



**ENVIRONMENTAL SCIENCE PROGRAM
COURSE OUTLINE**

1. **Course:** Environmental Science 201 – Introduction to Environmental Science (Course Number 15846)

Lecture Section(s): L01 TuTh 17:00-18:15 ST 145 **WINTER 2018**

Instructor(s): Dr. W.N. Holden ES 416 403-220-4886 wnholden@ucalgary.ca Office Hours: T & R 14:30-16:45.

Course Site Name on Desire 2 Learn (D2L): W2018ENSC201L01-ENSC201 – L01 (Winter 2018)

USC Specialized Programs Office: EEEL 426 403-220-8600 ensc@ucalgary.ca

2. **Prerequisite(s):** None.

3. **Course Description:** An introduction to Environmental Science. Topical issues in Environmental Science including climate change, aquatic systems, agriculture, forestry, mining, energy, endangered species, and protected areas contextualized within the framework of law, policy, economics, sustainability, and the precautionary principle.

4. **Course Objectives:** By the end of this course students will have a solid grounding in the basic concepts of environmental science such as (but not limited to) sustainable development (both intergenerational equity and intragenerational equity), the precautionary principle, biodiversity, genetic diversity, species endemism, alien invasive species, biomagnification of toxins, anthropogenic climate change, drought, the Clausius-Clapeyron Relationship, and habitat fragmentation. These topics will be discussed in the context of human resource extraction and wherever applicable microeconomic theory will be used to explain concepts. Students will also be introduced to the rudiments of Canadian environmental law.

5. **Grading:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course, the following weights will be used:

Lectures	Mid-term Exam 1 (15 February 2018)	25 %
	Mid-term Exam 2 (22 March 2018)	25 %
Final Examination	To be scheduled by the Registrar	50 %

Grading Scale							
A+	100 %	B+	80 – 84 %	C+	65 – 69 %	D+	50 – 54 %
A	90 – 99 %	B	75 - 79 %	C	60 – 64 %	D	45 – 49 %
A-	85 – 89 %	B-	70 – 74 %	C-	55 – 59 %	F	0 – 44 %

A grade of A+ is given for a mark of 100%. If, for some reason, the distribution of grades determined using the aforementioned conversion chart appears to be abnormal the instructor reserves the right to change the grade conversion chart if the instructor, at the instructor’s discretion, feels it is necessary to more fairly represent student achievement. Note: these boundaries will only be changed if such a change causes an increase in student grades. Tests and class participation will be marked on a numerical (percentage) basis. A passing grade in any one component is not required for the student to pass the course as a whole.

6. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter is found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student’s responsibility to familiarize themselves with these regulations. See also [Section E.3](#) of the University Calendar. Students unable to write an examination because of documented illness; family emergency or religious observance will have the weight shifted onto other components of the course. **Please note that the coordinator needs to be informed of any missed components within 48 hours.**

7. **Course Materials:** Dearden, P. & B Mitchell (2016). *Environmental Change & Challenge*. Fifth Edition. Toronto: Oxford University Press (required); Holden, W.N. & R.D. Jacobson (2012). *Mining and Natural Hazard Vulnerability in the Philippines: Digging to Development or Digging to Disaster?* London: Anthem Press (required). Plus other readings posted on D2L. Note: these textbooks will be placed on reserve.
8. **Examination Policy:** There will be a comprehensive final examination in this course, it will be scheduled by the Registrar, written in a gymnasium, and held during the final examination period. There will also be two midterm examinations that will be held in class with the first mid-term to be written on 15 February 2018 and the second midterm to be written on 22 March 2018. **THERE WILL BE NO MAKEUP OR DEFERRED EXAMINATIONS** under any circumstances, nor may the examinations be written early. Students unable to write an examination because of documented illness; family emergency or religious observance will have the weight shifted onto other components of the course. All examinations will be closed book examinations and calculators are neither allowed nor necessary. Should the writing of a midterm examination for an entire lecture section become impossible due to events beyond the control of the instructor (such as, and not exclusively consisting of; inclement weather, instructor's illness, unavailable facilities, or other "acts of fate") the midterm examination will be written in the next possible class. Students should also read [Section G](#) on Examinations in the Calendar. Note: you will **not be allowed** to discuss your grade with the instructor for 48 hours after receiving your examination and, if you wish to discuss your grade with the instructor, you **must do so** within 14 days after receiving your examination.
9. **Ethics Statement:** students in the course will not be expected to participate as subjects or researchers in any research projects.
10. **Academic Integrity:** Each student in this course is expected to abide by the University of Calgary code of academic conduct. Any work submitted by a student in this course for academic credit will be the student's own work. In the case of group assignments, all members of the group are responsible for the honesty and integrity of the document. You are encouraged to work together and to discuss information and concepts covered in lecture with other students. You can give "consulting" help to or receive "consulting" help from other students.
11. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**
 - (a) **Academic Misconduct:** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties
 - (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
 - (c) **Student Accommodations:** Students needing an Accommodation because of a Disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities available at http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf. Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Program Director of the Environmental Science Program, Dr. Ann-Lise Norman by email at alnorman@ucalgary.ca.
 - (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call **220-5333** for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay stations.
 - (e) **Freedom of Information and Protection of Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also <http://www.ucalgary.ca/secretariat/privacy>.
 - (f) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: suypaca@ucalgary.ca
SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca
Student Ombuds Office: 403 220-6420 Email: ombuds@ucalgary.ca; <http://ucalgary.ca/provost/students/ombuds>
 - (g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, **your cell phone should be turned off** unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

- (h) **Student conduct policy:** The instructor of this course has a zero-tolerance policy towards talking in class. Anyone observed talking in class will be asked to leave immediately and a failure to leave will constitute non-academic misconduct.
- (i) **Universal Student Ratings of Instruction (USRI):** At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

**FACULTY OF SCIENCE
ENVIRONMENTAL SCIENCE PROGRAM
Winter 2018**

ENSC 201 (01)

Readings List

The lectures for this course will be based upon the following readings, augmented by other readings posted on D2L. We will commence with these readings on the first class and proceed with through them in the order stipulated below. The first midterm examination will be based only on Unit I, the second midterm examination will be based only on Unit II, and the final examination will be comprehensive.

Unit I: Introduction to the Ecosphere

Dearden & Mitchell (2016), Chapter One, Environment, Resources, and Society; Holden & Jacobson (2012), pp. 185-186, and pp. 217-219.

Dearden & Mitchell (2016), Chapter Two, Energy Flows and Ecosystems; Holden & Jacobson (2012), p.61, and pp. 233-235.

Dearden & Mitchell (2016), Chapter Three, Dynamic Ecosystems; Holden & Jacobson (2012), p. 234.

Dearden & Mitchell (2016), Chapter Four, Ecosystems and Matter Cycling

Unit II: Climate Change, Aquatic Resources, and Agriculture

Dearden & Mitchell (2016), Chapter Seven, Climate Change; Holden & Jacobson (2012), pp. 93-102., and pp. 36-38.

Dearden & Mitchell (2016), Chapter Eleven, Fresh Water

Dearden & Mitchell (2016), Chapter Eight, Oceans; Holden & Jacobson (2012), p. 234.

Dearden & Mitchell (2016), Chapter Ten, Agriculture

Unit III: Forestry, Minerals, Energy, Mining, and Protected Areas

Dearden & Mitchell (2016), Chapter Nine, Forestry

Dearden & Mitchell (2016), Chapter Twelve, Minerals, Energy, and Mining; Holden & Jacobson (2012), pp.59-76.

Dearden & Mitchell (2016), Chapter Fourteen, Protected Areas; Holden & Jacobson (2012), pp. 35-41, pp. 233-235, and pp. 235-237.

Program Approval:	Approved by Program Director (M. Reid)	Date:	12 Dec 2017
Associate Dean’s Approval for alternate final exam arrangements:	Approved by the Associate Dean (N. Chibry)	Date:	13 Dec 2017

ENSC 201 Lecture Schedule: Winter 2018

Date	What is Happening
January 9	Introduction and Lecture by Holden
January 11	Lecture by Holden
January 16	Lecture by Holden
January 18	Lecture by Holden
January 23	Lecture by Holden
January 25	Lecture by Holden
January 30	Lecture by Holden
February 1	Lecture by Holden
February 6	Lecture by Holden
February 8	Lecture by Holden
February 13	Lecture by Holden
February 15	First Midterm Examination (Unit I)
February 20	Reading Week
February 22	Reading Week
February 27	Lecture by Holden
March 1	Lecture by Holden
March 6	Lecture by Holden
March 8	Lecture by Holden
March 13	Lecture by Holden
March 15	Lecture by Holden
March 20	Lecture by Holden
March 22	Second Midterm Examination (Unit II)
March 27	Lecture by Holden
March 30	Lecture by Holden
April 3	Lecture by Holden
April 5	Lecture by Holden
April 10	Lecture by Holden
April 12	Lecture by Holden and USRI