



## **COURSE OUTLINE**

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*Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for your records.*

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### **1. Instructor Information**

- (a) Instructor: Ian Browning
- (b) Office hours: Mon 13.30-15.20, Thur 10.30-11.20 or by appointment
- (c) Location: F314a
- (d) Phone: 250-370-3428, (4432 Interurban)
- (e) E-mail: [browning@camosun.ca](mailto:browning@camosun.ca)
- (f) Web site: <https://online.camosun.ca/>

### **2. Intended Learning Outcomes**

Upon successful completion, the student will be able to:

- 1. Use their knowledge of sterile lab technique to work safely with microorganisms in a lab environment.
- 2. Apply their understanding of the critical role of microorganisms in maintaining and remediating the environment to assess the consequences of human activities.

### **3. Required Materials**

- (a) Lab Manual: from Course D2L site
- (b) Lab Coat (may be supplied by the department)
- (c) Lecture note outlines, print from D2L:

### **4. Course Content and Schedule**

Lecture: 1 hour / week Fisher 306  
Mon: 15.30-16.20

Lab: 2 hours / week Fisher 222  
Tues: 13.30 – 15.20

**ENVR.103 SCHEDULE  
WINTER 2015**

| Week            | LECTURE TOPIC                                     | LAB EXERCISE   |
|-----------------|---|--|
|                 | Monday  | Tuesday  |
| 1<br>Jan 5/6    | Lec. 1: Course Introduction                       | <b>Lab Safety</b><br>LAB 1: Microscopy                                 |
| 2<br>Jan 12/13  | Lec. 2: Bacterial Cell Structure and Function     | LAB 2: Isolation Techniques<br><b>Environmental Isolate Experiment</b> |
| 3<br>Jan 19/20  | Structure and Function (continued)                | LAB 3: Bacterial Stains  |
| 4<br>Jan 26/27  | Lec. 3: Growth and Control                        | LAB 4: Chemical and Physical Methods of Control                        |
| 5<br>Feb 2/3    | Growth and Control (continued)                    | LAB 5: Growth Parameters   |
| 6<br>Feb 9/10   | <b>NO Lecture: Holiday Monday</b>                 | LAB 6: Culture Media   |
| 7<br>Feb 16/17  | Lec. 4: Bacterial Metabolism                      | LAB 7: Soil Bacteria: Nitrogen and Sulphur Cycles                      |
| 8<br>Feb 23/24  | Lec.5: Microbial Ecology: Population Interactions | <b>Lab Exam 1</b> (Labs 1-5)<br><b>Lecture Exam 1</b> (Lectures 1-4)   |
| 9<br>Mar 2/3    | Lec 6: Microbial Ecology Biogeochemical Cycling   | LAB 8: Bioremediation: Isolation of Oil Degrading Bacteria             |
| 10<br>Mar 9/10  | Lec.7: Sanitary Microbiology: Water Testing, BOD  | LAB 9: Enterobacteriaceae  |
| 11<br>Mar 16/17 | Sanitary Microbiology: Wastewater Treatment       | LAB 10: Detecting Coliform Bacteria in Water                           |
| 12<br>Mar 23/24 | Sanitary Microbiology: Drinking Water             | LAB 10 continue<br>EI Identification                                   |
| 13<br>Mar 30/31 | <b>Lecture Exam 2</b> (Lectures 5-7)              | LAB 10 continue<br>EI Identification                                   |
| 14<br>Apr 6/7   | <b>NO Lecture: Holiday Monday</b>                 | <b>Lab Exam 2</b> (Labs 6-10)  |

The course schedule 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 lab-based course, attendance in the lab is mandatory. Students who miss labs without a valid medical excuse may be required to repeat the course. *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 (Weighting)**

- (a) Assignments: 20% of grade**
  - Environmental Isolate Project 5%**
  - Assignments and Lab Reports 15%**
  
- (b) Quizzes: 5% of grade**
  - Weekly prelab quizzes**
  
- (c) Exams:**
  - Lecture Exam 1 = 20%,**
  - Lecture Exam 2 = 20%**
  - Lab Exam 1 = 15%**
  - Lab Exam 2 = 20%**

## 6. Grading System

| 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)