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| CAMOSUN COLLEGE | ***School of Arts & Science***<br>***SOCIAL SCIENCES DEPARTMENT***<br>**GEOG 100-sections 01 & 02**<br>**Ecosystems and Human Activity**<br>**2009W** |

# COURSE OUTLINE

**The Approved Course Description is available on the web @ _____**

Ω *Please note: this outline will be electronically stored for five (5) years only.*
*It is strongly recommended students keep this outline for your records.*

## 1. Instructor Information

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| (a) | Instructor: | Dr Tim Elkin | | |
| (b) | Office Hours: | 9:30 – 10:20 AM Tuesday and Thursday<br>12:30 – 1:20 PM Monday, Tuesday and Thursday | | |
| (c) | Location: | E238 | | |
| (d) | Phone: | 250-370-3115 | Alternative Phone: | |
| (e) | Email: | elkint@camosun.bc.ca | | |
| (f) | Website: | D2L | | |

## 2. Intended Learning Outcomes

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

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

- demonstrate a knowledge of ecological systems and the impact of human activity on those systems
- demonstrate an understanding of key environmental issues
- demonstrate knowledge of courses of action which address environmental concerns.

## 3. Required Materials

Raven and Berg, 2006, Environment (5th edition), Toronto: Harcourt.

## 4. Course Content and Schedule

Week starting
**Theme 1: Humans in the Environment**

Jan 5-
Week1 Introduction to the course: course outline
The Environment: What is the problem?

**Lab**: Geography of pollution

**Class discussion**: Human impact on the environment.
What are the most important environmental problems facing us today?

Jan 12-
Week 2

Introducing environmental science and sustainability
Ecological Footprints
Text: Chap 1

**Lab**: Environmental science: Research and the scientific method; geography of environment; human impact on the environment; ecological footprints

**Class discussion**: Scientific assessment, risk analysis and the precautionary principle.
What chemicals pose a risk to the environment? What chemicals pose a risk to human health? Should there be greater controls on the use of chemicals in society? Do genetically modified foods pose a risk to society?

**Required reading:**
Tim Flannery, *Outspoken Silence,* Globe and Mail, October 18 2008

**Class discussion**: Recognizing ecological limits
*"The world will no longer be divided by the ideologies of 'left' and 'right,' but by those who accept ecological limits and those who don't.",*
Wolfgang Sachs, Wuppertal Institute (http://www.footprintnetwork.org)
Canada's ecological footprint is one of world's largest, at 7.6 ha per person; yet its biocapacity is also very large, at 14.5 ha per person, giving Canadians an ecological reserve of 6.9 ha (See Table 1, *Living Planet Report 2006*). Can it be said that Canadians are in fact living within their means?
Do Canadians need to recognize ecological limits and reduce their ecological footprint?

**Required reading:**
Global Footprint Network, *Living Planet Report 2006, p.2-3;*
Global Footprint Network, *Ecological Creditors and Debtors*
(See Course manual)

Jan 19-
Week 3

Addressing environmental problems: Policy, economics and worldviews
Text: Chap 2

**Lab**: Addressing environmental problems: Policy and economics; worldviews.
**Class discussion**: Addressing environmental problems: How 'green' is our campus? What environmental problems exist on the Camosun campus? What solutions can you identify to these problems?

Video: Subdue the Earth

**Theme 2: The World We Live In**

Jan 26-
Week 4

Ecosystems and Energy
Text: Chap 3

**Lab**: Ecosystems and Energy

**Class discussion**: Whaling.
Is whaling an unacceptable practice that should be stopped immediately?

Context: The hunting of whales (whaling) has a long history. Traditional hunts by small groups of primarily indigenous peoples have been replaced by high tech factory-style whaling. Until the modern era, whale populations were rarely at the point of extermination. Now, populations of most of the large species and many of the smaller species are at critical levels. Should whaling in international waters be allowed to continue? Should whaling be limited to closely monitored hunts by indigenous people? What kind of whale products should be traded internationally? Place yourself in the position of an owner of a Japanese factory whaler working in the Great Southern Ocean and in the position of someone who opposes whaling.
For additional information, see 'Take a Stand' in Raven text, end of chapter 3.

Feb 2-
Week 5

Structure and function of ecosystems
Ecosystems and Living Organisms; Ecosystems and the Physical Environment
Text: Chap 4, 5

**Lab**: Structure and function of ecosystems
How are climate and ocean currents interlocked: Using GIS to examine climate change impacts (GP computer lab)

**Class discussion**: The nature of community.
Is community based mostly on competition or cooperation between members? Consider concepts in the chapter that are supportive of your answer.

**Class discussion**: Agriculture and the use of chemical fertilizers.
Should society use legislation to prohibit farmers using fertilizers?
Is there an alternative to chemical fertilizers?

Feb 9-
Week 6

**TEST I**

**READING BREAK**

Feb 16-
Week 7

Ecosystems of the World
Text: Chap 6

**Lab**: Mapping ecosystems (GP computer lab)

**Class discussion**: BC's coastal temperate rainforest.
Should logging of BC's old growth temperate rainforest be stopped immediately?
Video: Battle for the Trees

Theme 3: Human Population and the Environment

Feb 23 - Week 8

Human population dynamics
Text: Chap 7, 8

**Lab**: Population dynamics

**Class discussion**: Labeling nations with such labels as developed and developing can be hugely misleading.
Hans Rosling, *No more boring data*
http://uk.youtube.com/watch?v=hVimVzgtD6w

**Class discussion**: Addressing the tragedy of the commons: Closing the commons and examining the viability of the voluntary approach.
The case of population controls: Should strict population controls be used by all nations to address social and environmental problems?

**Required reading:**
Jared Diamond, 2005, Collapse, Ch. 10: *Malthus in Africa: Rwanda's Genocide* (pp. 311-328). Penguin Books (see Course manual)

Video: The population bomb

*Theme 4: Resource and Environmental Management*

March 2- Week 9

Water
Text: Chap 14

**Lab**: Water resources

**Class discussion**: Dam construction in BC.
Should all future dam construction in BC be prohibited?

Context: Dams can provide clean energy, water storage, and flood control. Hydro electricity forms an important part of the BC economy. However, dams also can cause environmental degradation and can prevent fish from migrating and breeding. In the Pacific Northwest, salmon populations have declined greatly.
For additional information, see 'Take a Stand' in Raven text, end of chapter 14.

Video: Cadillac desert

March 9- Week 10

**TEST II**

Focus on research paper

March 16- Week 11

Wildlife and biodiversity
Text: Chap 17

**Lab**: Biodiversity

**Required reading:**
Leakey, R., The Sixth Extinction. Ch. 8: *Value in Diversity*. Toronto: Doubleday (see Course manual)

**Class discussion**: Arctic National Wildlife Refuge
Should the Arctic National Wildlife Refuge be protected or developed as part of North America's oil and gas reserves?

Context: The fate of the Arctic National Wildlife Refuge relates to decisions the US makes about energy policy, transportation choices, and other seemingly unrelated matters. Caught in the balance are the culture and livelihood of the Gwich'in people and the migratory wildlife in this fragile ecosystem.
For additional information, see 'Take a Stand' in Raven text, end of chapter 17, and the website for a recent documentary video, http://www.oilonice.org.

Video: Oil on ice

March 23-
Week 12

Food
Text: Chap 19

*Michael Pollan: The omnivore's next dilemma*
*http://uk.youtube.com/watch?v=TQPN1O03z8I*

**Lab**: Calculating your Ecological Footprint
Video: Ecological Footprint

**Required reading**:
Wackernagel, Mathis, How Big is Our Ecological Footprint? (See Course manual)

Michael Bond, 2008, *the trouble with meat,* Engineering and Technology 21 June- 4 July 2008 (See Course manual)

**Class discussion**: Vegetarianism
Should Canadians be required to follow a vegetarian diet?

March 30-
Week 13

The atmosphere and atmospheric change
Text: Chap 21

**Research paper due first class of the week**

**Lab**: Climate change

**Class discussion**: Canada's position on the Kyoto Protocol.
Canada took a hard line at the climate change negotiations in Bali, siding with the US and Japan, against the Europeans who were arguing for fixed, and far-reaching, carbon reduction targets. Canada's position is that it cannot meet its current Kyoto commitment without damaging its economy, and any future commitment it makes must happen in the longer term.
Should Canada honour (and go beyond) its commitment to the Kyoto Protocol?

**Required reading**:
Wolfgang Sachs, *Climate Equity,* Grist, Oct 2007
(See Course Manual)

Al Gore: New thinking on the climate crisis
http://uk.youtube.com/watch?v=rUO8bdrXghs

**Theme 5: Thinking of the Future**

April 6-
Week 14 **TEST III**

**Lab**: Thinking of the Future; reflecting on worldviews

Video: The man who planted trees

## 5. Basis of Student Assessment (Weighting)

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| Tests | - 35% |
| Lab work | - 35% |
| Discussion questions | - 10% |
| Research paper | - 20% |

## 6. Grading System

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

**Standard Grading System (GPA)**

| Percentage | Grade | Description | Grade Point Equivalency |
|---|---|---|---|
| 90-100 | A+ | | 9 |
| 85-89 | A | | 8 |
| 80-84 | A- | | 7 |
| 77-79 | B+ | | 6 |
| 73-76 | B | | 5 |
| 70-72 | B- | | 4 |
| 65-69 | C+ | | 3 |
| 60-64 | C | | 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 require a further enrollment in the same course. No more than two IP grades will be assigned 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 camosun.ca.

### 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 on the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED