**CAMOSUN COLLEGE**
***School of Arts & Science***
***Department***

***ENVR 210: Aquatic Environments***
***Fall, 2010***

# COURSE OUTLINE

**The Approved Course Description is available on the web @** _____

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

## 1. Instructor Information

(a) Instructor: Steve Gormican

(b) Office hours: Mon 13:30 -14:30 & Thurs 13:30- 14:30

(c) Location: F308B

(d) Phone: 370-3423

(e) E-mail: gormicans@camosun.bc.ca

## 2. Intended Learning Outcomes

At the completion of this course, students will possess the expertise and proficiency to be able to:

- Utilize the specialized vocabulary of aquatic sciences
- Describe and measure lake and ocean morphological features
- Compare the physical and chemical properties of fresh and marine waters
- Describe lake and ocean layering and vertical mixing processes
- Identify the processes for surface circulation patterns in oceans and the linkages with atmospheric processes
- Identify the components of waves and tides; utilize standard tide and current tables
- Compare the chemical components of lakes and oceans
- Describe nutrient limitation in lakes and oceans and compare the processes involved
- Identify the components of light and its relationship with primary production
- Identify processes which affect lake and marine primary production
- Compare lake and ocean phytoplankton and zooplankton groups and the factors which affect population abundance

## 3. Required Materials

(a) ENVR Lab Manual (S. Gormican Fall, 2010)
ENVR Study Guide (S. Gormican, Fall, 2010)

b) Other oceanography and limnology texts are available on Reserve in the library under ENVR 210

## 4. Course Content and Schedule

| WEEK | Beginning | COURSE MATERIALS |
|---|---|---|
| 1 | Sept. 06 | Introduction to Lakes and Oceans (Unit 1)<br>Lake and Ocean Morphology (Unit 2) |
| 2 | Sept. 13 | Lab activity TBA<br>Properties of Water; Lake Circulation (Unit 3) |
| 3 | Sept. 20 | Lab #2: Lake Morphology<br>Charts, Maps and Navigation (Unit 4) |
| 4 | Sept. 27 | Lab #3: Charts and Navigation (#3A OR #3B)<br>Water Masses Mixing Processes (Unit 5) |
| 5 | Oct 04 | Lab # 4. Water Masses and T-S Diagrams<br>Atmospheric Circulation and Weather (Unit 6)<br>Surface Circulation (Unit 7) |
| 6 | Oct. 11 | **No Lab** – Thanksgiving Holiday<br>Waves (Unit 8) |
| 7 | Oct. 18 | Lab #5. Wind Bands & Surface Currents<br>Tides (Unit 9)<br>Estuaries and BC Oceanography (Unit 10) |
| 8 | Oct. 25 | Lab #6 Waves<br>Dissolved Ions and Gases (Unit 11 and Unit 12) |
| 9 | Nov 01 | Lab #7 Tides<br>Water Quality (Unit 9x)<br>Nutrients (Unit 14) |
| | **Nov. 02** | **Mid-term exam due.** |
| 10 | Nov. 08 | Lab #8. Seasonal Changes in Lakes<br>Nutrients (Unit 14) cont. |
| 11 | Nov. 15 | Lab # 9x. Water & Sediment Standards<br>Light (Unit 15)<br>Primary Production (Unit 16) |
| 12 | Nov. 22 | Lab #10. Nutrient Budget<br>Primary Production (Unit 16) cont. |
| 13 | Nov. 29 | Lab #11. Submarine Light and Primary Production<br>Zooplankton/Secondary Production (Unit 17) |
| 14 | Dec. 06 | Review in lab time slot.<br>Local Marine Issues and Review |
| 15/16 | Dec. 13-21 | Final exam period. Date to be announced. |

## 5. Basis of Student Assessment (Weighting)

(a) Assignments

Weekly lab exercises (10): 35%

(b) Exams

Mid-term exam: 25%
Final exam: 40%

## 6. Grading System

The following percentage conversion to letter grade will be used:

| | | |
|---|---|---|
| A+ = 90 - 100% | B = 73 - 76% | D = 50 - 59% |
| A = 85 - 89% | B- = 70 - 72% | F = 0.0 - 49% |
| A- = 80 - 84% | C+ = 65 - 69% | |
| B+ = 77 - 79% | C = 60 - 64% | |

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

### EARNING 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