

MEDICAL MICROBIOLOGY SYLLABUS – *update for BACTERIOLOGY*

COURSE OBJECTIVES

Medical Microbiology introduces basic principles and then applies clinical relevance in four segments of the academic preparation for physicians: immunology, bacteriology, mycology, and virology. (Parasitology is covered in the Pathology course.) This rigorous course includes many etiological agents responsible for global infectious diseases. Because the territory covered by infections and the immune response expands each year, we focus on pathogenic mechanisms in order to foster a student's ability to solve problems in their future clinical career.

BACTERIOLOGY SECTION ORGANIZATION

Microbiology faculty join forces with clinical faculty from a variety of Departments and Divisions to present course material in the Bacteriology Section. This renovated curriculum hosts material presented in the following Blocks:

| BLOCK | TOPICS | BACT (handout) CHAPTERS | FACULTY |
|-------|---|--|--------------------------------|
| I | Introduction & Antibiotics | <u>Basic</u> : BACT-1, 2, 3, Dry Lab | D. Lannigan, O. Hendley |
| | | <u>Clinical Integration</u> : BACT -16 | B. Wispelwey |
| II | Cardiovascular, Neurological & Bone/Skin Infections | <u>Basic</u> : BACT-4,5,6, 8 | A. Bouton |
| | | <u>Clinical Integrations</u> : BACT-7CI, BACT-9CI, BACT-20CI | J. Dent, T. Cropley, B. Nathan |
| III | Gastrointestinal Infections | <u>Basic</u> : BACT-10, 11, 12, | D. Peura A. Bouton |
| | | <u>Clinical Integration</u> : BACT-13CI | J. Roche |
| IV | Respiratory Infections | <u>Basic</u> : BACT-14, 15, 17 | J. Goldberg E. Hewlett |
| | | <u>Clinical Integrations</u> : BACT-18CI, BACT-19CI, | M. Hughes C. Moore |
| V | Recreational Infections & Immunocompromised | <u>Basic</u> : BACT-21, 24, | J. Goldberg |
| | | <u>Clinical Integration</u> : BACT-22 CI, BACT-23-CI, BACT-25-CI | J. Eby, D. Kaufman, M. Rein |

Basic Lectures cover learning objectives for each organisms, focusing on virulence factors targeted by diagnostics, antibiotic regimens, and vaccines.

Clinical Integration Lectures will focus learning in a *very different way* than traditional lectures.

Students are expected to participate during in-class opportunities for response and questioning. Clinicians are NOT delivering "usual" cases, but have crafted 3-4 fast-paced cases (per hour) embracing vital, basic science knowledge. Students will interact via Audience Response System, and it is recommended that all CI lectures be attended in person.

ASSESSMENT

Student performance in Medical Microbiology will be evaluated by a series of exams and quizzes. Attendance at all course events is necessary for optimal performance, and material presented in all lectures, clinical integrations and the "dry" laboratory will be included in quizzes and exams. In light of pod-casting, students are reminded that confusion in lecture is most efficiently cleared up immediately by questions in lecture rather than at later times.

Grades are not determined for individual exams. Final grades are determined according to the ratios in the following table.

| | Number | % each | Total % of Final Grade |
|---------------------|--------|--------|------------------------|
| Examinations | 3 | 30% | 90% |
| Quizzes | | | 10% |

Following grade determination, teaching faculty from the Department of Microbiology meet to set the Pass-Fail line at two standard deviations from the mean score.

REQUIRED TEXTBOOKS:

Preparing prior to class will be the single most effective mechanism to ensure success in Medical Microbiology. Reading assigned chapters in the textbook will logarithmically increase a student's knowledge and will heighten both complete understanding and efficient mastery of required material.

Bacteriology / Mycology / Virology:

Patrick R. Murray, Ken S. Rosenthal, Michael A. Pfaller.
Medical Microbiology, 6th ed. (Philadelphia:
 Elsevier/Mosby, 2009).



RECOMMENDED STUDY BOOKS:

Levinson, W. Review of Medical Microbiology and Immunology, 9th ed. LANGE REVIEW SERIES (NY: McGraw-Hill, 2006).

Harvey, R.A., P.C.Champe, and B.D. Fisher. Microbiology, 2nd edition. LIPPINCOTT'S ILLUSTRATED REVIEWS (Philadelphia: Lippincott, Williams, & Wilkins, 2007).

QUIZ SCHEDULE:

| QUIZ | OPENING DATE | CLOSING DATE | CHAPTER COVERAGE |
|---------|----------------------|---------------------|-----------------------------------|
| Quiz 7 | Thurs., Nov. 5, 4pm | Mon., Nov. 9, 10pm | BACT-1 through BACT-3 and Dry Lab |
| Quiz 8 | Thurs., Nov. 12, 4pm | Mon., Nov. 16, 10pm | BACT-4 through BACT-8 |
| Quiz 9 | Thurs., Nov. 19, 4pm | Mon., Nov. 30, 10pm | BACT-9 through BACT-13 |
| Quiz 10 | Thurs., Dec. 3, 4pm | Mon., Dec. 7, 10pm | BACT-14 through BACT-19 |
| Quiz 11 | Thurs., Dec. 10, 4pm | Mon., Dec. 14, 10pm | BACT-20 through BACT-25-CI |