



MICRO 762 MEDICAL BACTERIOLOGY

Course Description: One of four courses that comprises distinct sections of the larger Medical Microbiology course MICRO 611/701.

Credit Hours: 6

Course Dates: See attached schedule

Course Times: See attached schedule

Course Location: See attached schedule

Instructor: See attached schedule

Required Text and Other Learning Resources: Medical Microbiology-Fifth Edition (2005) by Murray, Rosenthal, Kobayashi and Pfaller. The Microbiology 611 Laboratory Manual (2008 edition will be available for sale in September), and First Aid for the USMLE STEP 1. All material covered in the lectures, Blackboard material, small group discussions, clinical correlations and laboratory periods will be covered on the written examinations and/or quizzes.

Course Objectives: Upon completion of this course, students will be able to demonstrate:

- The ability to reason deductively in solving clinical problems related to infectious and immune diseases.
- Knowledge of:
 - Mechanisms by which bacteria, fungi, parasites and viruses attack the body to cause disease.
 - Diagnosis, prevention, treatment, and epidemiology of infectious diseases including the impact of infectious agents on the human body and the alterations of structure and function resulting from infections, particularly the most frequent manifestations and life threatening conditions resulting from common microbial infections.
- Competence in performance and interpretation of certain routine clinical laboratory microbiological methods including aseptic technique, the Gram stain, isolation of pure cultures, and antibiotic sensitivity testing.

Grading Policy and Rubric: There are two written examinations each worth 38% of the final grade. The Practical Exam will be worth 14% of the final grade. Grades from quizzes will be worth **10%** of the student's final average. No bonus points will be awarded for extracurricular activities. Graduate students must score 80% or higher to pass this course. There will be no make-ups for unexcused missed activities. Unexcused absences from mandatory events can result in deductions from the final grade average. There will be no penalty for medically excused absences or for the first two unexcused absences from required events. After two unexcused absences from required events, each additional absence will result in the

deduction of three (3) points from the final grade average. For example five unexcused absences from mandatory events will result in the deduction of nine points from the final grade average for the course (see example below)

Course Policies:

Course Attendance: Students are expected to attend microbiology lectures. Students are required to attend mandatory special events in this course including all guest lectures, laboratory sessions, and case discussions. Students with more than two unexcused absences from mandatory events will be required to attend a conference with the course directors to discuss their absenteeism. More than two unexcused absences from mandatory events will result in deductions from the final grade average (see grading details). An excused absence based on a physician's excuse will not result in a deduction from the final grade. Other extenuating circumstances will be considered upon the recommendation of the Dean of Graduate Studies.

Course Communication: GroupWise and Blackboard software are among the official methods of communication between students and faculty in the course. All students are required to regularly check their GroupWise email and Microbiology 611 Blackboard course website for postings. Students are responsible for obtaining their own copies of class materials provided in these ways. All class notices will be sent to each student's GroupWise email account. Class handouts and other documents will be available for download from the Microbiology 611 Blackboard site (<http://elearning.umsmc.edu/>). Technical support for Blackboard is available from Dr. Lushbaugh, Dr. Bengtén or Dr. Lundrigan. Questions on lecture materials will be answered verbally in class or by return email and will generally involve the input of the person who taught the topic in question. All course announcements and answers to student inquiries will be posted on our course Bb site for reference.

Assignments and Test: Make-up tests will only be given in the case of severe illness; assignments are due on the assigned dates.

University Policies:

Students with disabilities (ADA) statement: See UMC policy

Academic honesty statement: See UMC policy

**EXAMPLE CLASS SCHEDULE
MEDICAL BACTERIOLOGY 762 CLASS SCHEDULE 2008-09 ACADEMIC YEAR**

Day, Date, Year	Time	TITLE	Faculty	Rm.
Tuesday, September 16, 2008	9:00	Bacterial Anatomy (3)	Lundrigan	R354
Wednesday, September 17, 2008	9:00	Bacterial Growth (4)	Lundrigan	R354
Wednesday, September 17, 2008	1:00	Bacterial Genetics I – Bacterial Chromosomes, Mutation (5)	Lundrigan	R354
Thursday, September 18, 2008	9:00	Bacterial Genetics II – Mobile genetic elements - plasmids (5)	Lundrigan	R354
Friday, September 19, 2008	9:00	Bacterial Genetics III – Transfer of Drug Resistance (5)	Lundrigan	R354
Tuesday, September 23, 2008	9:00	Sterile Technique & Biohazard Precautions Lecture Required	Lushbaugh	R354
Tuesday, September 23, 2008	1:00	SECTION A Laboratory: Gram Stain and Isolation of Pure Cultures 1/3	Faculty	N215
Tuesday, September 23, 2008	3:00	SECTION B Laboratory: Gram Stain and Isolation of Pure Cultures 1/3	Faculty	N215
Wednesday, September 24, 2008	9:00	Production of Disease by Bacteria (19)	O'Callaghan	R354
Wednesday, September 24, 2008	1:00	SECTION A Laboratory: Gram Stain and Isolation of Pure Cultures 2/3	Faculty	N215
Wednesday, September 24, 2008	3:00	SECTION B Laboratory: Gram Stain and Isolation of Pure Cultures 2/3	Faculty	N215
Thursday, September 25, 2008	9:00	Applied Bacterial Genetics	O'Callaghan	R354
Thursday, September 25, 2008	1:00	SECTION A Laboratory: Gram Stain and Isolation of Pure Cultures 3/3	Faculty	N215
Thursday, September 25, 2008	3:00	SECTION B Laboratory: Gram Stain and Isolation of Pure Cultures 3/3	Faculty	N215
Friday, September 26, 2008	9:00	Antibiotics I – Bacteria and Antibiotics (20)	O'Callaghan	R354
Tuesday, September 30, 2008	1:00	Antibiotics II – Treatment of Bacterial Infections (20)	O'Callaghan	R354
Wednesday, October 01, 2008	9:00	Antibiotics III – Treatment of Bacterial Infections (20)	O'Callaghan	R354
Wednesday, October 01, 2008	1:00	Antibiotics IV – Treatment of Bacterial Infections (20)	O'Callaghan	R354
Thursday, October 02, 2008	1:00	Gram Positive Pyogenic Cocci – <i>Staphylococcus</i> I (22)	O'Callaghan	R354
Thursday, October 02, 2008	2:00	Gram Positive Pyogenic Cocci – <i>Staphylococcus</i> II (22)	O'Callaghan	R354
Friday, October 03, 2008	9:00	Gram Positive Pyogenic Cocci – <i>Streptococcus</i> (23)	McDaniel	R354
Monday, October 06, 2008	9:00	Gram Positive Pyogenic Cocci – <i>Streptococcus/Enterococcus</i> (24)	McDaniel	R354
Tuesday, October 07, 2008	1:00	<i>Corynebacterium</i> (includes <i>Diphtheria</i>), <i>Nocardia</i> (27, 28)	McDaniel	R354
Tuesday, October 07, 2008	2:00	<i>Bacillus</i> (includes <i>Anthrax</i>), <i>Listeria</i> (25, 26)	Marquart	R354
Wednesday, October 08, 2008	9:00	<i>Neisseria</i> , <i>Branhamella</i> , <i>Moraxella</i> (30)	McDaniel	R354

2008				
Wednesday, October 08, 2008	1:00	Gram Positive Pyogenic Cocci Case Small Group Discussion Required	Faculty	Group
Thursday, October 09, 2008	1:00	Mycobacterium (29)	Lundrigan	R354
Thursday, October 09, 2008	2:00	Clinical Presentation (Soft Tissue Infections)	Burton	R354
Friday, October 10, 2008	9:00	Clinical Presentation (Tuberculosis)	Mathew	R354
Tuesday, October 14, 2008	1:00	SECTION B Laboratory: Throat Culture and Demo of Pyogenic Cocci 1/3	Faculty	N215
Tuesday, October 14, 2008	3:00	SECTION A Laboratory: Throat Culture and Demo of Pyogenic Cocci 1/3	Faculty	N215
Wednesday, October 15, 2008	9:00	Clinical Presentation (Hospital Acquired Infections)	Turner	R354
Wednesday, October 15, 2008	1:00	SECTION B Laboratory: Throat Culture and Demo of Pyogenic Cocci 2/3	Faculty	N215
Wednesday, October 15, 2008	3:00	SECTION A Laboratory: Throat Culture and Demo of Pyogenic Cocci 2/3	Faculty	N215
Thursday, October 16, 2008	1:00	SECTION B Laboratory: Throat Culture and Demo of Pyogenic Cocci 3/3	Faculty	N215
Thursday, October 16, 2008	3:00	SECTION A Laboratory: Throat Culture and Demo of Pyogenic Cocci 3/3	Faculty	N215
Friday, October 17, 2008	9:00	Overview of Gram Positive Infections & Treatment	O'Callaghan	R354
Monday, October 20, 2008		Exam Block 2 Begins		
Wednesday, October 22, 2008	9:00	Bacteriology Exam 1 - 2 hr	Faculty	R354
Monday, October 27, 2008	1:00	Antibiotics IV – Treatment of Gram Negative Bacterial Infections	O'Callaghan	R354
Monday, October 27, 2008	2:00	Antibiotics V – Treatment of Gram Negative Bacterial Infections	O'Callaghan	R354
Tuesday, October 28, 2008	1:00	Gram Negative Bacilli (<i>E coli</i> , <i>Shigella</i> , <i>Salmonella</i>) (31)	Lundrigan	R354
Wednesday, October 29, 2008	9:00	Gram Negative Bacilli (<i>Klebsiella</i> , <i>Proteus</i>) (31)	Lundrigan	R354
Thursday, October 30, 2008	1:00	Pseudomonas and related bacteria (34-35)	O'Callaghan	R354
Friday, October 31, 2008	9:00	Middle Ear Infection Cases – Small Group Discussion Required	Faculty	Group
Tuesday, November 04, 2008	9:00	<i>Haemophilus</i> , <i>Bordetella</i> , (35, 36)	McDaniel	R354
Tuesday, November 04, 2008	1:00	SECTION A Laboratory: <i>Gram Negatives</i> 1/3	Faculty	N215
Tuesday, November 04, 2008	3:00	SECTION B Laboratory: <i>Gram Negatives</i> 1/3	Faculty	N215
Wednesday, November 05, 2008	9:00	Gram Negative Bacilli (<i>Vibrio</i> , <i>Campylobacter</i>) (32. 33)	Lundrigan	R354
Wednesday, November 05, 2008	1:00	SECTION A Laboratory: <i>Gram Negatives</i> (2/3)	Faculty	N215
Wednesday, November 05, 2008	3:00	SECTION B Laboratory: <i>Gram Negatives</i> (2/3)	Faculty	N215
Thursday, November 06, 2008	1:00	SECTION A Laboratory: <i>Gram Negatives</i> (3/3)	Faculty	N215

Thursday, November 06, 2008	3:00	SECTION B Laboratory: Gram Negatives (3/3)	Faculty	N215
Friday, November 07, 2008	10:00	Anaerobes I (<i>Clostridium</i>) (40)	Meade	R354
Friday, November 07, 2008	11:00	Anaerobes II (<i>Actinomyces, Mobiluncus, Bacteroides</i>) (41-42)	Lundrigan	R354
Monday, November 10, 2008	9:00	Clinical – Opportunistic Gram Negatives (<i>Pseudomonas, Klebsiella</i>)	Swaitlo	R354
Tuesday, November 11, 2008		Veterans Day		
Wednesday, November 12, 2008	9:00	<i>Brucella, Francisella, Legionella, Bartonella</i> (36-39)	McDaniel	R354
Wednesday, November 12, 2008	1:00	Spirochetes (<i>Treponema, Borrellia, Leptospira</i>) (43)	Miller	R354
Thursday, November 13, 2008	9:00	<i>Mycoplasma</i> and <i>Rickettsia</i> (44-45)	Lushbaugh	R354
Thursday, November 13, 2008	1:00	<i>Ehrlichia, Coxiella, Chlamydia</i> (46-47)	Lushbaugh	R354
Friday, November 14, 2008	9:00	Superficial and Dermatophytoses Mycoses (71-73)	Sullivan	R354
Tuesday, November 18, 2008	9:00	Systemic Mycoses (74)	McDaniel	R354
Tuesday, November 18, 2008	1:00	SECTION B Laboratory: Isolation and Identification of Unknown (1/3)	Faculty	N215
Tuesday, November 18, 2008	3:00	SECTION A Laboratory: Isolation and Identification of Unknown (1/3)	Faculty	N215
Wednesday, November 19, 2008	9:00	Mycoses Opportunistic (75)	McDaniel	R354
Wednesday, November 19, 2008	1:00	SECTION B Laboratory: Isolation and Identification of Unknown (2/3)	Faculty	N215
Wednesday, November 19, 2008	3:00	SECTION A Laboratory: Isolation and Identification of Unknown (2/3)	Faculty	N215
Thursday, November 20, 2008	9:00	GI and GU Protozoa (82)	Lushbaugh	R354
Thursday, November 20, 2008	1:00	SECTION B Laboratory: Isolation and Identification of Unknown (3/3)	Faculty	N215
Thursday, November 20, 2008	3:00	SECTION A Laboratory: Isolation and Identification of Unknown (3/3)	Faculty	N215
Friday, November 21, 2008	9:00	Parasites of the Immunosuppressed (83)	Lushbaugh	R354
Tuesday, November 25, 2008	9:00	Blood and Tissue Protozoa (83)	Meade	R354
Tuesday, November 25, 2008	1:00	Roundworms (Nematodes) (84)	Meade	R354
Thursday, November 27, 2008	5:00	Thanksgiving Holiday		
Monday, December 01, 2008	9:00	Tapeworms (Cestodes) (86)	Meade	R354
Tuesday, December 02, 2008	9:00	Flukes (Trematodes) (85)	Lushbaugh	R354
Wednesday, December 03, 2008	1:00	SECTION A Mycology Laboratory	Faculty	N215
Wednesday, December 03, 2008	3:00	SECTION B Mycology Laboratory	Faculty	N215

Friday, December 05, 2008	9:00	Medically Important Arthropods as direct causes of disease (87)	Goddard	R354
Tuesday, December 09, 2008	9:00	Medically Important Arthropods as vectors of disease (87)	Goddard	R354
Tuesday, December 09, 2008	1:00	SECTION B Parasitology Laboratory	Faculty	N215
Tuesday, December 09, 2008	3:00	SECTION A Parasitology Laboratory	Faculty	N215
Thursday, December 11, 2008	9:00	Clinical Presentation (Sexually Transmitted Diseases)	Burton	R354
Friday, December 12, 2008	9:00	Overview of Gram Negatives, Mycology, Parasitology	Faculty	R354
Monday, December 15, 2008		Exam Block 3 begins		
Thursday, December 18, 2008	1:00	Section A: 1 Hour Practical Exam on labs, POPs, Clinicals	Faculty	N215
Thursday, December 18, 2008	2:30	Section B: 1 Hour Practical Exam on labs, POPs, Clinicals		
Friday, December 19, 2008	9:00	Exam Block 3 – Bacteriology Exam 2 - 2 hr	Faculty	R354
Friday, December 19, 2008	5:00	Winter Holiday		