

MCB5252-SPRING 2023
MICROBIOLOGY, IMMUNOLOGY, AND BASIS of
IMMUNOTHERAPEUTICS
Department of Microbiology and Cell Sciences

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WK	TOPIC
01-08	01-Prokaryotes, Eukaryotes, Acellular Structures, Cell Structure and Function
01-15	02-Microbes as Agents of Infectious Diseases; Virulence Factors
01-22	03-Epidemiology and Mechanism of Pathogenesis, Modes of Transmission
EXAM I	Thursday-Sunday, February 02-05, 2023 (Weeks 1-3)
01-29	04-Innate Immunity, Acquired Immunity, AMI vs. CMI
02-05	05-Hypersensitivity, Autoimmunity, and Immune Deficiency, Immune Disorder
02-12	06-Developing Immunity, Vaccines, Immune Response to Infectious Diseases,
Serology	
EXAM II	Thursday-Sunday, March 02-05, 2023 (Weeks 4-6)
02-19	07- Host-Parasite Interactions-Virulence Factors, Endotoxins vs. Exotoxins
02-26	08- Staphylococcal, Streptococcal, Meningitis, Pneumonia, and Tuberculosis
03-05	09- Enteric Diseases, Gonorrhoea, Chlamydia, other Sexually Transmitted Infections
(STI's)	
03-19	10- Antimicrobial Drugs, Antibiotics and Mechanism of Antibiotic Resistance
Exam III	Thursday-Sunday March 30-April 02, 2023 (Weeks 7-9)
03-26	11- Hepatitis, HIV, and Herpes, and Selected Viral Infections, Viral Infections and
Cancer	
04-02	12- Fungal, Parasitic, and Emerging Infectious Diseases
04-09	13- Use of Immunotherapeutics/Immunotherapy in Cancer Treatment, Immune-
Oncology	
04-16	14- Use of Immunotherapeutics/Immunotherapy in Cancer Treatment, Immune-
Oncology	
Exam IV	Thursday-Sunday April 20-23, 2023 (Weeks 10-13)

Textbook: Medical Microbiology by P. R. Murray et al 9th edition (eBook, 2020, 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.

Canvas Course 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. Students should use Canvas email for email correspondences.

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

EXAMS: Four scheduled exams are given through Canvas via Honorlock. Exams are conducted via Honorlock using a USB external wide-angle web camera. You must SWITCH from built-in webcam on your computer to an external camera prior to starting your exam session. Use of External Camera is required for all exams taken via Honorlock. Exams taken without the use of external camera are not valid and the student will receive a score of ZERO (0) for that exam. Each exam contains forty (40), all multiple-choice questions. You will have 90 minutes to complete each exam.

Use of External Side View Camera: Department of Microbiology & Cell Science requires the use of external side view wide-angle web-camera with Honorlock for ALL online assessments. All exams will be administered through Honorlock using Canvas course website. Students will use their own computers with an external camera (110° or 120° wide angle) for side-view monitoring. Unlike built-in webcams, external camera reveals the test-takers face and their work area (bench, monitor, keyboard) simultaneously. It is the student responsibility to purchase an external camera and properly set it up prior to starting each exam. See the course website in Canvas for tutorials and more

details on the proper use of External Camera. Use of SCRATCH PAPERS OR ANY OTHER RESOURCES IS PROHIBITED DURING THE EXAM SESSION.

Exam materials come from lectures presentations, lecture notes, and assigned textbook readings. Study guide posted for each exam provides an excellent outline for topics covered for each exam. 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, reading assignments, lecture notes, or materials presented during the lecture presentations, and exams will be graded accordingly. Practice exams/answers available through Canvas website to familiarize students with materials covered for each exam. Students should use these practice 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. Points from these quizzes are added to your total scores for your four exams. More details are available on Canvas under "FILES". Performance in quizzes can only help you. There is no penalty for not taking the quizzes. EACH QUIZ REMAINS OPEN FOR SEVEN (7) DAYS.

SUBMITTING THESE QUIZZES ARE CONSIDERED TIMELY CLASS PARTICIPATIONS, AND ABSOLUTELY NO MAKEUPS ARE ALLOWED.

Quizzes will no longer be available after the due date, and no late submission is possible. See Canvas for the assigned readings for each quiz.

Extra Credit Quizzes Submission Dates:

Extra Credit Quizzes	Opening Date	Submission Date
Quiz ONE	01/16/2023	01/22/2023
Quiz TWO	01/23/2023	01/29/2023
Quiz THREE	02/06/2023	02/12/2023
Quiz FOUR	02/13/2023	02/19/2023
Quiz FIVE	03/06/2023	03/12/2023
Quiz SIX	03/20/2023	03/26/2023
Quiz SEVEN	04/03/2023	04/09/2023
Quiz EIGHT	04/10/2023	04/16/2023
Quiz Makeup	04/17/2023	04/23/2023

CASE STUDY PROJECT: 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 Makeup exam is allowed for a missed exam due to an **excused** absence. Makeup exam contains short answer questions, fill-in-the blank questions, and multiple-choice questions. Requirements for class participation and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Grading scale (Total accumulated points including points from exams, quizzes, 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

Required Policies

Makeup Exam Policy-Requirements for class participation and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

-Students Requiring Accommodation

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

-UF Evaluations Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful

manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

-University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or in this class.

-Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Other 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, 392-1575, personal and career counseling.
- Student Mental Health, Student Health Care Center, 392-1171, personal counseling.
- Sexual Assault Recovery Services, 392-1161.
- Student Health Care Center, 392-1161.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

-Useful Links:

- Center for Disease Control and Prevention: CDC: <http://www.CDC.gov>

- US Food and Drug Administration: FDA: <http://www.FDA.gov>
- US Environmental Protection Agency: EPA <http://www.EPA.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 Libraries: UF Libraries: <http://www.uflib.ufl.edu>
- University of Florida: UF: <http://www.ufl.edu>

End Notes:

I genuinely care about your success in this course. Please reach out to me via email, phone calls, text messages. Your well-being during the semester is paramount to everything else. Please take care of your health while going through these stressful times in your professional life. Let me know if I can be of any assistance to you.