

INSTRUCTOR: Tim Elkin.
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LEARNING OUTCOMES:

Upon completing the course students should be able to

- demonstrate knowledge of the theory and practice of environmental management
- demonstrate a working ability with specific techniques and tools used in the field of environmental management

CONTENT:

The course introduces the student to the theory and practice of environmental management at the urban and regional scale. A preventive approach is explored and applied to industrial and urban systems. A key theme is the collection, interpretation and synthesis of environmental data for decision making. Specific techniques and tools are examined including full cost accounting and cost-benefit analysis, the use of Geographic Information Systems, environmental indicators and state of the environment reporting, environmental auditing and environmental management systems.

APPROACH:

This is an applied course; that is, the emphasis is on the *application* of theory to practice in the field of environmental management. Guest speakers - consultants and government officials – are invited on an occasional basis to discuss current practice. Several case studies and site visits within the local urban region are introduced to allow the student to critically examine local issues and policy.

An emphasis is placed on project work that is carried out in small groups.

COURSE READINGS

Course text:

Jackson, T., 1996, Material Concerns. Routledge

A lab manual is for sale in the college bookstore.

RESERVE MATERIAL

Roseland, M., 1998, Toward Sustainable Communities. Gabriola Island, BC: New Society

Roseland M., ed., 1997, Eco-City Dimensions. Gabriola Island, BC: New Society

EVALUATION SUMMARY

Environmental Technology Project	- 10%
EMS Project	- 20%
Energy Project	- 10%
Transportation Project	- 15%
Indicators Project	- 10%
Urban Habitat Project	- 20%
Case Study	- 15%

COURSE OUTLINE AND READINGS

Week of

WEEK 1	Introduction to the course
Jan 6	Focus on the urban region Viewing the environment as a material concern Preventive approach to environmental management Readings: Jackson Chs.1,2,3
WEEK 2	Principles of prevention
Jan 13	Environmental auditing and Environmental Management Systems Readings: Jackson Ch.4 Introduction to EMS project
WEEK 3	Environmental Management Systems
Jan 20	Guest speaker
WEEK4	Environmental Management System (EMS) Project
Jan 27	
WEEK 5	Economics of prevention
Feb 3	Obstacles to change Readings: Jackson Chs.5, 6 Moore J., <i>Inertia and Resistance on the Path to Healthy Communities</i> , in Roseland M., ed., 1997, <u>Eco-City Dimensions</u> . Gabriola Island, BC: New Society Introduction to energy project
WEEK 6	Victoria's Solar House
Feb 10	SITE VISIT

Note: Feb 13/14 is Reading Break

WEEK 7 Feb 17	Re-thinking the industrial economy Demand-side management: The case of transporation Readings: Jackson Ch.7
WEEK 8 Feb 24	Transportation Roseland, <u>Toward Sustainable Communities</u> Ch.9, <i>Transportation planning and traffic management</i>
WEEK 9 March 3	Negotiating change in society Environmental policy Importance of environmental information: State of the Environmental reports and environmental indicators Readings: Jackson Ch.8 Introduction to Indicators project Introduction to CASE STUDY
WEEK 10 March 10	Land use and urban form Ecological Footprints and urban density Readings: Roseland, <u>Toward Sustainable Communities</u> Ch.10, <i>Land use and urban form</i> Walker L. and William Rees, <i>Urban density and Ecological Footprints</i> in Roseland M., ed., 1997, <u>Eco-City Dimensions</u> .
WEEK 11 March 17	Land use and urban form: <i>The Selkirk Waterfront Development</i>
WEEK 12 March 24	Environmental management at the local level: The case of Saanich Municipality
WEEK 13 March 31	Urban habitat project: Douglas Creek SITE VISIT
WEEK 14 April 7	CASE STUDY PRESENTATIONS

LAB/SEMINAR SCHEDULE

Week of:

Jan 6

Towards prevention: A discussion

Prevention and waste management: is it happening in the CRD?

Assignment

Visit the CRD web site: Report on the Environment, Phases 1,2,3

<http://www.crd.bc.ca/reports/rte/cover.htm>

Examine Priority B, *Use of Infrastructure and Resources*, Indicator B6: *Solid Waste Diverted from Landfill*. **Print the information and bring it to class.**

Question: What does this indicator tell us about how we are managing solid waste in the CRD?

Visit BC Environment's web site: Environmental Trends in BC 2000

<http://wlapwww.gov.bc.ca/soerpt/index.html>

Examine the Indicator, *Domestic Waste in BC*. Choose 'In-depth' data.

Print the information and bring it to class.

Question: What does this indicator tell us about how we are managing solid waste in BC?

Questions for discussion:

How is waste management happening in the CRD?

Is there a no-waste or zero waste solution?

Jackson suggests two strategies toward prevention. What are these and will they work?

Introduction to Environmental Technology Project.

Jan 13

Introduction to Environmental Management System (EMS) Project: Developing an EMS for Camosun College

Jan 20

Environmental Management System (EMS) Project

Jan 27

PRESENTATIONS: Environmental Technology Project.

Feb 3

Energy Project

Feb 10

Reading Break

Feb 17

Transportation project and the use of Transport Cost Analyzer

Feb 24

Transportation project

March 3

Indicators project

March 10

Introduction to Urban habitat project: Cecilia and Douglas Creeks

March 17

Selkirk Waterfront Development: SITE VISIT

March 24

Urban habitat project

March 31

Urban habitat project

April 7

Urban habitat project

ASSIGNMENTS AND EVALUATION

ENVIRONMENTAL TECHNOLOGY PROJECT (10%)

The project is described in Lab Manual.

Project is due Friday Jan 31.

ENVIRONMENTAL MANAGEMENT SYSTEM PROJECT (15%)

The project is described in Lab Manual.

Project is due Friday Feb 21.

RENEWABLE ENERGY PROJECT (10%)

The project is described in Lab Manual.

Project is due Friday Feb 28.

TRANSPORTATION PROJECT (15%)

The project is described in Lab Manual.

Project is due Friday March 14.

ENVIRONMENTAL INDICATORS PROJECT (10%)

The project is described in Lab Manual.

Project is due Friday March 28.

URBAN HABITAT PROJECT (20%)

The project is described in Lab Manual.

Project is due Friday April 12.

The project focuses on two urban streams:

Cecilia Creek and Douglas Creek

CASE STUDY (15%)

The project is described in Lab Manual.

Students will present their findings at the end of the semester (Week 14)

GENERAL INFORMATION FOR WRITTEN WORK

Reports

All written work handed in must be **type written** and **double spaced** (unless otherwise stated).

All reports should be considered ‘professional’ in nature. They provide the opportunity to practice technical writing skills. Reports should have an introduction explaining the nature of the assignment, discussion of methodology and results and a brief conclusion summarizing findings.

Note that all work must consistently use a standard bibliographic style, including works cited from the internet.

Any report or paper handed in late will lose 10%. Very late submissions (more than one week) will not be accepted.

GRADES

LETTER GRADE	NUMERIC GRADE	DESCRIPTION
A+	95-100%	Superior Level Achievement
A	90-94	
A -	85-89	
B+	80-84	High Level Achievement
B	75-79	
B -	70-74	
C+	65-69	Satisfactory Achievement
C	60-64	Sufficient Achievement
D	50-59	Minimum level of achievement
F	0-49	Minimum level not achieved