ENVR 222 URBAN AND REGIONAL ENVIRONMENTS WINTER 2007

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LEARNING OUTCOMES:
Upon completing the course students should be able to

- Demonstrate an understanding of key concepts in environmental management, including the preventive approach, industrial ecology, demand management, and environmental policy.

- Demonstrate an ability to use specific techniques and tools in environmental management, including environmental reports and environmental indicators, cost benefit analysis, environmental auditing and environmental management systems, and GIS.

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, 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 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 course 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

EMS Project	- 20%
Urban Habitat Project	- 20%
CITYgreen project	- 15%
Energy Project	- 10%
Transportation Project	- 15%
Indicators Project	- 10%
Participation	- 10%

COURSE OUTLINE AND READINGS

Week of	
WEEK 1	Introduction to the course
Jan 10	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 17	Environmental auditing and Environmental Management Systems **Readings:** Jackson Ch. 4
WEEK 3	Environmental Management Systems
Jan 24	Guest speaker
WEEK4	Principles of prevention
Jan 31	Land use and urban form Concepts of Smart Growth, Low Impact Development The Bedzed project **Readings:** Roseland, Toward Sustainable Communities Ch.10, *Land use and urban form* Walker L. and William Rees, *Urban density and Ecological Footprints* in Roseland M., ed., 1997, Eco-City Dimensions.
WEEK 5	Land use and urban form:
Feb 7	*The Selkirk Waterfront Development*
WEEK 6	Selkirk Waterfront Development and Cecilia Creek
Feb 14	SITE VISIT
WEEK 7	Vancouver Island Technology Park
Feb 21	SITE VISIT
WEEK 8	Economics of prevention
Feb 28	Obstacles to change **Readings:** Jackson Chs. 5, 6

Moore J., *Inertia and Resistance on the Path to Healthy Communities*, in Roseland M., ed., 1997, Eco-City Dimensions. Gabriola Island, BC: New Society

WEEK 9 Victoria's Solar House
March 7 SITE VISIT

WEEK 10 Re-thinking the industrial economy
March 14 Demand-side management:
The case of transportation
Readings:
Jackson Ch. 7

WEEK 11 Transportation
March 14 Roseland, Toward Sustainable Communities Ch.9, *Transportation planning and traffic management*

Guest speaker

WEEK 12 EASTER HOLIDAY
March 28

WEEK 13 Negotiating change in society
April 4 Environmental policy
Importance of environmental information:
State of the Environmental reports and environmental indicators
Readings:
Jackson Ch. 8

WEEK 14 Project work
April 11

LAB/SEMINAR SCHEDULE
Week of:
Jan 10
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/rte/report/cover.htm. Examine Priority B, *Use of Infrastucture and Resources*, Indicator B6: *Solid Waste Diverted from Landfill*:
http://www.crd.bc.ca/rte/report/p-b6.htm. **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 2002
http://wlapwww.gov.bc.ca/soerpt/publications.html.

Examine the Indicator, *Municipal Solid Waste Disposed of and Recycled* in the topic Status and Trends in Municipal Solid Waste. Choose *View Graph Data*:
http://wlapwww.gov.bc.ca/soerpt/9mitigation/municipal.html
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:
What legislation governs the management of solid waste in the CRD? How is solid waste managed in the CRD? Is the current approach to management a preventive approach?
Is there a no-waste or zero waste solution to the waste management problem?

Jackson suggests two strategies toward prevention.
What are these? Are they currently being used in waste management in the CRD?

Jan 17
Introduction to Environmental Management System (EMS) Project: Developing an EMS for Camosun College

Jan 24
Environmental Management System (EMS) Project

Jan 31
Low Impact Development
Introduction to Urban habitat project: Cecelia and Douglas Creeks

Feb 7
READING BREAK

Feb 14
Low Impact Development
Introduction to CITYgreen Project

Feb 21
Project work

Feb 28
Introduction to Energy project

March 7
Project work

March 14
Introduction to Transportation project and Transport Cost Analyzer

March 21
EASTER HOLIDAY

March 28

Project work

April 4
Introduction to environmental indicator project

April 11
Project work

ASSIGNMENTS AND EVALUATION

ENVIRONMENTAL MANAGEMENT SYSTEM PROJECT (20%)
Students develop an EMS for Camosun College.
The project is described in Lab Manual.
Project is due Friday Feb 11.

URBAN HABITAT PROJECT (20%)
Students examine the impact of storm-water runoff on
two urban streams: Cecelia Creek and Douglas Creek
The project is described in Lab Manual.
Project is due Friday March 4.

CITYgreen PROJECT (15%)
A handout will be given out in class for this project.

RENEWABLE ENERGY PROJECT (10%)
Students evaluate the feasibility of renewable energy.
The project is described in Lab Manual.
Project is due Friday March 18.

TRANSPORTATION PROJECT (15%)
Students examine the effectiveness of demand management in the transportation sector.
The project is described in Lab Manual.
Project is due Friday April 8.

ENVIRONMENTAL INDICATOR PROJECT (10%)
Students focus on air quality as an environmental indicator.
The project is described in Lab Manual.
Project is due Friday April 15.

PARTICIPATION (10%)
Course evaluation is largely based on six projects in which students work in small groups and present a report. In a course of this nature, student participation is essential. Students are expected to be fully involved in the course by attending **all** class events - lectures, labs and site visits - and contributing to discussion at these events. Equally students are expected to fully participate in the project work. Student groups have the option to hand in, with each report, an evaluation of student member participation in the project, if participation in the work has not been equal for all students.
At the end of the semester, on April 8, students will hand in the evaluation form assessing their own participation in the course.

GENERAL INFORMATION FOR WRITTEN REPORTS

All written work handed in must be **type written**.
All reports should be considered **'professional'** in nature, as if you were working as a consultant and submitting a professional report. This is an opportunity to practice technical writing skills in presenting the findings of your project work.
All reports must have:

- **An introduction,** explaining the nature of the problem;
- **A discussion** of methodology and results;
- **A conclusion,** summarizing findings.

Note that all work must consistently use a standard bibliographic style, including works cited from the Internet.
Any report 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%	
A	90-94	Superior Level Achievement
A -	85-89	
B+	80-84	
B	75-79	High Level Achievement
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

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/2-5.html