

## COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/envr.html>

- Please note: the College electronically stores this outline for five (5) years only.  
 It is **strongly recommended** you keep a copy of this outline with your academic records.  
 You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

### 1. Instructor Information

|     |               |                         |                    |  |
|-----|---------------|-------------------------|--------------------|--|
| (a) | Instructor:   | JEREMY HACKETT          |                    |  |
| (b) | Office Hours: | Mondays, 11.20 to 12.20 |                    |  |
| (c) | Location:     | Ewing 248               |                    |  |
| (d) | Phone:        |                         | Alternative Phone: |  |
| (e) | Email:        | hackettj@camosun.bc.ca  |                    |  |
| (f) | Website:      |                         |                    |  |

### 2. Intended Learning Outcomes

*(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)*

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

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

### 3. Required Materials

- (a) ENVR 103 Lab Manual, includes Anthology Text
- (b) Lab Coat (may be supplied by the department)
- (c) Lecture note outlines, print from D2L

(b) Other

### 4. Course Content and Schedule

Lecture: 1 hour / week  
 Mondays 9:30-10:20  
 Fisher 302

Lab: 2 hours / week  
 Tuesday 9:30 to 11:20  
 And 2.30 to 4.20  
 Fisher 222

**ENVR.103 SCHEDULE  
WINTER 2012**

| Week | LECTURE TOPIC<br>Monday                               | TEXT<br>REF.     | LAB EXERCISE<br>Tuesday   |
|------|---|------------------|---|
| 1    | Lec. 1: Course Introduction                           | 1-13             | Lab Safety<br>LAB 1: Microscopy   |
| 2    | Lec. 2: Bacterial Cell Structure<br>and Function      | 14-33            | LAB 2: Isolation Techniques   |
| 3    | Structure and Function<br>(continued)                 | 34-41            | LAB 3: Bacterial Stains   |
| 4    | Lec. 3: Growth and Control                            | 42-58            | LAB 4: Chemical Control of Growth<br>LAB 5: Physical Methods of Control |
| 5    | Growth and Control<br>(continued)                     | 42-58            | LAB 6: Growth Parameters  |
| 6    | Lec. 4: Bacterial Metabolism                          | 59-70            | LAB 7: Culture Media  |
| 7    | <b>Reading Break</b>                                  |                  | <b>Lab Midterm</b> (Labs 1-5)   |
| 8    | <b>Lecture Midterm</b><br>(Lectures 1-4)              |                  | LAB 8: Soil Bacteria:<br>Nitrogen and Sulphur Cycles                    |
| 9    | Lec. 5: Microbial Ecology:<br>Population Interactions | 79-91            | LAB 9: Bioremediation:<br>Isolation of Oil Degrading Bacteria           |
| 10   | Microbial Ecology<br>Biogeochemical Cycling           | 71-78<br>106-110 | LAB 10: Enterobacteriaceae  |
| 11   | Lec. 6: Sanitary Microbiology:<br>Water Testing, BOD  | 92-106           | LAB 11: Detecting Coliform Bacteria<br>in Water                         |
| 12   | Sanitary Microbiology:<br>Wastewater Treatment        | 92-106           | LAB 11 continue<br>EI Identification                                    |
| 13   | Sanitary Microbiology:<br>Drinking Water              | 92-106           | LAB 11 continue<br>EI Identification                                    |
| 14   | Lec. 7: Microbial<br>Biotechnology                    | 111-117          | <b>Lab Final</b><br>(Labs 7-11)   |

## 5. Basis of Student Assessment (Weighting)

(This section should be directly linked to the Intended Learning Outcomes.)

- (a) Assignments: 15% of grade
  - Term Paper 5%
  - Environmental Isolate Project 5%
  - Assignments and Lab Reports 5%
- (b) Quizzes: 5% of grade
  - Weekly prelab quizzes
- (c) Exams:
  - Lecture exams: Midterm 20%, Final 25%
  - Lab exams: Midterm 15%, Final 20%

## 6. Grading System

(No changes are to be made to this section unless the Approved Course Description has been forwarded through the Education Council of Camosun College for approval.)

### Standard Grading System (GPA)

| 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                       |

### Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at [camosun.ca](http://camosun.ca) for information on conversion to final grades, and for additional information on student record and transcript notations.

| Temporary Grade | Description  |
|-----------------|--|
| I               | <i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.  |
| IP              | <i>In progress:</i> A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. (For these courses a final grade will be assigned to either the 3 <sup>rd</sup> course attempt or at the point of course completion.) |
| CW              | <i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.  |

## 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, at Student Services, or the College web site at [camosun.ca](http://camosun.ca).

## STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED