Microorganisms	Ch. 10 Hwk.
4/29/20	Chapter 10 part 2	
5/04/20	Chapter 13: Viruses, Viroids, and Prions	Ch. 10 Quiz
5/06/20	Lecture Review	
5/11/2020	<b>Cumulative Final Exam (9:00-11:00)</b>	

# Laboratory Portion

**Meeting Time:** Wednesdays, 10:30-1:15 in HS

**Lab Manual:** *Microbiology: Laboratory Theory and Application* Brief Third Edition Michael J. Leboffe & B.E. Pierce, 2016. Morton Publishing.

## Lab Policies:

- 1.) Attendance is **Required**. These are practical, hands-on activities and cannot be made up.
- 2.) No food, drink or chewing gum is allowed in the lab.
- 3.) You must wear a lab coat or apron during lab.
- 4.) Wash your hands before leaving the lab for the day.
- 5.) If you have long hair you must tie it back.

**Lab Reports:** For each separate lab, a lab report will be assigned. These will be due the dates of the following exams (3/11 & 5/6 ). Seven total lab reports will be assigned, with each report worth 15 points.

**Quizzes:** Six quizzes will be given over the semester. These will be given at the beginning of class and cover the previous lab as well as the lab activity that day. Each quiz will be worth five points with the lowest quiz score dropped.

**Exams:** Two exams will be given in lab. A midterm exam will take place on March 11th and the final exam will take place on May 6th. Each exam will be worth 50 points and contain a combination of hands-on practical questions and theoretical questions. You will be given a study guide one week before each exam.

## Grade Breakdown:

- 105 Points: Lab Reports (7 @ 15 points each)
- 25 Points: Quizzes (5 @ 5 points each)
- 100 Points: Exams
- 20 Points: Attendance and Participation

### Tentative Schedule:

Dates:	Lab Activity	Assignments
1/22/20	Lab 1: Lab Safety & Aseptic technique	
1/29/20	Lab 2: Microbial Growth	Quiz 1
2/5/20	Lab 3: Microscopy and Staining	Quiz 2
2/12/20	Lab 3: Simple and Gram Staining	
2/19/20	Lab 4: Body Surfaces	Quiz 3
2/26/20	Lab 4: Selective Media	
3/4/20	Exam Review, Completion of lab Reports 1-4	
3/11/20	Midterm Practical Exam	
3/18/20	<b>Spring Break: No Class</b>	
3/25/20	Lab Exercise 5: Differential Tests	
4/01/20	Lab Exercise 6: Differential Tests	Quiz 4
4/08/20	Lab Exercise 6: Gram Positive Bacteria	
4/15/20	Lab Exercise 7: Urine Culture	Quiz 5
4/22/20	Lab Exercise 7 continued.	
4/29/20	Exam Review, Lab Report Completion	Quiz 6
5/06/20	Final Practical Exam	

Thank you for registering for Biology 2305c at UNM-VC. I am very excited to be here to help you continue your education and achieve your goals.