

**Microbiology 408: Microbial Pathogenesis  
Course Outline – 2018**

**Instructors:** Dr. Caroline Cameron, Room 247, Petch Building  
E-mail: [caroc@uvic.ca](mailto:caroc@uvic.ca)  
Office Hours: Monday's, 10:30-12:00 or by appointment

Dr. Fran Nano, Room , Petch Building  
E-mail: [fnano@uvic.ca](mailto:fnano@uvic.ca)  
Office Hours: TBA

**Course Website:** Material posted on CourseSpaces  
**Textbook:** No textbook, all necessary material will be provided in the lectures

**TENTATIVE LECTURE SCHEDULE**

Month	Day	Tentative Topics	Instructor	Exam/Assignment
January	4	Introduction	Dr. Cameron	
	8, 11, 15, 18, 22, 25, 29	Introduction to pathogens  Koch's postulates and commensal bacteria  Virulence factor discovery – methodology and medical relevance; includes short discussion of protective antigens and drug targets.  Bacterial Secretion systems  Examples of intracellular pathogens: Chlamydia and Mycobacterium.	Dr. Nano	
<b>February</b>	<b>1</b>		<b>Dr. Nano</b>	<b>MIDTERM #1</b>
February	5, 8, 19, 22, 26	Host-pathogen interactions <ul style="list-style-type: none"> <li>• Host defense mechanisms - bacterial evasion strategies</li> <li>• Microbial colonization and adherence strategies</li> <li>• Microbial invasion strategies</li> </ul> Mechanisms of bacterial pathogenesis <ul style="list-style-type: none"> <li>• Apoptosis/necroptosis</li> <li>• Toxin production</li> <li>• Biofilms</li> </ul>	Dr. Cameron	<b>February 19, problem-based learning module; microbial invasion strategies</b>
March	1, 5, 8, 12			

		<ul style="list-style-type: none"> <li>• Quorum sensing</li> <li>• Antigenic variation</li> </ul> <p>Microbiome</p> <ul style="list-style-type: none"> <li>• Interaction with host/pathogens</li> <li>• Role in protection from disease and susceptibility to disease</li> </ul>		
<b>March</b>	<b>15</b>		<b>Dr. Cameron</b>	<b>MIDTERM #2</b>
March	19, 22, 26, 29	<p>Examples of Pathogens:</p> <ul style="list-style-type: none"> <li>• Spirochetes</li> <li>• Mycobacteria</li> <li>• Gram-negatives</li> <li>• Gram-positives</li> </ul> <p>Combatting infectious diseases via antibiotics/vaccines/new therapeutic agents</p>	Dr. Cameron	<i><b>March 26, problem-based learning module; Gram-positives</b></i>
<b>April</b>	<b>5</b>		<b>Dr. Cameron</b>	<b>MIDTERM #3</b>

## GRADING SCHEME

Marking of short answer exam questions on material presented in the course and assignment of a numerical mark to each question. Evaluation of performance on the in-class projects.

<u>Evaluation of the Exams/Projects and Weighting</u>	
Midterm #1	February 1, 2018, 35% of final grade
Midterm #2	March 15, 2018, 40% of final grade
Midterm #3	April 5, 2018, 15% of final grade
Projects	Infectious Disease Grand Rounds (Nano) In-Class Problem-Based Learning Modules in Infectious Diseases (Cameron), 10% of final grade
NO FINAL	

## UVic Grading Scheme

**A+** 90 -100      **B+** 77 - 79      **C+** 65 - 69      **F** < 50

<b>A</b>	85 - 89	<b>B</b>	73 - 76	<b>C</b>	60 - 64	<b>N **</b>	< 50
<b>A<sup>-</sup></b>	80 - 84	<b>B<sup>-</sup></b>	70 - 72	<b>D</b>	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:

3 midterms, in-class projects

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.

**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/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 software or other platforms to assess the integrity of student work.”

### ***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 us regarding the course and our 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. We will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

### ***Centre for Accessible Learning***

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/.](http://rcsd.uvic.ca/)) in order to assess your specific needs.