

**MEDICAL MICROBIOLOGY AND IMMUNIZATIONS
PHAR 6141**

Fall Semester 2005 **389 Kirby Plaza (Duluth) and 7-135 Weaver-Densford (TC)**
4:40-5:30 PM Mondays, Wednesdays

Course Directors:

Rory P. Remmel, Ph.D.
Professor
Office: 7-125C WDH
Telephone: 612-624-0472
Office Hours: TBA
e-mail: remme001@tc.umn.edu

Grant W. Anderson, Ph.D.
Assistant Professor
Office: 354 Kirby Plaza
Telephone: 218-726-6007
Office Hours: TBA
e-mail: ander163@umn.edu

Course home page: PHAR 6141 through WebCT

Teaching Assistant: Tanney Ezeonwuka

Course Objectives:

Pharmacy courses teaching infectious disease therapies instruct students on how to properly select chemotherapeutic agents for the treatment of specific infections. The first step in this process is to associate specific pathogens with the diseases they cause. After successful completion of Phar 6141, students should be able to perform the following tasks:

1. Describe the pathogenicity and diseases caused by the major pathogenic bacteria, fungi, protozoa, and viruses.
2. Retrieve and evaluate information on emerging infectious diseases.
3. Recommend the appropriate immunization schedule for childhood and adult vaccines and counsel patients on the side effects and risk/benefit ratio of specific vaccines.
4. Retrieve and evaluate information on immunizations required for patients traveling to foreign countries.

Course Policy:

1. Two examinations will be given. A mid-term quiz on gram negative and gram positive bacteria and a comprehensive final examination. The minimum passing grade for exams is normally 65%.
2. Make-up exams will only be given to those students who have a legitimate excuse and have obtained prior permission. Legitimate excuses include verified illness, family emergencies, U.S. military service, and University sponsored events. Subsequent written verification of illness by a physician is required. The course director will determine the acceptability of other excuses. Students will take the makeup exam during finals week or by arrangement with the course director.
3. If a student wishes to have an examination re-graded, s/he must arrange for it within one week after the graded exam is returned. The request for re-grading and an explanation for why the student's answer merits additional points must be submitted in writing.
4. The final letter grade given to a student who has passed all unit exams (80% of total grade) and completed assignments (20% of total grade) will be based on the student's total score. Normally, a total score of 93% or more is needed in order to receive a grade of A, 90-92 for an A-, 87-89 for a B+, 83-86 for a B, 80-82 for a B-, 77-79 for a C+, 73-76 for a C, 70-72 for C-, 67-69 for a D+, and 65% is needed for a D.
5. Incidents of academic misconduct, such as cheating or plagiarism, will be reported to the Honor Council for disciplinary action. Observed violations of the honor code should be reported to the Honor Council.
6. Disability accommodations: Any student with a disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations should contact the Course Directors at the beginning of the semester. All discussions will remain confidential.

Course Grades:Assignments

World-Wide Web Assignment on Emerging Infectious Diseases	10%
World-Wide Web Assignment on Travel Immunizations	10%

Examinations

Mid-Term Quiz on Gram Positive and Gram Negative Bacteria	20%
Final Examination	60%

Content and Nature of Examinations:

Examination questions may pertain to material presented in lectures, assigned readings, and handout material.

Examination questions normally consist of multiple choice questions mixed with some matching and fill-in-the-blank questions.

Graded assignments

Graded assignments will consist of 2 written papers. Assignments turned in late will receive an automatic 20% point deduction.

Assumed Entry Knowledge:

The student is assumed to have:

Completed a college-level course in microbiology or bacteriology that has covered:

1. Gram Staining
2. Basic structural characteristics of bacteria, fungi, protozoa, and viruses
3. Biochemical testing for characterization of bacteria

Course Material:

The required text for this course is Sherris Medical Microbiology: An Introduction to Infectious Disease 4th Edition by KJ Ryan and CG Ray, McGraw-Hill, New York, NY.

Course handouts for Medical Microbiology will be available through WebCT and are required reading. Selected readings from: Centers of Disease Control Web Page (www.cdc.gov) and *Morbidity and Mortality Weekly Report* (www.cdc.gov/mmwr) will be required.

Lecture Schedule:**Phar 6141, Medical Microbiology and Immunizations**

Lecture	Topic
1 9/7 (W)	Introduction Differences between Eukaryotes, Fungi, & Prokaryotes Readings: Chapters 1 and 2
2 9/12 (M)	Gram positive cocci Staphylococci, Streptococci, Enterococci Readings: Chapters 16 and 17
3 9/14 (W)	Gram positive rods Corynebacterium, Bacillus, Listeria, Clostridia Readings: Chapters 18 and 19
4 9/19 (M)	Gram negative cocci Neisseria, Moraxella, Acintobacter Readings: Chapter 20 Gram negative rods Many Readings: Chapters 22, 23, 24, 26, 32
5 9/21 (W)	Chlamydia, Mycoplasma, Spirochetes, Rickettsia, Mycobacteria Readings: Chapters 25, 27, 31, 28
6 9/26 (M)	Helminths Readings: Chapters 55-58
7 9/28 (W)	Systemic Mycoses (Fungi) and Protozoa Readings: Chapters 47-49, 52-54
8 10/3 (M)	QUIZ & Introduction to Viruses
9 10/5 (W)	Respiratory viruses, Childhood exanthems, Poxviruses, Enteroviruses Readings: Chapters 33-36
10 10/10 (M)	Hepatitis viruses, Herpesviruses, Diarrheal viruses, Arthropod-borne viruses, Rabies, HIV, Papovaviruses Readings: Chapters 37-43
11 10/12 (W)	Catch-up lecture
12 10/17 (M)	Childhood Immunizations

13	10/19 (W)	Adult Immunizations and Travel Vaccines
14	10/24 (M)	Immunizations continued
15	10/26 (W)	FINAL EXAM