The Florida State University
College of Medicine

BMS 6302

Systemic Medical Microbiology and Infectious Disease

Spring 2012

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Instructors

Course Director

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Course Overview

Course Goals

Building upon the principles learned in General Medical Microbiology and Infectious Disease (BMS 6301), the medical student studies in detail infectious diseases in organ systems. The biological characteristics and pathologic mechanisms of infectious bacteria, viruses, fungi and parasites are covered. Functional and clinical implications are presented in the form of relevant clinical case examples that include the use of laboratory testing for diagnosis and treatment.

Learning Objectives

NOTE: Course-specific learning objectives that are matched to the FSU COM competency domains will be provided for each lecture, small group session and online module.

Course Objectives

Medical Knowledge Competency

- Apply concepts from the microbiology knowledge base (principles of microbial taxonomy, structure, physiological function, pathogenesis) to better understand patient cases.
- Employ the vocabulary for describing microbial taxonomy and diseases in discussions of patient information.
- Analyze the various mechanisms by which different categories of microorganisms cause dis-ease and recognize the related signs and symptoms in the human body.
- Differentiate among laboratory testing methods to diagnose infections, including appropriate specimen collection
- Interpret test results in the context of the patient's disease presentation and findings.
- Propose a differential diagnosis set for the infectious diseases common to each organ system.
- Choose among the general categories of therapeutic modalities available to treat infections
- Demonstrate problem solving ability and diagnostic reasoning with infectious diseases.
- Correlate microbial infection with radiologic imaging findings.

Patient Care

- Identify the effect of age on the types of infections seen in the life-cycle, including those seen in perinatal, pediatric, and geriatric patients.
- Analyze the clinical manifestations in the history and physical examination that point to infection.

Professionalism

- Practice professional attitudes and behaviors in interactions with others.

Systems-Based Practice

- Assess public health surveillance and measures to deal with infections in a population.

Integration with COM Goals and Objectives

Medical Knowledge Competency

- Demonstrate the application of the scientific bases of health, disease, and medicine to common and high impact medical conditions in contemporary society.
- Describe the development, structure and function of the healthy human body and each of its major organ systems at the macroscopic, microscopic, and molecular levels.
- Recognize and discuss the implications of altered body structure and function (pathology and pathophysiology) in the major organ systems with various infectious diseases.
- Identify changes in the structure and function of the human body associated with the aging process; distinguish normal age-associated changes with from disease.
- Describe the molecular basis of diseases and maladies and the way in which they affect the body (pathogenesis).
- Demonstrate the ability to use basic biobehavioral and clinical science principles to analyze and solve problems related to the diagnosis, treatment, and disease prevention.
- Employ strategies to support lifelong learning via both print and electronic sources to assist in making diagnostic and treatment decisions (e.g., practice guidelines) and to remain current with advances in medical knowledge and practice.

Patient Care

- Demonstrate appropriate use of laboratory and radiographic studies in making diagnostic and treatment decisions.
- Evaluate the patient's medical problems and formulate accurate hypotheses to serve as the basis for making diagnostic and treatment decisions.
- Acquire new information and collect data and critically appraise its validity and applicability to one's professional decisions, including the application of information systems technologies for support of clinical decision-making.
- Organize, research, present, and manage clinical information.
- Practice effective and compassionate communication, both verbally and in writing, with patients, their families, colleagues and others with whom physicians must exchange information in carrying out their responsibilities.
- Demonstrate the ability to work effectively as part of a health care team, with appreciation for the multiple contributions of other health care professionals and agencies to the health of the individual and the health of the community.

Professionalism

- Apply the principles of professionalism and high ethical standards in all aspects of medical practice, specifically competence, honesty, integrity, compassion, respect for others, professional responsibility and social responsibility.
- Demonstrate awareness of the health care needs of aging patients and a willingness to care for the elderly.

Course Format

Combination of lectures sessions and case-based, small-group discussion sessions.

Competencies

FSUCOM – Competencies –Microbiology 202 BMS 6302		
Competency Domains	Competencies Covered in the Course	Methods of Assessment
Patient Care	X	Multiple Choice Examination
Medical Knowledge	X	Multiple Choice Examination
Practice-based Learning	X	Multiple Choice Examination
Communication Skills	X	Peer, Self & Facilitator Evaluation of Small Group Exercises
Professionalism	X	Peer, Self & Facilitator Evaluation of Small Group Exercises
System-based Practice	X	Multiple Choice Examination

Policies

Americans with Disabilities Act

Candidates for the M.D. degree must be able to fully and promptly perform the essential functions in each of the following categories: Observation, Communication, Motor, Intellectual, and Behavioral/Social. However, it is recognized that degrees of ability vary widely between individuals. Individuals are encouraged to discuss their disabilities with the College of Medicine's Director of Student Counseling Services and the FSU Student Disability Resource Center to determine whether they might be eligible to receive accommodations needed in order to train and function effectively as a physician. The Florida State University College of Medicine is committed to enabling its students by any reasonable means or accommodations to complete the course of study leading to the medical degree.

The Office of Student Counseling Services
Medical Science Research Building
G146
Phone: (850) 645-8256 Fax: (850) 645-9452

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
97 Woodward Avenue, South
Florida State University
Tallahassee, FL 32306-4167
Voice: (850) 644-9566
TDD: (850) 644-8504
sdrc@admin.fsu.edu
http://www.fsu.edu/~staffair/dean/StudentDisability

Academic Honor Code

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. (Florida State University Academic Honor Policy)

Attendance Policy

The College of Medicine has detailed attendance policies as they relate to each cohort and events that conflict with course schedules**. See pages 28-30** of *FSUCOM Student Handbook* for details of attendance policy, notice of absences and remediation.

Required Materials

Required Text

Sherris Medical Microbiology, 6th Ed. (2010) Ryan, KJ and Ray, CG, editors. Access Medicine; Elsevier-Mosby, ISBN: 978-0-07-160402-4.

http://www.accessmedicine.com.ezproxy.med.fsu.edu/resourceTOC.aspx?resourceID=656

This textbook is available online through the Charlotte Edwards Maguire Medical Library, Access Medicine Textbook Collection.

Recommended Resources

Morbidity and Mortality Weekly Report (CDC) http://www.cdc.gov/mmwr/

Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, 7th Ed., Churchill Livingstone an imprint of Elsevier.

http://www.mdconsult.com.ezproxy.med.fsu.edu/books/about.do?about=true&eid=4-u1.0-B978-0-443-06839-3..X0001-X--TOP&isbn=978-0-443-06839-3&uniqId=267548881-2

Available online through the Charlotte Edwards Maguire Medical Library, MD Consult E-Book Collection.

Class schedules, weekly assignments, and information on coverage of exams are posted on the Blackboard website for this course. Copies of lecture topic summaries, and PowerPoint presentations are also posted on Blackboard.

Grading

FSU COM has adopted a pass/fail grading system for the first and second years. See page 31 of Student Handbook for details. In order for a student to receive a grade of PASS in Microbiology 202, all the following required course activities must be completed:

- Exams and quizzes consist of multiple choice, best answer questions based on clinical vignettes. An average of 70% from all combined block exams and quizzes, with no individual exam score <65%. Any exam with a score < 65% will need to be remediated as determined by the Course Director in order to pass the class.
- A passing grade must be attained on the NBME subject exam, as determined by the Course Director. This is a comprehensive examination, a Board-style assessment purchased from the NBME and administered electronically by FSU COM.
- Adequate and appropriate preparation and participation in all small group sessions (determined by small group faculty and Course Director evaluation with input from small group peers).

The material for examinations and quizzes will come from lectures, small group sessions, material on the Blackboard site for the course, ***and the textbook***.

There will be four integrated block examinations in the Spring semester. These examinations will cover material in all the courses for the four weeks prior to each examination. The number of questions on each exam that pertain to the microbiology content domain will reflect the lectures and small group sessions held during that block. Quizzes will be used during the weeks between exams to help students stay current with the material covered in the course. In addition, the NBME exam will be given as a comprehensive assessment covering material from both fall and spring semesters.