

MICR 303: IMMUNOLOGY
COURSE OUTLINE SUMMER 2018

INSTRUCTORS

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LOCATION

Mon, Thurs, 8:30-11:20

TEXT

Janeway's Immunobiology, 9th Ed

OFFICE HOURS

Mon, Thurs, 11:30-
12:30 Petch 183

PLACE

Cornett Building B143

COURSE CONTENT

This course provides an overview of components of the immune system and how they function to generate diversity in immune responses, antibody-mediated and cell-mediated immune responses and antigen recognition, and the immune system and its functional role in health and disease. Experimental details on how the information has been obtained will be included throughout, where possible. Students will learn common techniques used by immunologists to probe the function of the immune system, including: flow cytometry, ELISA, use of transgenic mice, transfer of immune cell types, and pharmacological blocking or depletion of cell types/receptors/cytokines

May 14, 17, 24 Part I: Introduction to the Immune System

1. Overview of the immune system (Ch. 1)
2. Innate immunity: anatomical barriers, antimicrobial peptides, complement, pattern recognition (Ch. 2, 3).
3. Innate immunity: key cells and effector mechanisms (Ch. 2,3)

**May 24, 28, 31,
June 4**

4. Adaptive immunity: antigen recognition by B cells and antibody effector mechanisms (Ch. 4,10)
5. Adaptive immunity: antigens and antigen presentation to T cells (Ch. 6)
6. Adaptive immunity: T cell activation, subsets and effector mechanisms (Ch. 7,9)
7. Adaptive immunity: generation of lymphocyte antigen receptors, interactions between immune players (Ch. 5, 10)

Part 2: The Immune System in Health and Disease

June 4, 7

8. Immunological memory, vaccination (Ch. 11,16)
9. Immunity to infectious pathogens, pathogen evasion of immune responses (Ch. 13)

June 11, 14

10. Tumor immunology: tumor immune environment, immunotherapy (Ch. 16) (Dr. Smazynski)

June 18, 21 25

11. Generation of tolerance and regulatory mechanisms: B, T cell development, mechanisms preventing auto-reactivity (Ch. 8)
12. Immune-mediated disease: Autoimmunity, transplants (Ch. 15)
13. Mucosal immunity (Ch. 12)
14. Immune-mediated disease: Immunodeficiency, hypersensitivity and allergy (Ch. 13, 14)

ASSESSMENT OF STUDENT PERFORMANCE

(1) Techniques to be used:

- Grading of short answer and longer answer exam and quiz questions on material presented in the course, and assignment of a numerical mark to each question.
- Exams are based on material covered in lectures (slides, board, discussions). Lectures are based on information from the text and other sources. Textbook reading is recommended to reinforce information covered in class, and to provide additional details for those that are interested. Students won't be examined on information in the textbook that is not covered in class.

(2) Evaluation and weighting:

- Midterm 1* (May 28) 15%*
- Midterm 2* (June 11) 35%*
- Quizzes (May 24, June 4, 21) 10%**
- Final exam (June 28) 40%

*Of the 2 midterms, the poorest grade will contribute 15 marks, while the highest grade will contribute 35 marks.

**Of the 3 quizzes, the best 2 will count towards the total quiz grade (5% each).

No deferrals granted for missing a quiz

(3) UVIC Grading Scheme:

A⁺	90 - 100	B⁺	77 - 79	C⁺	65 - 69	F	< 50
A	85 - 89	B	73 - 76	C	60 - 64	N **	< 50
A⁻	80 - 84	B⁻	70 - 72	D	50 - 59		

** N grades

Students who have completed the following elements will be considered to have completed the course and will be assigned a final grade:

- Midterm 1, Midterm 2, Final Exam

Failure to complete one or more of these elements will result in a grade of “N” regardless of the cumulative percentage on other elements of the course. An N is a failing grade, and it factors into a student’s GPA as 0. The maximum percentage that can accompany an N on a student’s transcript is 49.

COURSE EXPERIENCE SURVEY (CES)

We value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete a confidential survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey you will receive an email inviting you to do so. Please ensure that your current email address is listed in MyPage (<http://uvic.ca/mypage>) . If you do not receive an email invitation, you can go directly to <http://ces.uvic.ca> . You will need to use your UVic netlink ID to access the survey, which can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

RESOURCE CENTER FOR STUDENTS WITH DISABILITY

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, approach the Resource Centre for Students with a Disability (RCSD) as soon as possible (<http://rcsd.uvic.ca/>.) in order to assess your specific needs.

DEPARTMENT INFORMATION AND POLICIES

1. The Department of Biochemistry and Microbiology upholds and enforces the University's policies on academic integrity. These policies are described in the current University Calendar. All students are advised to read this section.
2. Cell phones, computers, and other electronic devices must be turned off at all times unless being used for a purpose relevant to the class. Students having a cell phone, tablet, or computer on their person during an exam will be assumed to have it for the purpose of cheating.
3. Any recordings of lectures may only be performed with written permission of the instructor, and are for personal use only. The instructor retains copyright to such recordings and all lecture materials provided for the class (electronic and otherwise); these materials must not be shared or reposted on the Internet.
4. Course materials, such as notes, problem sheets, quizzes, examinations, example sheets, or review sheets, may not be redistributed without the explicit written permission of the instructor.
5. Students are expected to be present for the midterm and final exams. Instructors may grant deferrals for midterm examinations for illness, accident, or family affliction, and students must provide appropriate documentation 48 hours after the midterm exam. The Department of Biochemistry and Microbiology considers it a breach of academic integrity for a student taking a deferred examination to discuss the exam with classmates. Similarly, students who reveal the contents of an examination to students taking a deferred examination are considered to be in violation of the University of Victoria policy on academic integrity (see current University Calendar). Deferral of a final exam must be requested with an Academic Concession form and submitted directly to Undergraduate Records. Deferred final exams for fall term courses will be arranged by the instructor. Deferred final exams for spring term courses will be arranged through Undergraduate Records and must be written before the end of the summer term as stipulated in the University Calendar.
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/re-mark exams not written in indelible ink. In addition, requests for review/re-mark 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 software or other platforms to assess the integrity of student work.

*******In the event of extraordinary circumstances beyond the University's control, or at the discretion of the instructor, the content and/or evaluation scheme in this course is subject to change***