

School of Arts & Science SOCIAL SCIENCES DEPARTMENT GEOG 100

Ecosystems and Human Activity winter/2014

COURSE OUTLINE

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

Ω Please note: the College electronically stores this outline for five (5) years only. It is strongly recommended you keep a copy of this outline with your academic records. You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

1. Instructor Information

(a)	Instructor:	Tim Elkin		
(b)	Office Hours:	Tues 1.30-2.20; Wed 10.30-11.20; Thurs 12.30-2.20; Fri 10.30-11.20		
(c)	Location:	E238		
(d)	Phone:	370-3115	Alternative Phone:	
(e)	Email:	elkint@camosun.ca		
(f)	Website:			

2. Intended Learning Outcomes

(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)

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.
- 2. Demonstrate an understanding of key environmental issues.
- 3. Demonstrate a knowledge of courses of action which address environmental concerns.

3. Required Materials

The required text for the course is Raven, Berg and Hassenzahl, 2012, <u>Environment</u> (8th edition), Toronto: Harcourt [although the earlier edition text (7th, 2010) is acceptable; there will be some differences].

Several required readings are indicated in the topic outline below. These readings, along with the labs, are available in the **course manual**. Students should purchase the **course manual** from the bookstore.

4. Course Content and Schedule

INTRODUCTION

Week starting

Jan 6- Introduction to the course: course outline Week1 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?

EXAMINING THE HUMAN RELATIONSHIP WITH NATURE

Jan 13- Introducing environmental science and sustainability

Week 2 Ecological Footprints

Text: Chap 1

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

Class discussion 1: Recognizing ecological limits

Do Canadians need to recognize ecological limits and reduce their ecological footprint?

Required reading:

Global Footprint Network, Living Planet Report 2008, p.2-3 (See Course manual)

Class discussion 2: Scientific assessment, risk analysis and the precautionary principle: Examining risks associated with major projects such as oil development. **Is oil sands development in Alberta an acceptable risk?**

Required reading:

Kenneth Rogoff, *Technology, complexity, economy, catastrophe*. Globe and Mail Jun 02, 2010 (See Course Manual)

Video: H2Oil

Jan 20- Addressing environmental problems: Policy, economics and worldviews Week 3 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

UNDERSTANDING ECOSYSTEMS

Jan 27- Ecosystems and Energy Week 4 Text: Chap 3

Lab: Ecosystems and Energy

Class discussion: Whaling.

Is whaling an unacceptable practice that should be stopped immediately?

Feb 3- Structure and function of ecosystems

Week 5 Ecosystems and the Physical Environment; Ecosystems and Living Organisms. Text: Chap 4, 5

Lab: Living and physical worlds

Required reading (lab):

Leakey, R., <u>The Sixth Extinction</u>. Ch. 8: *Value in Diversity*. Toronto: Doubleday (see Course manual)

Class discussion 1: The nature of community.

Is community based mostly on competition or cooperation between members?

Consider concepts that support your answer.

Class discussion 2: Agriculture and the use of chemical fertilizers.

Should society use legislation to prohibit farmers using chemical fertilizers? Is there an alternative to chemical fertilizers?

Feb 10- Ecosystems of the World

Week 6 Text: Chap 6

Class discussion: Protecting BC's temperate rainforest ecosystem

Should cutting of BC's old growth temperate rainforest be stopped immediately?

READING BREAK

Feb 17- **Lab**: Examining ecosystems: Examining Canada's ecosystems using GIS Week 7

TEST I

Feb 24- Human population Week 8 Text: Chap 8

Class discussion: Overpopulation

The current human population crisis causes or exacerbates all environmental problems, including energy issues and climate change: What is the solution?

Lab: Human population dynamics

Videos: Hans Rosling, No more boring data; The population bomb

HUMAN ACTIVITY AND ECOSYSTEM CHANGE

March 3-Wildlife and biodiversity

Week 9 Text: Chap 16

Lab: Valuing wildlife **Required reading**:

Leslie Anthony, Fitness for Survival, Globe and Mail, Nov 23, 2013 (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?

Video: Oil on ice

March 10- Food

Week 10 Text: Chap 18

Class discussion: Meat eating and the environment

Should Canadians be required to follow a vegetarian diet?

Lab: Calculating your Ecological Footprint

Required reading (lab):

Michael Bond, 2008, the trouble with meat, Engineering and Technology;

Wackernagel, Mathis, How Big is Our Ecological Footprint? (See Course Manual)

Video: Ecological Footprint

March 17- Climate change Week 11 Text: Chap 20

Lab: Climate change Required reading (lab):

Thomas Homer-Dixon, 2010, *Introduction* in Homer-Dixon T. (ed.), <u>Carbon Shift: How Peak Oil and the Climate Crisis will change Canada</u> (Vintage Canada) (See Course

Manual)

Video: Sun Come Up

Online discussion

Canada's position on carbon reduction targets:

Should Canada's efforts at addressing climate change be more far-reaching? Given historic emissions does Canada have the same or more responsibility than nations such as China and India? What should we be doing?

Required reading (Discussion):

Ronald Wright, 2010, Foreword in Homer-Dixon T. (ed.) <u>Carbon Shift: How Peak Oil and the Climate Crisis will change Canada</u> (Vintage Canada) (See Course Manual)

March 24- Climate change

Week 12 Online assignment: He Sees Our Hot Future

Podcast with botanist and geologist Richard Hebda. http://thetyee.ca/Opinion/2010/01/19/RichardHebda/

TEST II

March 31- Focus on research paper

Week 13

Focus on research paper

Lab: Thinking of the Future; reflecting on worldviews

Research paper due in class

5. Basis of Student Assessment (Weighting)

(This section should be directly linked to the Intended Learning Outcomes.)

Tests - 30%
Lab work - 40%
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 the Education Council of Camosun College for approval.)

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 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 3 rd 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 the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED