



## CAMOSUN COLLEGE

*School of Arts & Science  
Biology Department*

*BIOL 104 Infectious Disease  
Fall 2011*

### COURSE OUTLINE

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#### 1. Instructor Information

- (a) Instructor: Linda Scotten
- (b) Office hours: Mon, Wed: 10:30-11:20, Thurs 1:30-2:20
- (c) Location: F342A
- (d) Phone with voice mail: 370-3482
- (e) E-mail: [lscotten@camosun.bc.ca](mailto:lscotten@camosun.bc.ca)
- (f) Web site: <http://faculty.camosun.ca/lindascotten>

#### 2. Intended Learning Outcomes

On completion of this course the student will be able to:

- 1. differentiate between bacteria, viruses, fungi, parasites and prions based on structural differences.
- 2. analyze the different patterns of transmission and virulence mechanisms used by microorganisms to produce disease.
- 3. describe how the nonspecific and specific host defenses work against a variety of organisms.
- 4. categorize appropriate methods for treatment and control of infectious agents including physical methods, antibiotics and disinfectants and vaccinations.
- 5. demonstrate the ability to practice aseptic technique in the microbiology lab and to use a variety of diagnostic tests to identify infectious agents.

#### 3. Required Materials

- (a) Lab Manual for Biology 104, includes Anthology Text
- (b) Disposable Lab Coat for use in Microbiology Lab only
- (c) Lecture outlines will be posted on the course website:  
<http://faculty.camosun.ca/lindascotten>

#### 4. Biology 104: Course Content and Schedule Fall 2011

| Week | LECTURE TOPIC  | Text Ref.                     | LAB EXERCISE  |
|------|--|-------------------------------|---|
|      | Monday / Wednesday   |                               | Thursday  |
| 1    | <i>Labour Day</i><br>Lec. 1: Relevance and History of Infectious Disease | Alcarno<br>p. 1-7             | Introduction to the Microbiology Lab and Lab Safety                   |
| 2    | Lec. 2: Classification and Diversity of Infectious Agents                | Evans, Ingraham<br>p. 8-18    | Lab 1: Isolation Technique  |
| 3    | Lec. 3: Bacterial Cell Structure and Function                            | Krasner<br>p. 19-26           | Lab 2: Microscopy / Diversity   |
| 4    | Lec. 4: Epidemiology   | Talaro,<br>p. 133- 143        | Lab 3: Bacterial Stains   |
| 5    | Lec. 5: Growth and Control   | Black<br>p. 27-36             | Lab 4: Physical Control: Media Preparation<br>Lab 6: Chemical Control |
| 6    | <i>Thanksgiving Day</i><br>Lec. 6: Antibiotic Resistance                 | Levy<br>p. 37-44              | Lab 5: Growth Parameters<br>Lab 7: Culture Media                      |
| 7    | <b>Midterm Exam (20%)</b><br>Lec. 7: Bacterial Metabolism                | Engelkirk, Burton<br>p. 45-55 | Lab 8: Microbial Contamination of Food and Water                      |
| 8    | Lec. 8: Bacterial Genetics<br>Lec. 9: Viruses                            | Pommerville<br>p. 56-68       | <b>Lab Midterm (10%) Labs 1-7</b>                                     |
| 9    | Lec. 10: Influenza<br>Lec. 11: Host Defence: Innate                      | Webster, Walker<br>p. 69-76   | Lab 9a: Diagnostic Microbiology                                       |
| 10   | Lec. 11: Host Defence: Innate  | Pommerville<br>p. 77-88       | Lab 9b: Diagnostic Microbiology                                       |
| 11   | Lec. 12: Host Defence: Adaptive  | Tortora<br>p. 89-107          | Lab 9c: Diagnostic Microbiology                                       |
| 12   | Lec. 13: HIV/AIDS  | Bauman<br>p. 108-114          | Lab 10: Normal Flora / Pathogens of the Nose and Throat               |
| 13   | Lec. 14: Pathogenesis of Infectious Disease                              | Murray<br>p. 124-132          | Lab 11: ELISA for Tracking an HIV Epidemic                            |
| 14   | Lec. 15: Emerging Infectious Diseases / Review                           | Morse<br>p. 115-123           | <b>Lab Final (15%) Labs 8-11</b>                                      |

The schedule on the previous page is provided to allow you to prepare for your labs in advance. The schedule and exam dates are subject to change as need arises. Since this is a laboratory based course attendance in the lab is mandatory. *Students who miss more than 2 hours of lab without a valid medical excuse will be docked 1% of their course mark per lab hour missed.*

Although labs are performed with a partner, all written material to be handed in for grading is to be presented individually. Plagiarism, including the copying of any part of assignments, laboratory reports, quizzes or exams is a serious offense and is considered to be an academic misconduct.

The final lecture exam will be comprehensive; however emphasis will be placed on previously untested material. Students are expected to write all tests and exams when scheduled. It is the student's responsibility to notify the instructor *in advance* if an exam must be missed. The student will be required to provide verification of emergency circumstance (i.e. note from Doctor) in order to write a make-up exam. Please do not schedule vacations during final exam period.

## 5. Basis of Student Assessment

- (a) Assignments and lab write-ups 5%
- (b) Prelab quizzes 5%
- (c) Exams: Lecture Midterm (20%) and Final Exam (25%)  
Lab Midterm (10%) and Final Exam (15%)
- (d) Pathogen Book Project 20%

## 6. Grading System

The following percentage conversion to letter grade will be used:

| Percentage | Grade | Description   | Grade Point Equivalency |
|------------|-------|---|-------------------------|
| 90-100     | A+    |   | 9                       |
| 85-89      | A     |   | 8                       |
| 80-84      | A-    |   | 7                       |
| 77-79      | B+    |   | 6                       |
| 73-76      | B     |   | 5                       |
| 70-72      | B-    |   | 4                       |
| 65-69      | C+    |   | 3                       |
| 60-64      | C     |   | 2                       |
| 50-59      | D     | Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite. | 1                       |
| 0-49       | F     | Minimum level has not been achieved.  | 0                       |

## 7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Registrar's Office or the College web site at <http://www.camosun.bc.ca>

### ACADEMIC CONDUCT POLICY

There is an Academic Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.

[www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html](http://www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html)