

INSTRUCTOR: Dr. Rosa A. Maldonado, Department of Biological Sciences
OFFICE: Bioscience Research Building:
Room 5.132
PHONE: 747-6891
EMAIL: ramaldonado@utep.edu
OFFICE HOURS: Dr. Maldonado: T & R, 2 - 3 p.m., or by appointment
LECTURE: Tue & Thu, 10:30 – 11:50 p.m., Physical Science Building 208
TEXTBOOK: Murray, *et al.*, Medical Microbiology, 9th Edition **REQUIRED**
INSTRUCTOR ASISTANT Dr. Sayonara de Melo Viana; sdemelovi@utep.edu

COURSE OBJECTIVES

This course provides an integrated approach to studying the mechanisms by which bacteria, viruses, fungi, and parasites cause human disease. Our objectives are:

1. To build a foundation of basic scientific principles in microbiology in order to interpret clinical problems
2. To develop familiarity with and understanding of standard microbiological procedures and instrumentation
3. To understand the appropriate laboratory techniques to be used for diagnosis of common infectious diseases

COURSE GOALS

1. Learn the fundamental concepts in medical microbiology
2. Apply the concepts you've learned
3. Extrapolate information and facts from what you already know
4. Communicate your understanding of microbiology
5. Learn to think critically

COURSE APPROACH

Each 90-minute class session will combine my lectures with cooperative learning activities. These activities are designed to give you the opportunity to participate in the learning process. It will form small groups of 4-5 students in the first-class session. You will remain a member of your group for the semester. We will use the groups for class discussions, group-learning exercises, clinical case reviews, and homework assignments. The in-class activities will allow you to discuss issues posted to the class and may include course material from your textbook or new material not presented to you beforehand.

BLACKBOARD. All materials for this course will be posted on Blackboard (slides, links, animations, etc.). You are responsible for downloading anything required for the class session and bringing it to class. It is strongly recommended that you visit the course Blackboard site before each class.

CLASS POLICIES (STANDARD)

MISSED EXAMS. If you know ahead of time that you will not be able to take an exam on the scheduled date, notify me, and we will allow you to take the exam early with no penalty. If you miss an exam and you can provide **PROOF** for your (reasonable) absence, the exam will be

rescheduled at my convenience but must be taken before the graded exam is distributed to the class. If you miss the exam and cannot provide proof of your absence, there will be NO make-ups!!

ATTENDANCE: It is required to attend the lectures, and it will be taken by iClicker.

LATE HOMEWORK. Homework is due at the beginning of class ONLY on the due date (see schedule), WITH NO EXCEPTIONS. LATE homework will NOT be accepted. Failure to turn in an on-time assignment will result in an automatic score of zero.

HONORS AND GRADUATE CREDIT. Please see Dr. Maldonado if you wish to take this course for honors credit or graduate credit (Undeclared Graduate and Masters' students only – Doctoral students may not take this course for graduate credit). In addition to the class requirements outlined below, we will assign a research paper on a topic relevant to current problems in pathogenic microbiology.

COURSE DROP DEADLINE. To receive an automatic “W”, students must drop or withdraw from this class by the drop date listed in the academic schedule (**April 14th**).

COURTESY. As a courtesy to your classmates, please give your full attention to all speakers and limit your in-class discussions to topics related to pathogenic microbiology. Cell-phones and pagers must be turned off during class sessions. The use of laptop or notebook computers or tablets during class sessions is limited to note-taking and coursework only – please refrain from browsing the internet or checking your email during class. Please be on time for class – roll may be taken at the start of each class.

ACADEMIC DISHONESTY. It is the official policy of the University of Texas at El Paso that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Please see the Student Affairs website at <http://www.studentaffairs.utep.edu> for details.

DISABILITIES. If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, by email to cass@utep.edu, or go to Union Building East, Room 106. For additional information, please visit the CASS website at <http://www.utep.edu/CASS>. CASS' Staff are the only individuals who can validate and if need be, authorize accommodations for students with disabilities.

GRADING SYSTEM

Grading is NOT based on a curve. You will each EARN a grade that reflects the effort you put into the course and the knowledge you have gained. Your grade will be based on a comprehensive assessment of your skills and their development throughout the course of the semester, using the following criteria.

1. READINESS ASSESSMENT TESTS (RATs). These will be given on Blackboard and are designed to test your knowledge of the material presented in class, in lab, and in your reading assignments. The RATs will ensure that you are keeping up with the class and will help us to focus our lectures on the topics you find most challenging. A maximum of 22 RATs will be given, but only the 20 highest scores will count toward your final grade. Each RAT is worth 7.5 points. Each RAT must be completed TWO HOURS before each day's class, that is by 8:30 am on class days. You will have two hours in which to take each RAT and will have access to it only once. The RATs that are due on Tuesdays will be available at 5 pm the previous Friday and those that are due on Thursdays will be available at 5 pm on Monday. You may use your class notes and textbooks during each RAT.

2. HOMEWORK. Three homework assignments will be given, each worth 50 points. These are problem-based learning sessions **with your small groups**. They focus on your ability to integrate basic science into the solution of clinical problems and will encourage you to work together, develop critical thinking, improve communication skills, and get to know one another better. Groups will be presented with a clinical problem you will discuss and diagnose. Scores will be based on participation and the answers to the specific problems given in class.

3. IN-CLASS EXERCISES. An in-class exercise will be completed in your small group during nearly every class session. These exercises comprise an essential component of your grade and **cannot be made up if missed**. Therefore, you are encouraged to come to class and participate in class discussions. The point total for these exercises is 150.

4. PAPER PRESENTATION. This is a peer-reviewed manuscript that will be assigned to each group and be posted in blackboard. The presentation should include:

- 1) First slide title, authors, and its institution
- 2) introduction and hypothesis
- 3) material and Methods (if you don't know the technique look in google, if still it is not clear for you, contact me, I will set up virtual meeting and explained to you.
- 4) Results, each figure must be explained
- 5) Discussion and conclusion

5. EXAMS. A total of FIVE exams will be given during the semester, each worth 100 points. The fifth exam is a MANDATORY, cumulative final that will be given during finals week. The exams will test your understanding of all of the materials covered in the textbook, in class, and on homework assignments, and your ability to APPLY the concepts you have learned. Expect that up to 25% of each exam could include material from the previous exam. Your lowest of the first four exam grades will be dropped, with no penalty, for a total of 400 possible exam points, but keep in mind that the final exam score cannot be replaced. The exams will combine multiple-choice and short-answer questions.

IN SUMMARY, the grades will be calculated as follows:

RATs	150 points (20 RATs/7.5 pts each)	= 15% of total
Paper Presentation	150 points	= 15% of total
Exams	400 points (4 exams/100 pts each).	= 40%
Homework	150 points (3 assignments/50 pts each)	= 15%
In-class exercises	150 points	= 15%
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Totals	1000 points	= 100%

Where, A = 900 – 1000
B = 800 - 899
C = 700 – 799
D = 600 – 699
F = 599 and below

LockDown Browser. This course requires the use of LockDown Browser for online exams. Watch this [short video](#) to get a basic understanding of LockDown Browser and the optional webcam feature (which may be required for some exams).

Then download and install LockDown Browser from this link:

https://blackboardlearn.utep.edu/ultra/tools/lti/launchFrame?toolHref=https:%252F%252Fblackboardlearn.utep.edu%252Fwebapps%252Fblackboard%252Fexecute%252Fbti%252FlaunchPlacement%3Fbti_placement_id%3D_207_1%26wrapped%3Dtrue%26from_ultra%3Dtrue

When taking an online exam, follow these guidelines:

- Select a location where you won't be interrupted
- Before starting the test, know how much time is available for it, and that you've allotted sufficient time to complete it
- Turn off all mobile devices, phones, etc. and don't have them within reach
- Clear your area of all external materials — books, papers, other computers, or devices
- Remain at your desk or workstation for the duration of the test
- LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted
- You need a camera on your computer or a webcam.
- You should show with the camera your surrenders before start the exam.

You should perform a practice exam too test your equipment is working properly with the lockdown software.

Operating systems: Windows: 10, 8, 7
 Mac: MacOS 10.12 or higher
 iOS: 11.0+ (iPad only). Must have a compatible LMS integration

CLASS SCHEDULE

Please note that the exact date on which we will discuss each topic is subject to change, depending on the pace of the course.

Lecture #	Day/Date	Topics	Reading – Chapter #
1	T Jan. 17	Introduction, General principles of Laboratory Diagnostic	Chapters 1 - 6
2	R Jan. 19	Basic concepts in the immune response	Chapters 7-11
3	T Jan. 24	Bacterial classification, structure, replication, genetics and mechanism pathogenesis	12,13,14
4	R Jan. 26	Antibacterial agents,	17 -19
5	T Jan. 31	<i>Staphylococcus and Streptococcus</i>	
--	R Feb. 2	EXAM 1	-----
6	T Feb. 7	Enterobacteriaceae Anaerobes & Mycobacteria	
7	R Feb. 9	Campylobacter & Helicobacter	
8	T Feb. 14	Bacteria causing zoonotic disease & Bordetella	
9	R Feb. 16	Presentation groups 1, 2 and 3	
10	T Feb. 21	Neisseria, Chlamydia, & Spirochetes	
11	R Feb. 23	Legionella & Vibrio	
--	T Feb. 28	EXAM 2	-----
12	R Mar. 2	Introduction to virology, diagnostic virology	
13	T Mar. 8	Antiviral therapies; polyoma, papilloma, & pox	
--	R Mar.7	Hepatitis viruses	
14	Mar. 9	Presentation groups 4, 5 and 6	
15	T Mar. 13-17	SPRING BREAK – NO CLASSES	
16	T Mar. 21	Enteroviruses,	
17	R Mar. 23	Respiratory viral infections,	
18	T Mar. 28	Diarrhea viruses	
19	R Apr. 30	Arboviruses & zoonotic viruses - Spring Drop/Withdrawal Deadline	
--	T Apr. 2	EXAM 3	-----
21	R Apr. 4	Retroviruses and HIV	
22	T Apr. 11	Hepatitis viruses.	
23	R Apr. 13	Mycology I	
24	T Apr. 21	Mycology II,	
25	T Apr. 18	Presentation groups 7 and 8	
26	R Apr. 20	Parasitology I	
--	T Apr. 25	Parasitology II	-----
	T Apr. 27	Discussion	
	T May 2	EXAM 4	
--	T May 4	Review or FREE TIME TO STUDY	-----
--	R May 12	FINAL EXAM 10 am-12:45 pm	-----

DUE DATES FOR RATS, CCRS, HOMEWORK, AND EXAMS

Lecture #	Day/Date	Assignment Due
1	T Jan. 17	----
2	R Jan. 19	RAT 1
3	T Jan. 24	RAT 2
2	R Jan. 26	RAT 3;
	T Jan 31	RAT 4
5	R Feb. 2	EXAM 1
--	T Feb. 7	RAT 5
6	R Feb. 9	RAT6
7	T Feb. 14	RAT 7
8	R Feb. 16	RAT 8
9	T Feb. 21	Homework 1 due in class <i>Presentation groups 1, 2 and 3</i>
10	R Feb. 23	RAT 9
11	T Feb. 28	EXAM 2
--	R Mar. 3	RAT 10
12	T Mar. 7	RAT 11
13	R Mar. 9	RAT 12
14	Mar. 13-17	SPRING BREAK – NO CLASSES;
15	T Mar. 21	Homework 2 due in class; <i>Presentations group 4, 5 and 6</i>
16	R Mar. 23	RAT 13
17	T Mar. 28	RAT 14
18	R Mar. 30	RAT 15
19	T Apr. 4	RAT 16
--	R Apr. 6	EXAM 3
21	T Apr. 11	RAT 18
22	R Apr. 13	RAT 19
23	T Apr. 18	RAT 20; Homework 3 due in class
24	R Apr. 20	<i>Presentations group 7 and 8</i>
25	T Apr. 25	RAT 21
26	R Apr. 27	
--	T May 2	EXAM 4; Honors papers due
--	R May 4	Review or FREE TIME TO STUDY)
--	R May 12	FINAL EXAM 10 am-12:45 pm