

## School of Arts & Science ENVIRONMENTAL TECHNOLOGY DEPARTMENT ENVR 209

Waste Management - Remediation Winter 2016

#### COURSE OUTLINE

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

#### 1. Instructor Information

Instructor:	Michael Kory		
Office Hours:	Wednesday 2:30 - 4:30 or by appointment		
Location:	F344D		
Phone:	(250) 370-3506	Alternative Phone:	(250) 516-2415
Email:	KoryM@camosun.bc.ca		
Website:	D2L		

#### 2. Intended Learning Outcomes

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

- 1. Discuss basic waste management technology.
- Demonstrate skills in contingency planning, basic training in marine oil spill response, and oil spill management.
- 3. Discuss provincial and federal legislation on:
  - Solid, liquid and gaseous waste management.
  - Contaminated site remediation.
  - Environmental impact assessment.
  - Transportation of hazardous wastes.
  - Management of hazardous and toxic wastes.
  - Marine pollution.
- 4. Outline how to conduct a preliminary site investigations and develop a site profile for a potentially contaminated site.
- 5. Discuss environmentally sound waste management options such as:
  - Environmental management systems (EMSs).
  - Pollution prevention (PP or P2).
  - 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", 4<sup>th</sup> or 5<sup>th</sup> Edition. Prentice Hall, Columbus, Ohio.2008. Although the text is not required, there are two copies on special reserve in the library; students might find purchase of the book worthwhile for a general reference. The text can be ordered through the Camosun Bookstore.

Other: Recommended reading links provided in lectures.

### 4. Course Content and Schedule

The course will consist of lectures, field trips and includes invited speakers. There is no formal laboratory component to ENVR 209. Due to scheduling for multiple sections of this course and professional obligations, dates for field trips and speakers will be announced as visits are formalized. As much notice as possible will be given. Field trips will be scheduled on Mondays and Tuesdays and to accommodate both ENVR 209 sections. Guest speakers will generally visit during Thursday's class.

For 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 practical heels are particularly important. Waterproof boots with good tread are recommended for the visit to the Saanich Wastewater Treatment Plant, Hartland Road Solid Waste Facility, and any other field trip scheduled inadvertently on rainy days. Please be prepared to fill out a question sheet and take notes on field trips. Please attempt to meet at the bus at or before the scheduled class start times on field trip days to ensure we get as much time as possible at the field site; municipal facilities typically prefer to end tours at 4:00 PM.

Attendance will not be taken; however, be aware that 5% of your final grade will be based in part on field trip/guest speaker feedback forms and class discussions. Keep in mind that the examinations will be based on all of the lectures; with a minor contribution from field trips and presentations by guest lecturers directly related to lecture material. Please be welcoming to guest lecturers who have generously volunteered time from their busy schedules, and since they are experts in their fields, lots of questions are encouraged. This course covers a lot of material in a wide variety of topics. I hope we will all enjoy it.

#### **ENVR 209 - WINTER 2016 SCHEDULE.**

Note: Dates for guest speakers and class events are tentative and subject to change.

Week	Date	Monday F306 (2:30-5:20) Tuesday WT 201 (9:30-12:20)	Thursday F336 (3:30- 5:20)	
1	Jan 11/12/14	Course introduction; outline; grading:	Introduction to Air Quality	
2	Jan 18/19/21	Field Trip:Topaz AQ station	Air Quality Monitoring	
3	Jan 25/26/28	Air Quality Emission Controls	Air Quality Management	
4	Feb 1/2/4	Liquid Wastes	Air Quality Quiz	
5	Feb 8/9/11	Section 001A: Family Day-No class Section 001B: Field Trip: Saanich Peninsula Sewage Treatment Plant	CRD Guest speaker Roles of CRD Liquid waste Source control Sewage issues	
6	Feb 15/16/18	Liquid Waste Management	Liquid Waste Management	
7	Feb 22/23/25	Section 001A: Field Trip: Saanich Peninsula Sewage Treatment Plant Section 001B:Liquid Waste Management discussions	Liquid Waste quiz	
8	Feb 29- March 1/3	Field Trip: Hartland Rd. Engineered Landfil	Solid Waste-Recycling	
9	March 7/8/10	Solid Waste-Recycling	Guest Speaker Fungi and remediation	
10	March 14/15/17	Contaminated Sites	Solid Waste/Recycling quiz	
11	March 21/22/24	Contaminated Sites	Environmental Impact Assessment Risk Assessment Guest Speaker MOE	
12	March 28/29/31	001A: Easter Monday-no class Petroleum Industry-Marine pollution Pollution prevention	Environmental management Systems	
13	April 4/5/7	Environmental Impact assessments	Contaminated Sites/ Assessments quiz	
14	April 11/12/14	Student presentations	Reviews	
	April 18-26	EXAM period EXAM TBA	EXAM TBA	

### 5. Basis of Student Assessment (Weighting)

Please note that all quizzes, assignments, papers and presentations must be completed; as well, field trips and guest speaker presentations must be attended to fulfill the requirements of the course.

Component	Grade %
Quizzes (4)	40
Assignments (2)	10
Class Research Paper (15%) and Presentation (5%)	20
Class Participation; field questionnaires; class exercises	5
Final Exam	25
TOTAL	100

### 6. Grading System

# Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	Α		8
80-84	A-		7
77-79	B+		6
73-76	В		5
70-72	B-		4
65-69	C+		3
60-64	С		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** for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description	
I	Incomplete: 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	In progress: A temporary grade assigned for courses that, due to design may requal a further enrollment in the same course. No more than two IP grades will be assign for the same course. (For these courses a final grade will be assigned to either the 3rd course attempt or at the point of course completion.)	

CW

Compulsory Withdrawal: 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 <a href="mailto:camosun.ca">camosun.ca</a>.

#### 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.

Please note that plagiarism will be treated with zero tolerance. Do not copy anything from published sources or another student in any way that violates policy. Student(s) violating policy will be given a zero grade for work(s) submitted.