

UNIVERSITY OF TEXAS AT DALLAS

LECTURE SYLLABUS

Spring 2013

COURSE INFORMATION

Course Number/Section BIOL 4350.001, Lecture
Course Title Medical Microbiology
Days & Time Tuesday & Thursday 10:00 am-11:15 am
Classroom SLC 2.304

PROFESSOR CONTACT INFORMATION

Professor..... RUBEN D. RAMIREZ, M.D., PH.D.
E-Mail..... Ruben.Ramirez@UTDallas.edu
Office..... SLC 2.406
Phone..... (972) 883-4172
Emergency Contact Info..... FO3.608A, (972) 883-2501
Office Hours..... Tuesday & Thursday: 1:00pm-2:00pm

COURSE PRE-REQUISITE, CO-REQUISITE, AND/OR OTHER RESTRICTIONS

Prerequisite: BIOL 3301 or BIOL 3420. (3-0)

COURSE DESCRIPTION

Course objectives: Medical Microbiology, BIOL 4350, will familiarize students with the disease and health relationship between microorganisms and humans. The goals of the course is to have students understand, especially from a molecular point of view, the process by which microorganisms can cause disease, virulence factors they possess, portals of entry and the consequences, host response to disease conditions, the signs and symptoms of a disease, chemical means by which diseases can be treated, methods used for identification of pathogenic organisms, and current information on pathogens and infectious diseases. Thus, this course will focus on why the biologic properties of organisms are important to disease in humans, and will examine etiology, epidemiology, host defenses, identification, diagnosis, prevention, and control for each microbe. Bacterial will comprise a large percentage of the pathogens studied and some viruses will also be included. There may be a short introduction to fungal pathogens.

STUDENT LEARNING OUTCOMES

Upon completion of this course the students should be able to do the following:

1. Categorize emerging vs. established diseases, describe molecular approaches to diseases diagnoses and explain the first and second lines of defense against diseases by the human body.
2. Explain how we combat diseases via vaccination and use of antibiotics as well the recurring problems of antibiotic resistance.
3. Describe the features, virulence factors, characteristics of the causative organism, symptoms and progression, resistance to antibiotics and other specific, especially molecular, reasons which contribute to the success of an organism as a human pathogen with regard to airborne, water and food borne, sexually transmitted, and vector and animal/insect borne diseases.

REQUIRED TEXTBOOK AND MATERIALS

Medical Microbiology, sixth edition, by Patrick R. Murray, PhD, Ken S. Rosenthal, PhD and Michael A. Pfaller, MD (ISBN: 978-0-323-05470-6).

Suggested texts: Mims' Medical Microbiology, fourth edition by Richard Goering, Hazel Dockrell, Ivan Roitt, Mark Zuckerman and Derek Wakelin, publishers: Mosby/Elsevier.

GRADING POLICY

1. Grades for the course will be calculated as follows:

Lecture Exams (4)	90% (22.5% each exam score)
Quizzes	10%

2. Grading scale:

Grade	Score	Grade	Score
A+	100-96	C+	77-75
A	95-92	C	74-72
A-	91-88	C-	71-68
B+	87-85	D+	67-65
B	84-82	D	64-62
B-	81-78	D-	61-58
		F	57 and below

Final grade will be rounded to the nearest integer, e.g., 89.5 = 90; 89.49 = 89. No points or fraction of a point (regardless how small) will be awarded to increase to the next letter grade (NO EXCEPTIONS).

3. Grades are determined based only on performance. Grades are not based on need, effort, or attendance.
4. I do not curve grades (do not ask, beg, cry or plead).

COURSE POLICY

1. **Exams:** Four exams will be given during the semester. There will be no final exam. Graded exams will not be reviewed in class. Exams will be kept on file in the instructor's office and will be available for review for 1 week, starting the next day after the exam grades are posted in blackboard. The student is responsible for scheduling time to review. All issues regarding exam questions and grades must be resolved within this week. After this week, grades will be considered final.
2. Exam dates will be tentatively as follows: Exam I (2/7) = chapters 2-3, 7-11; Exam II (3/7) = chapters 13, 20-28, 39-40, 43; Exam III (4/4) = chapters 29-38, 41-42, 44-46; and Exam IV (5/2) = chapters 4, 51-65, Bioterror. There will be no final comprehensive exam.
3. The average of four lecture exams will count 90% of final overall grade (each lecture exam is 22.5% of final overall grade). No lecture exam will be dropped.
4. The structure of the exams will be multiple choice, true/false, and matching questions. There will be 80 questions and the time allowed to complete the exam will be 1 hour. There may be bonus points on all exams. You will need a Scantron (ParSCORE, SCORE SHEET, Form No. F-1712-PAR-L) for all exams.
5. Everything in the textbook is fair game for exams, regardless whether or not it is presented in class. You are responsible to use the information contained in the entire chapters to prepare for exams (regardless it is presented or not in class).
6. For exam purposes only, when there are conflicts between the information contained in textbook (or any other outside source) and the material presented in class, material presented by the professor in class will rule over what is written in textbook/outside source.
7. Do not miss exams! (If exams are missed you must be able to verify your reason for missing)
8. Make-up lecture exams are usually not given - if there are circumstances that warrant a make-up the instructor will determine the criteria for such an exam at the appropriate time. The structure of make-up exams will be different than that specify in #4 above.
9. Legitimate Reasons to make-up missed exams are as follows: death of an immediate family member, bona fide medical emergencies, and military orders. Proper documentation must be presented in writing – no exceptions.

10. **Quizzes:** There will be a **maximum** of 10 unannounced quizzes posted for in eLearning. The average of all quizzes minus the lowest two scores will count 10% of final overall grade. Quizzes will be taken in eLearning. You will have 1 week (168 hours) to take the quiz (due date and time will be shown in eLearning). Thus, do not procrastinate, because there will be no make-up for missing quizzes (**absolutely no exceptions**). A missed quiz will receive a zero (0). Read the instructions prior to taking the quiz. Quizzes are timed and only two attempts are allowed (you will get the highest score out of the two attempts).
11. **Assignments:** There **may** be unannounced in-class assignments. In-class assignments may be comprised of either group or individual exercises, which may include case studies, review crossword puzzles, review worksheets, and perhaps other activities. Points (not to exceed 5 points per exam) earned in these assignments will be added only to the pertaining exams (not to the final overall grade).
12. **Bonus Points:** Bonus points (maximum 5 points) will be made available during all exams. No bonus/extra points for the final grade.
13. **You will need a UTD photo ID to get into lecture exams. If you do not have an UTD photo ID presently, please make arrangements to get one before the first exam (photo ID on Driver Licenses/Cards/Badges are not considered substitute of UTD photo ID – we need your UTD number next to your photo in the same document, not just your photo). No exam or grade will be given to students without UTD photo ID (no exceptions).**
14. In keeping with the spirit of the Privacy Act, grades and/or grade information will not be given to anyone other than the student and will not be discussed over the phone.

STUDENT CONDUCT & DISCIPLINE

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD printed publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Series 50000, Board of Regents, The University of Texas System*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391) and online at <http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-HOPV.html>

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

ACADEMIC INTEGRITY

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic Dishonesty, any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and 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.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

EMAIL USE

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

WITHDRAWAL FROM CLASS

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper

paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

STUDENT GRIEVANCE PROCEDURES

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

INCOMPLETE GRADE POLICY

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**. See web site: <http://www.utdallas.edu/student/catalog/ugcurrent/policies/academic.html>.

STUDENT ACCESSABILITY

The goal of Student AccessAbility Office is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Student AccessAbility Office is located in room 3.200 in the Student Services Building (SSB). Office hours are Monday-Thursday, 8:00 a.m. to 6:00 p.m.; and Friday, 8:00 a.m. to 5:00 p.m.

The contact information for the Student AccessAbility Office is:

The University of Texas at Dallas
800 W. Campbell Rd., SSB32
Richardson, Texas 75083
(972) 883-2098 (voice or TTY)
studentaccess@utdallas.edu

If you anticipate issues related to the format or requirements of this course, please meet with the Coordinator of Student AccessAbility Office. The Coordinator is available to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Student AccessAbility Office to notify them of your eligibility for reasonable accommodations. Student AccessAbility Office can then plan how best to coordinate your accommodations.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Student AccessAbility Office provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

RELIGIOUS HOLY DAYS

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

These descriptions and timelines are subject to change at the discretion of the Professor.

TENTATIVE ACADEMIC CALENDAR

WEEK	T & R	LECTURE TOPICS	CHAPTERS
1	1/15 1/17	Course Introduction and Overview Bacterial Classification, Structure, and Replication	Chapter 2
2	1/22 1/24	Bacterial Metabolism and Genetics Commensal and Pathogenic Microbial Flora in Humans	Chapter 3 Chapter 7
3	1/29 1/31	Sterilization, Disinfection, and Antisepsis Elements of Host Protective Responses	Chapter 8 Chapter 9
4	2/5 2/7	Humoral & Cellular Immune Response Exam I	Chapter 10-11 Chp 2-3, 7-11
5	2/12 2/14	Antimicrobial Vaccines & Antibacterial Agents Pathogenic Gram Positive Bacteria: Staphylococcus	Chapter 13 & 20 Chapter 21
6	2/19 2/21	Streptococcus Enterococcus, Bacillus	Chapter 22 Chapter 23, 24
7	2/26 2/28	Clostridium Listeria, Corynebacterium, Mycoplasma	Chapter 39 Chapter 25, 26, 43
8	3/5 3/7	Nocardia, Mycobacterium, Actinomyces & Propionibacterium Exam II	Chapters 27, 28, 40 Chp 13, 20-28, 39-40, 43
9	3/12 3/14	***3/10 – 3/16 SPRING BREAK***	
10	3/19 3/21	Pathogenic Gram Neg. Bacteria: Neisseria & Enterobacteriaceae Pseudomonas/Burkholderia/Acinetobacter/Moraxella, Haemophilus/Pasteurella, Bordetella, Francisella, & Brucella	Chapter 29 & 30 Chapters 33-36
11	3/26 3/28	Legionella, Bartonella, Bacteroides, Prevotella & Coxiella Rickettsia/Orientia/Ehrlichia/Anaplasma, Chlamydia/Chlamydophila	Chapters 37-38, 41 & 45 Chapters 44, 45, 46
12	4/1 4/2 4/4	***4/1 LAST DAY FOR WL – UNDERGRADUATES*** Spirochetes, Vibrio & Campylobacter/Helicobacter Exam III	Chapter 31-32, 42 Chp 29-38, 41-42, 44-46
13	4/9 4/11	Viral Classification, Structure, and Replication	Chapters 4
14	4/16 4/18	Pathogenic DNA Viruses	Chapters 51-55
15	4/23 4/25	Pathogenic RNA Viruses	Chapters 56-65
16	4/30 5/2 5/4	Biological Warfare & Bioterrorism Exam IV ***SATURDAY, 5/4, LAST DAY OF CLASSES***	Video Chp 4, 51-65, Bioterror

NOTE: The professor has the right to change the syllabus at any point during the semester.