

MICR303: IMMUNOLOGY
COURSE OUTLINE SUMMER 2019

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INSTRUCTOR

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COURSE LOCATION

Engineering Comp Science Bldg 104
Mon, Thurs: 8:30-11:20

COURSE OBJECTIVES

This course provides an overview of the mammalian immune system and its function during health and disease. Students will learn the key components of the immune system, how diverse pathogens or substances are recognised, how pathogen-specific effector responses are generated, how immunological memory is generated, how immune responses are kept in check, how inappropriate immune responses can lead to disease, and how the immune system can be harnessed therapeutically. Examples of experimental approaches used to probe the function of the immune system will be included throughout the course.

TEXTBOOK: Janeway's Immunobiology, 9th Edition.

LECTURE NOTES:

Notes will be made available on the CourseSpaces site prior to lectures. Notes are arranged by topic, and a single topic may span multiple lectures. Lecture notes are not complete, and students will be responsible for all materials covered in the lectures.

COURSE CONTENT

Part I: The Immune System and its components

1. Introduction to the Immune System	Principles of innate and adaptive immunity (Ch.1)
2. Innate Immunity	Anatomical barriers; antimicrobial peptides complement; innate cell types and effector mechanisms; pattern recognition. (Ch. 2,3)
3. Adaptive Immunity I:	Antigen and antigen-presentation; generation of lymphocyte antigen receptors; T cell activation; T cell subsets and effector mechanisms;

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antibodies and antibody production

Part 2: The Immune System in Health and Disease

5. Vaccination

Strategies; roles of memory cells (Ch. 16)

6. Immunity to infectious pathogens and

No deferrals granted for missing a quiz

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6. Multiple choice scan sheets for machine scoring (bubble sheets) are considered the authentic exam answer paper and will be retained by the department for 1 year.
7. Professors may refuse to review/remark exams not written in indelible ink. In addition, requests for review/remark of a midterm exam must be made within one week of the exam being returned. Students are expected to promptly pick up midterm exams after marking has been completed, either in class or from the instructor.
8. Examination papers that have pages removed, or are mutilated will not be marked.
9. The instructor reserves the right to use plagiarism detection