

**Environmental Technology Department
Faculty of Arts and Sciences**

January 09, 2003

Envr 209 Waste Management and Site Remediation Winter 2003

Course Description

This course provides an introduction to basic theories and current practices in waste management and contaminated site remediation. The course consists of classroom presentations on a variety of environmental topics by the course leader and invited speakers, complemented by field visits to waste management and contaminated sites in Greater Victoria area and the Capital Regional District (CRD).

The major topics covered are:

- Solid waste management
- Municipal and industrial liquid waste management
- Gaseous waste management
- Sources and types of special and hazardous wastes
- Contaminated site investigation and remediation
- Monitoring concepts and methods
- Pollution prevention and cleaner production
- Spill prevention and clean up
- Marine oil spill response and management
- Contingency planning
- Environmental management systems (ISO 14001)
- Legislation (Acts, Regulations, Bylaws)

Speakers from industry, consulting companies, waste management companies and government agencies will make presentations on recent developments in the fields of cleaner production, pollution prevention, waste management, contaminated site remediation, bioremediation and incineration. Two weeks will be devoted to the topic of air pollution featuring a speaker from BC Environment.

Field visits planned are to:

- Saanich Waste Water Treatment Plant
- Vancouver Island Brewery (in theory, to look at waste management)
- The Provincial Emergency Program (PEP) Operations Centre
- Esquimalt Graving Dock
- Canadian Coast Guard Response Centre

A schedule of field visits is in a separate document.

January 09, 2003

Envr 209

Waste Management and Site Remediation

Winter 2003

Learning Outcomes and Expectations

Students in Envr 209 are expected to:

- ❑ Gain a basic understanding of waste management technology
- ❑ Develop skills in contingency planning and acquire basic training in marine oil spill response and management
- ❑ Become familiar with provincial and federal legislation on
 - solid, liquid and gaseous waste management
 - transportation of hazardous wastes
 - environmental impact assessment
 - contaminated site remediation
 - management of hazardous and toxic wastes
 - marine pollution
- ❑ Understand how to conduct a preliminary site investigation and develop a site profile for a potentially contaminated site
- ❑ Be aware of environmentally sound waste management options such as
 - pollution prevention (PP or P2)
 - environmental management systems (EMSs)
 - waste reduction, recycling and reuse (WR3)

Envr 209 students will have seen many of these systems in operation at one or more industrial sites on Vancouver Island.

Students are expected to develop an understanding of analytical techniques for some of the more common pollutants.

In addition to the tangible expectations above, students are expected to acquire a sense of perspective with respect to environmental pollution and monitoring of the environment as well as gain an appreciation of the role and response of society to environmental issues.

Lecture Schedule

Date	Time	Topics
January		
09	08:30 am	Introductions/role/overview Administration/Handouts
	09:00 am	Break
	10:00 am	Lecture/PP – Introduction to Waste Management
	Noon	Questions/discussion
16	09:30 am	Video – Oil Spill Response Preparation
	10:00 am	Visit to Canadian Coast Guard
23	08:30 am	Environmental Management Systems
	10:00 am	BC Ferries – in class guest lecture
30	09:30 am	Visit to Saanich Wastewater Treatment Plant
	Noon	Post mortem/observations/discussion
February		
06	09:30 am	ISO 14001
	10:00 am	Visit to the Esquimalt Graving Dock
	Noon	Post mortem/observations/discussion
13	Reading Break – Electronic Mid-Term Exam	
20	08:30 am	Oil Spill Management Electronic Mid-Term Exams due
27	09:30 am	Air Quality Basics
	10:00 am	Jacques Whitford - in class guest lecture/demonstrations
March		
06	08:30 am	Emergency Response Planning
	10:00 am	Visit to headquarters of the Provincial Emergency Program
	Noon	Post mortem/observations.discussion
13	09:30 am	Site remediation – in class lecture
20	09:30 am	Environmental monitoring – in class lecture
27	09:30 am	Cleaner Production – in house guest lecture
April		
03	08:30 am	Mr. Steve Sakiyama, Air Quality
10	08:30 am	Mr. Steve Sakiyama, Air Quality

FIELD TRIPS and GUEST LECTURERS
Schedule and Information - Winter 2003

January 09

Administration

Hand-outs

Lecture: Introduction to the Subject

January 16 Canadian Coast Guard

MARINE OIL SPILL RESPONSE/EQUIPMENT

Key Contact: Mr. Paul Brett
Telephone: 1 250 757 2059
Facsimile: 1 250 757 2058
e-mail: tarka91@shaw.ca
Address: 25 Huron Street, Victoria, B.C.
Website: www.pacific.ccg.gc.ca/index.htm

January 23 BC Ferries

ENVIRONMENTAL MANAGEMENT SYSTEM

Key Contacts: Mr. Rob Hamilton; Ms. Alisha Rutski

Telephone: 1 250 381 1401
Facsimile: 1 250 361 3455
e-mail: rob.Hamilton@bcferries.com
Address: 838 Fort Street, Victoria, B.C. V8W 1H8
Website: bcferries.com

January 30 Saanich Peninsula Wastewater Treatment Plant

WASTEWATER

Key Contacts: Mr. Denis Perreault
Telephone: 1 250 656 2425
Facsimile: 1 250 655 4166
e-mail: dperreault@crd.bc.ca
Address: 9055 Mainwaring Road, Sidney, B.C.
Website: www.eocp.org/spwwtp.html

February 06 Esquimalt Graving Dock

ISO 14001 – WASTE MANAGEMENT SYSTEM

Key Contacts: Daryl Lawes; Melissa Sztybel; Katrina
Environmental Services

Telephones: 1 250 363 6985 (Daryl); 1 250 363 7516; 1 250-363-3711

Facsimile: 1 250-363-3808

e-mail: daryl.lawes@pwgsc.gc.ca
melissa.sztybel@pwgsc.gc.ca

Address: 825 Admirals Road, Victoria, V9A 2P1

Website: <http://w3.pwgsc.gc.ca/pacific/egd/general.htm>

February 13 Reading Break

February 27 Jacques Whitford Environment Limited

AIR QUALITY AND AQ INSTRUMENTATION

Key Contacts: Mr. Kurban (Ali) Keshvani, Air Quality Manager

Telephone: 1 604 436 3014

Facsimile: 1 604 436 3752

e-mail: kkeshvan@jacqueswhitford.com

Address: 3771 North Fraser Way, Unit 1, Burnaby, B.C. V5J 5G5

Website: jacqueswhitford.com

March 06 Provincial Emergency Program (PEP)

Key Contacts: Mr. Cam Filmer, Chief Operations Officer

Telephone: 1 250 952 4846

Facsimile: 1 250 952 4888

e-mail: cam.filmer@gems3.gov.bc.ca

Address: 455 Boleskine Road, Victoria V8Z 1E7

Website: PEP.bc.ca