CAMOSUN COLLEGE
School Of Arts & Science
Environmental Technology

Envr 209 Waste Management Remediation
Winter 2004

COURSE OUTLINE

This course covers pollution control, waste management principles and techniques and the concept of industrial ecology. Particular emphasis is given to hazardous secondary materials management, hazardous spill prevention and clean up, contaminated site remediation and associated legislation.

Prerequisites: ENVR 109,110 and CHEM 121.

For current information on the coverage of topics in this term see the course schedule below.

1. Instructor Information

(a) Instructor: George Giles, P. Eng

(b) Office hours: Thursdays 1:30 pm to 2:00 pm plus by appointment

(c) Location: F-344D

(d) Phone: TBA
Alternative: 477-2202

(e) E-mail: gegiles@shaw.ca

(f) Website: n/a

2. Intended Learning Outcomes

At the end of this course, students will be able to:

1. Discuss basic waste management technology
2. Demonstrate skills in contingency planning, basic training in marine oil spill response, and oil spill management
3. Discuss provincial and federal legislation on
    a. Solid, liquid and gaseous waste management
    b. Transportation of hazardous wastes
    c. Environmental Impact Assessment
    d. Contaminated Site Remediation
    e. Management of hazardous and toxic wastes
    f. Marine pollution
4. Outline how to conduct a preliminary site investigation and develop a site profile for a potentially contaminate site

5. Discuss environmentally sound waste management options such as
    a. Pollution prevention (PP or P2)
    b. Environmental management systems (EMS's)
    c. Waste reduction, recycling and reuse (WR3)
6. Discuss the analytical techniques for some of the more common pollutants
7. Participate in an oral discussion of environmental pollution and monitoring of the environment
8. Discuss the role and response of society to environmental issues.

3. Required Materials

(a) Texts – The Following text is optional: Nathanson, J., "Basic Environmental Technology, 4th Edition." Prentice Hall. Columbus, Ohio.2003. There are two copies on special reserve in the library; students might find purchase of the book worthwhile however, both for this course and a general reference. Available from the Camosun Bookstore.

Other N/A

4. Course Content and Schedule

The class will meet in Young 312 every Thursday at 8:30 am beginning on January 8, 2004, except there is no class on February 12 during Reading Break.

The course will consist of lectures, field trips and include invited speakers.

Students should allocate five hours for each session. In the case of field trips, wear clothing that will keep you warm and dry and which you don't mind getting a bit grubby. Proper shoes with closed toes and heels are particularly important. Waterproof boots with good tread are recommended for the visit to the drydock.

Attendance will not be taken; however, be aware that the final grade will be based in part on field trip reports and that the examinations will be based on all of the lectures, field trips and presentations by guest lecturers. You will obtain maximum benefit from full attendance and class participation.

Date	Activity
08-Jan-04	Lecture - environmental chemistry/microbiology and sewage treatment
15-Jan-04	Field Trip - Sewage Treatment Plant; Lecture on pulp mills
22-Jan-04	Field Trip - Pulp Mill
29-Jan-04	Lecture - Solid waste management, 3R's
05-Feb-04	Field Trip - Solid Waste Disposal Site; Lecture on oil spills
12-Feb-04	No Class - Reading Break
19-Feb-04	Field Trip - Oil Spill Response; Lecture on env. assessment (CEAA, BCEAA)
26-Feb-04	Mid-term Exam; Lecture on env site assessments, ISO 14001
04-Mar-04	Field trip - ISO 14001 - Esq. Drydock; Lecture on env. mgt. Systems, hazardous materials
11-Mar-04	Guest lecture - EMS by BC Ferry Services; lecture on cont'd sites/remediation
18-Mar-04	Guest lecture - Air pollution
25-Mar-04	Guest lecture - Air pollution; Field trip to air monitoring stn.
01-Apr-04	Lecture on water hydraulics
08-Apr-04	Lecture on sanitary sewers and stormwater management

Camosun's examination week for the fall session runs from April 13-17 and 19-21.

5. Basis of Student Assessment (Weighting)

	%
Quizzes	10
Field Trip Reports	30
Mid-term Exam	25
Final Exam	35
TOTAL	100

6. Grading System

The following percentage conversion to letter grade will be used:

A+ = 95 - 100%	B = 75 - 79%	D = 50 - 59%
A = 90 - 94%	B- = 70 - 74%	F = 0.0 - 49%
A- = 85 - 89%	C+ = 65 - 69%	I = See Calendar for Details
B+ = 80 - 85%	C = 60 - 64%	AUD = Audit

W = Official withdrawal has taken place.

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

Computer with high-speed internet access, email, MS Office.

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/2-8