# MCB 5252
## SPRING 2017
### MICROBIOLOGY, IMMUNOLOGY, AND BASIS of IMMUNOTHERAPEUTICS

Department of Microbiology and Cell Sciences

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<td>Microbes as Agents of Infectious Diseases; Virulence Factors</td>
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<td>Epidemiology and Mechanism of Pathogenesis, Modes of Transmission</td>
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**EXAM I**  
**Friday January 27, 2017**

| 05 | 01-30 | Active/Passive Immunity, Immunization, Vaccine Development            |
| 06 | 02-06 | Immunotherapy, Immunotherapeutic Drugs and Cancer Treatment          |
| 07 | 02-13 | Immune Response to Infectious Diseases                               |
| 08 | 02-20 | Serology, Use of Immunological Testing for Identification of Infectious Diseases |

**EXAM II**  
**Friday February 24, 2017**

| 09 | 02-27 | Staphylococcal, Streptococcal and Enteric Diseases                   |
| 10 | 03-13 | Meningitis, Pneumonia, Tuberculosis, Selected Infectious Diseases   |
| 11 | 03-20 | Gonorrhea, Chlamydia, and other Sexually Transmitted Infections (STI’s) |

**Exam III**  
**Friday March 24, 2017**

| 12 | 03-27 | Hepatitis, HIV, and Herpes Infections, Cancer and Viral Infections  |
| 13 | 04-03 | Fungal, Parasitic, and Emerging Infectious Diseases (case study project due) |
| 14 | 04-10 | Antimicrobial Drugs, Antibiotics and Mechanism of Antibiotic Resistance |
| 15 | 04-17 | Antimicrobial Drugs, Antibiotics and Mechanism of Antibiotic Resistance |

**Exam IV**  
**Wednesday April 19, 2017**

**Textbook:** Medical Microbiology by P. R. Murray et al 8th edition (eBook, 2016, recommended). The e-textbook serves as a reference that provides reading materials which helps students prepare for the lectures, and provides supplemental materials for the lectures.
**Course Objectives:** This course will provide an understanding of microbial structure and function with regards to their role in pathogenesis and infection. Principles of pathogenesis and infection will be discussed in depth. The course will examine the mechanism of microbial diseases, modes of entry, circumventing host defense system, and transmission. The role of immune system in defending the host against infection, and what happens when it breaks down will be examined. General therapeutic principles and mechanisms of bacterial resistance to anti-microbial drugs will be covered. The discussion regarding anti-microbial agents will include: class and mode of action of anti-microbial agents. The relationship between structure and function and its role in rise of antibiotic-resistant strains will be discussed. A discussion regarding the use of Immunotherapeutic drugs for treating human diseases is also included. At the end of the term students should have a good understanding of the infectious diseases, their causative agents, the immune response to infectious diseases, available treatments, and the preventive measures against them. Students will also have an in-depth understanding of serological techniques and their role in identification of infectious diseases.

**WEBSITE:** The class is on E-learning (Canvas). The class syllabus, lecture presentations, study guides, and other materials will be posted on E-Learning throughout the semester. Details and clarifications about class policy will be posted online as announcements or emails on a regular basis. Students should check their emails and announcements on Canvas on a daily basis.

**Attendance:** Attendance is not required. Lectures are pre-recorded and will be posted online on a regular basis.

**EXAMS:** Four scheduled exams are given via ProctorU. Students take the exams on Canvas via ProctorU Test Management System using their own computers. Exams are given during the dates stated in the syllabus. You must schedule your exam between 6:00 am EST and 11:30 pm EST during the day of the exam. You need to register with the ProctorU Test Management System and reserve your spots for all four exams in advance. You must complete your registration and reservation by the first week of classes.

Exam materials come from lectures presentations, lecture notes, and assigned readings. *In some cases information presented in class may be in contradiction with information from other sources, especially internet-posted materials. In these cases exam questions will be based only on the information available in the textbook, lecture notes, or materials presented during the lecture presentations, and exams will be graded accordingly.* Practice exams/answers will be posted online to familiarize students with. Students should use these exams as real assessments of learning rather than study guides.

**Extra Credit Online Quizzes:** Online quizzes are provided for students to gain extra credit points towards their grade in class. Details TBA.

**CASE STUDY PROJECT:** Each student will be assigned with an infectious disease case study project. Students will use their knowledge gained throughout the semester to diagnose and infectious disease case. Details TBA.
GRADING/TESTS: The final class grade is based on accumulated points. There are four (4) regularly scheduled non-cumulative exams (320 points, 80 points per each). Also included is the case study project which is worth 80 points. The course is based on total of 400 points. A written (short answer) makeup exam is allowed for a missed exam due to an excused absence. Makeup exam contains short answer questions, fill-in-the-blank questions, but it does not contain any multiple choice, T/F questions.

Grading scale (Total accumulated points including exams and points from case study project):

- A  360 – 400 points
- A- 356 – 359.9 points
- B+ 348 – 355.9 points
- B  320 – 347.9 points
- B- 316 – 319.9 points
- C+ 308 – 315.9 points
- C  280 – 307.9 points
- C- 275 – 279.9 points
- D  240 – 274.9 points
- E  000 – 239.9 points

ACADEMIC HONESTY: As a result of completing the registration form at the University of Florida, I assume that every student has signed the following statement: “I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”

STUDENTS WITH DISABILITIES: Students requesting classroom accommodations should register with the Dean of Students Office. The office will provide documentation to the student, who can then bring the necessary material to the instructor when requesting accommodation. Students who take exams at the DRC must present documentation about their accommodations and register with DRC during the first two weeks of classes.

UNIVERSITY SUPPORT SERVICES: Resources are available on campus for students having personal problems or lacking clear career and academic goals that interfere with their academic performance. These resources include:

- University Counseling Center, 301 Peabody Hall, 352-392-1575, personal and career counseling.
- Student Mental Health, Student Health Care Center, 352-392-1171, personal counseling.
- Sexual Assault Recovery Services, 352-392-1161.
- Student Health Care Center, 352-392-1161.
- Career Resource Center, Reitz Union, 352-392-1601, career development assistance and counseling.

Useful Links:

- Center for Disease Control and Prevention: CDC: [http://www.CDC.gov](http://www.CDC.gov)
- National Institute of Allergy and Infectious Disease: https://www.niaid.nih.gov
- Microbiology and Cell Science: MCS: http://microcell.ufl.edu
- College of Agriculture and Life Sciences: CALS: http://www.ifas.ufl.edu
- University of Florida: UF: http://www.ufl.edu