



COURSE OUTLINE

1. **Course:** ENSC 201, Introduction to Environmental Science - Winter 2022

Course Outcomes:

- 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.

Lecture 01 : TR 12:30 - 13:45 in ST 143

| Instructor | Email | Phone | Office | Hours |
|-------------------|----------------------|--------------|---------------|----------------------|
| Dr William Holden | wnholden@ucalgary.ca | 403 220-4886 | ES 416 | T & R 14:30 to 15:15 |

To account for any necessary transition to remote learning in the winter 2022 semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

All instruction and evaluation will be held in person on the University of Calgary Campus (subject to public health restrictions).

Re-Entry Protocol for Labs and Classrooms:

To limit the spread of COVID-19 on campus, the University of Calgary has implemented safety measures to ensure the campus is a safe and welcoming space for students, faculty and staff. The most current safety information for campus can be found [here](#).

Course Site:

D2L: ENSC 201 L01-(Winter 2022)-Introduction to Environmental Science

Note: Students must use their U of C account for all course correspondence.

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

| Course Component | Weight | Due Date (duration for exams) | Modality for exams | Location for exams |
|---|--------|---|--------------------|---|
| Midterm 1 ¹ | 25% | Feb 17 2022 at 12:30 pm (75 Minutes) | online | Online |
| Midterm 2 ² | 25% | Mar 24 2022 at 12:30 pm (75 Minutes) | in-person | In Class |
| Registrar Scheduled Final Exam ³ | 50% | Will be available when the final exam schedule is released by the Registrar | in person | Will be available when the final exam schedule is released by the Registrar |

¹ This timed, synchronous assessment will be available on D2L on 17 February at 12:30 MST. The assessment is designed to take you 75 minutes of writing time plus 38 minutes of buffer time. It must be completed and submitted by 17 February at 14:23 MST.

² Midterm Two and the Final Examination are scheduled to be written in person. These are closed book. If one, or both, of these have to be moved online they will follow the same format as Midterm One.

³ Midterm Two and the Final Examination are scheduled to be written in person. These are closed book. If one, or both, of these have to be moved online they will follow the same format as Midterm One.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

| | A+ | A | A- | B+ | B | B- | C+ | C | C- | D+ | D |
|---------------------------|-------|------|------|-----|-----|------|------|-----|-----|------|------|
| Minimum % Required | 100 % | 95 % | 90 % | 85% | 80% | 75 % | 70 % | 65% | 60% | 55 % | 50 % |

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.

This course has a registrar scheduled final exam.

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. [The Final Examination Schedule](#) will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

The University of Calgary offers a [flexible grade option](#), Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

4. Missed Components Of Term Work:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, one possible arrangement is that the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course. This option is at the discretion of the coordinator and may not be a viable option based on the design of this course.

A missed midterm examination will be re-weighted onto the final examination. A missed final examination will require an application for a deferred final examination.

The regulations of the Faculty of Science pertaining to this matter are 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.

Please note that the instructor needs to be informed of any missed components within 48 hours of the missed midterm.

5. **Scheduled Out-of-Class Activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

Readings will be posted on D2L.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. **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, subject to public health requirements and University of Calgary Policy. There will also be two midterm examinations. The first midterm examination will be a timed, synchronous assessment, which will be available on D2L on 17 February at 12:30 MST. The second midterm will be written in class on **24 March 2022**, subject to public health requirements and University of Calgary Policy. **THERE WILL BE NO MAKEUP OR DEFERRED EXAMINATIONS** under any circumstances, nor may the examinations be written early. Students unable to write a midterm examination because of documented illness; family emergency or religious observance will have the weight shifted onto the final examination. 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.

If you experience an issue that affects your ability to complete the online assessments, which can include (but is not limited to) issues with technology, time zone issues, caregiving responsibilities, or distractions within your test-taking environment, you will need to contact your instructor as soon as possible.

Students should also read the Calendar, [Section G](#), on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. **Human Studies Statement:**

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the

- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

Students **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 **10 days** after receiving your examination.

12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Services:** For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Sexual-and-Gender-Based-Violence-Policy.pdf>)
- d. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)
[Student Academic Misconduct Policy](#) and [Procedure](#)
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

- e. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.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, by filling out the [Request for Academic Accommodation Form](#) and sending it to Dr. Daniel Shugar by email daniel.shugar@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

- f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). 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 [Legal Services](#) website.

- g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](#) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](#) Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](#), Email: ombuds@ucalgary.ca.
- h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

Other Important Information For Students:

- a. **Safewalk:** Campus Security will escort individuals day or night (See the Campus Safewalk website). Call 403-220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- b. **Internet and Electronic Device Information:** Unless instructed otherwise, cell phones should be turned off during class. All communication with other individuals via laptop, tablet, smart phone or other device is prohibited during class unless specifically permitted by the instructor. Students that violate this policy will be asked to leave the classroom. Repeated violations may result in a charge of misconduct.
- c. **Principles of Conduct.** The University of Calgary Calendar includes a statement on the Principles of conduct expected of all members of the University community (including students, faculty, administrators, any category of staff, practicum supervisors and volunteers) whether on or off the University's property. This statement applies in all situations where the members of the University community are acting in their University capacities. All Members of the University Community have a responsibility to familiarize themselves with this. In order to create a classroom environment that is conducive to learning, the instructor of this course has a zero-tolerance policy with respect to people talking in class. All members of the class are requested to comply.
- d. **Rules Regarding Use of email.** All emails to the instructor must be sent from a ucalgary.ca email address. The instructor will not reply to email messages that are sent from non-ucalgary.ca email addresses. The instructor will not reply to email question in the last twelve (12) hours before an examination. The email class list on D2L has been disabled but should it become available to students any use of it to communicate with other students is strictly prohibited.

The lectures for this course will be based upon the following readings. 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 Part I, the second midterm examination will be based only on Part II, and the final examination will be comprehensive. Please note, the lecture notes for each unit were based upon various chapters of Dearden, P. & B Mitchell (2016). Environmental Change & Challenge. Fifth Edition. Toronto: Oxford University Press.

Part I: Introduction to the Ecosphere

Lecture Notes Unit One

Lecture Notes Unit Two

Lecture Notes Unit Three

Lecture Notes Unit Four.

Part II: Climate Change, Aquatic Resources, and Agriculture

Lecture Notes Unit Five

Lecture Notes Unit Six

Lecture Notes Unit Seven

Lecture Notes Unit Eight

Part III: Forestry, Minerals, Energy, mining, and Protected Areas

Lecture Notes Unit Nine
Lecture Notes Unit Ten
Lecture Notes Unit Eleven

Electronically Approved - Jan 18 2022 09:31

Department Approval

Electronically Approved - Jan 18 2022 23:36

Associate Dean's Approval