

Course ID:	Course Title:	Winter 2022
ECOL 235 -1, 235L -1	Introduction to Environmental Science, and Laboratory	Prerequisite: none
		Credits: 3

Class Information		Instructor Information		Important Dates	
Delivery:	In Class (online per protocol)	Instructor:	Dr. Stephen Jeans	First day of classes:	January 10, 2022
Days:	Wednesday, Friday	Email:	sjeans@ambrose.edu	Last day to add/drop:	January 23, 2022
Time:	11:45 a.m. to 1:00 p.m.	Phone:	403-410-2000 ext. 6939 office, 403-284-3630 voice only	Last day to withdraw:	March 18, 2022
Room:	A2210	Office:	L2111	Last day to apply for extension:	March 28, 2022
Lab/Tutorial:	Wednesday, room A2151, 1:30 – 4:30 p.m.	Office Hours:	Mon. 2 to 5 p.m., or Fri. 10 to 11:30 a.m., or by appointment	Last day of classes:	April 14, 2022
Final Exam:	Wed., Apr. 20, room A2210, 1:00 – 4:00 p.m.				

Important Dates and Information

For a list of all important dates and information regarding participating in classes at Ambrose University, please refer to the Academic Calendar at <https://ambrose.edu/academic-calendar>.

Course Description

This course will provide students will an overview of Environmental Science, including environmental testing, resource use by humans, pollution, biotechnology, conservation methods, industry standards, and environmental guidelines within Canada.

Expected Learning Outcomes

Students will be able to:

- knowledge*
- understand the nature of population, consumption, sustainable development, and resilience,
 - define terminology related to the environmental science, resources, energy, and matter,
 - explain ecosystem function including models of biogeochemical and matter cycling,
 - connect potential anthropogenic climate change impacts with different regions of Canada,
 - appreciate both fresh water and saline aquatic systems especially regarding fisheries,
 - know agricultural trends reducing land degradation, drought, and biomagnification of toxins,
 - understand social and natural science roles in ecosystem-based forest management,

- identify important topics in mining, energy extraction, production, and footprint reduction,
- explain endangered species, biodiversity, species endemism, and alien invasive species,
- identify issues of concern and related Canadian environmental laws, and regulations, and
- contextualize processes of community and stakeholder consultation, treaties, and laws.

- skill*
- estimate the cost of and ecosystem management choice versus alternatives,
 - observe natural settings in the identification of environmental science aspects and issues,
 - critique media and prepare an argument to debate wicked environmental problems, and
 - develop public speaking aptitude and express creativity in making presentations.

- attitude*
- adopt and define a personal environmental awareness reflecting ideas from Environmental Science,
 - appreciate various viewpoints and perspectives on global and regional issues both scientific and social,
 - develop an interest in visions for sustainability based on the precautionary principle, and
 - value an understanding of the significance and coexistence of science and of faith.

Textbooks

Dearden, Philip, Mitchell, Bruce, and O'Connell, Erin (2020). *Environmental Change & Challenge: A Canadian Perspective. Sixth Edition*. Toronto: Oxford University Press. ISBN-13: 9780199033829

Course Schedule

The schedule of course dates and readings for each intended topic are below. Learning exercises and opportunities that take advantage of resources, outdoor activity, and/or guests may alter this schedule at the instructor's discretion.

<u>Week</u>	<u>Reading</u>	<u>Topic</u>	<u>Note</u> [information for that activity]
01-12	Chapter 01	Environmental Resources and Society	online, check email/Moodle for link
01-19	Chapter 02	Responding to Global Environmental Change	online, check email/Moodle for link
01-26	Chapter 03	Energy Flows and Ecosystems	online, check email/Moodle for link
02-02	Chapter 04	Ecosystems are Dynamic	
02-09	Chapter 05	Ecosystems and Matter Cycling	
02-16	Chapter 07	Planning and Management	
02-21		NO CLASS - Family Day and Reading Break	
03-02	Chapter 08	Climate Change	
03-09	Chapter 09	Oceans and Fisheries	Guest Lab Instructor: Dr. Matthew Morris
03-16	Chapter 12	Water (and freshwater/aquaculture fisheries)	Expert Interviewed: Dr. Matthew Morris
03-23	Chapter 11	Agriculture	
04-01	Chapter 10	Forests (Friday lecture only)	<i>Wednesday, March 30, ARC – attendance suggested</i>
04-06	Chapter 13	Minerals and Energy	
04-13	Chapter 15	Endangered Species and Protected Areas	

COVID-19:

Read the Ambrose University response to the COVID-19 pandemic www.ambrose.edu/covid and how this course will be delivered safely in the document **COVID-19_Ecology.pdf** posted on Moodle. Students must be physically present for class unless the student has been travelling, in contact with people who may/do have illness, and/or the student feels ill.

If absence due to illness or any illness symptoms, then contact your professor for advice on missed course content.

Please note: a rapid test result of negative is NOT acceptable for coming to class if you have any symptoms of illness.

If Alberta Health and/or the University requires our course move online, then details of course procedure change will be sent by email and/or posted on Moodle. Lessons and assignments will be adapted as needed to the shift of delivery.

Requirements

Exit Slip

Along with each week’s lecture is a brief graded quiz or activity, about five minutes (~5 min.) ~5 questions.

This form of feedback works to assist both the course professor and student in gauging progress on new material.

Laboratory exercises

To reinforce concepts taught during the term, an in conjunction with the topic of the week, laboratory (wet lab. and/or dry lab.), and/or outdoor exercises are assigned/collected weekly. Coached by the course professor, typically completed within class time, and in small groups where possible. Available space, weather, and other factors may alter delivery.

Attendance

Attendance and participation in class activities is mandatory (and/or in Zoom class to follow health protocol). Contact the course professor before a class you may miss. Lectures are not recorded, so, marks/points lost through excused absence can be discussed with the professor and suitable alternate arrangements made at the professor’s discretion.

Out of respect for the professor and your peers, please turn your cellular phone off during class. Likewise, you may be asked to turn off distracting devices and/or refrain from using your laptop computer for non-class related activities.

Grade Summary:

Grading Schedule

Exit Slip	30%	~one per week (Mon. or Fri. depending on lecture)
Laboratory exercises	35%	~one per week, depends on protocols (e.g., at home or small group)
Final written examination	<u>35%</u>	mix of short questions and practical possible
Total: 100%		

Late assignments may be accepted at instructor's discretion -- if contact and arrangements are made, however the mark achieved may be reduced by 5%/day (up to 10%/day if no contact is attempted by the student prior to the due-date).

Missed final exam, without cause, cannot be made up.

The available letters for course grades are as follows:

Grade	Numeric equivalent	Interpretation	Grade Points
A+	100	Mastery: Comprehensive understanding of subject matter	4.00
A	95		4.00
A-	90		3.70
B+	85	Proficient: Well-developed understanding of subject matter	3.30
B	81		3.00
B-	76		2.70
C+	71	Basic: Developing understanding of subject matter	2.30
C	67		2.00
C-	62		1.70
D+	59	Minimal Pass: Limited understanding of subject matter	1.30
D	55		1.00
F	up to 49%	Failure: Failure to meet course requirements	0.00
P	P/F	Pass	No grade points

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g., percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed/emailed out.

Other:

Out-of-classroom activities, equipment use, and supplementary course fees

When weather permits, in-class work may be taken outside, in and around the campus area. Participants will be informed ahead of time, typically the class before and/or by email at least a day before. It is the responsibility of the participant to dress appropriately (mainly for changing, cold air, and cold ground temperatures).

Reinforcing concepts learned during classwork, participants take part in demonstrations and lab work that will include the use of equipment. Safety is an expectation, for yourself and the well-being of others, and for the preservation of Ambrose facilities, apparatus, and materials. Report any concerns or incidents immediately to your instructor.

A supplementary course fee is charged by the Registrar's Office to cover expenses related this course; the primary cost is associated with transportation on the field tutorial. Should the trip become a virtual event, due to the pandemic or other reason, your course professor will discuss reimbursement of a portion of this fee with administration and the Registrar.

Ambrose University Library has a wealth of connections to online materials/sites, please inquire about this resource.

Ambrose University Important Information:

Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions.

Exam Scheduling

Students who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the Academic Calendar. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Standards of Behaviour in the Classroom Setting

Learning is an active and interactive process, a joint venture between student and instructor and between student and student. Some topics covered within a class may lead to strong reactions and opinions. It is important that Students understand that they are entitled to hold contradictory beliefs and that they should be encouraged to engage with these topics in a critical manner. Committing to this type of "active learning" significantly increases the learning experience for both teacher and student, and reflects the Christian imperative to pursue truth, which lies at the heart of the Ambrose educational experience. However, active discussion of controversial topics will be undertaken with respect and empathy, which are the foundations of civil discourse in the Classroom Setting. Primary responsibility for managing the classroom rests with the instructor. The instructor may direct a student to leave the class if the student engages in any behaviour that disrupts the classroom setting. If necessary, Ambrose security will be contacted to escort the student from class. Please refer to your professor regarding their electronic etiquette expectations.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are

reported to the Academic Dean and become part of the student's permanent record.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. The academic calendar can be found at <https://ambrose.edu/content/academic-calendar-2>

Privacy

Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Coursework Extensions

Should a request for a time extension on coursework exceed the end of the term, a *Coursework Extension Application* must be completed and submitted to the Office of the Registrar. The extension (if granted) will be recorded on the student record. Extensions are granted at the discretion of the instructor and are normally granted for 30 days beyond the last day of the term.

Normally, Course Extension Applications will be considered only when all of the following conditions are met:

- the quality of prior course work has been satisfactory;
- circumstances beyond your control, such as an extended illness or death of a family member, make it impossible for you to complete the course work on time; and
- you submit *Coursework Extension Application* to the Office of the Registrar on or before the deadline specified in the Academic Schedule.

If granted, time extensions do not excuse you from a final examination where one has been scheduled for the course.

A temporary grade of TX will be assigned until a final grade is submitted in accordance with the new deadline. A final grade of F will apply to:

- all course work submitted after the end of the semester unless a coursework extension has been granted; and all course work submitted after the revised due date provided by an approved extension to coursework.

Academic Success and Supports

Accessibility Services

Academic accommodation is provided to Ambrose students with disabilities in accordance with the Alberta Human Rights Act and the Canadian Charter of Rights and Freedoms. Provision of academic accommodation does not lower the academic standards of the university nor remove the need for evaluation and the need to meet essential learning outcomes. Reasonable accommodations are tailored to the individual student, are flexible, and are determined by considering the barriers within the unique environment of a

postsecondary institution. It can take time to organize academic accommodations and funding for disability-related services. Students with a disability who wish to have an academic accommodation are encouraged to contact Accessibility Services as early as possible to ensure appropriate planning for any needs that may include accommodations. Staff can then meet with students to determine areas to facilitate success, and if accommodations are required, ensure those accommodations are put in place by working with faculty.

Ambrose Writing Services

Ambrose Writing services provides academic support in the four foundational literacy skills—listening, speaking, reading, and writing. It also assists students with critical thinking and the research process. Throughout the academic year, students can meet with a writing tutor for personalized support, or they can attend a variety of workshops offered by Academic Success. These services are free to students enrolled at Ambrose University. Academic Success serves all students in all disciplines and at all levels, from history to biology and from theatre to theology. To learn more, please visit <https://ambrose.edu/writingcentre>

Ambrose Tutoring Services

Ambrose Tutoring Services provides support in specific disciplinary knowledge, especially in high-demand areas such as chemistry, philosophy, math and statistics, and religious studies. These tutors also coach students in general study skills, including listening and note-taking. During the academic year, Ambrose Tutoring Services offers drop-in tutoring for courses with high demand; for other courses, students can book a one-to-one appointment with a tutor in their discipline. These services are free to students enrolled at Ambrose University. To learn more, please visit <https://ambrose.edu/tutoring>.

Mental Health Support

All of us need a support system. We encourage students to build mental health supports and to reach out when help is needed.

On Campus:

- Counselling Services: ambrose.edu/counselling
- Peer Supportive Listening: One-to-one support in Student Life office. Hours posted at ambrose.edu/wellness.
- For immediate crisis support, there are staff on campus who are trained in Suicide Intervention and Mental Health First Aid. See ambrose.edu/crisissupport for a list of staff members.

Off Campus:

- Distress Centre - 403-266-4357
- Sheldon Chumir Health Care Centre - 403-955-6200
- Emergency - 911

Sexual Violence Support

All staff, faculty, and Residence student leaders have received *Sexual Violence Response to Disclosure* training. We will support you and help you find the resources you need. There is a website with on and off campus supports – ambrose.edu/sexual-violence-response-and-awareness.

Off Campus:

- Clinic: Sheldon Chumir Health Centre - 403-955-6200
- Calgary Communities Against Sexual Abuse - 403-237-5888

Note: Students are strongly advised to retain this syllabus for their records.