

Course ID:	Course Title:	Winter 2023
ECOL 351	Conservation Biology	Prerequisite: BIO 213, or BIO 133
		Credits: 3

Class Information		Instructor Information		Important Dates	
Delivery:	In class	Instructor:	Lizelle J. Odendaal, Ph.D., MSc., BSc. Hons., BSc.	First Day of Class:	January 10, 2023
Day(s):	TU/TH	Email:	lizelle.odendaal@ambrose.edu	Last Day to Add/Drop:	January 22, 2023
Time:	2:30-3:45pm	Office Hours:	Thu 12-2pm, or by appointment	Last Day to Withdraw:	March 31, 2023
Room:	A2133			Last Day to Apply for Coursework Extension:	April 3, 2023
Final Exam:	Thursday April 20, 2023, room A2133, 1-4pm			Last Day of Class:	April 13, 2023

Course Description

This course will focus on applications of ecology to conservation and sustainability. Emphasis will be placed on human-environment interactions and their implications for biodiversity, natural resource management, and endangered ecosystems and species.

Students will explore both local and international contemporary conservation issues to facilitate their understanding of core conservation biology theories and practices.



Expected Learning Outcomes

As a result of lectures, in class discussions based on journal articles, mini in-class assignments, and class tests you should be able to:

- Explain the origin and distribution of biodiversity and how it varies in space and time.
- Describe current conservation issues at both a local and global scale and understand the contemporary conservation practices used to mitigate the impacts of these threats to biodiversity.
- Gain an appreciation for the value of biodiversity to human society.
- Understand how human impact and ecological principles shape patterns of biodiversity.
- Understand and appreciate the role of indigenous knowledge, and minority voices, in conservation research and practices both locally and globally.
- Develop your skills to critically evaluate scientific literature and be able to apply the knowledge you gained to supplement your understanding of the course material.

As a result of the term project, which includes a short oral presentation, abstract submission, and a poster presentation at the Ambrose Research Day Conference, you will:

- Develop critical oral and poster presentation skills that you will most likely use further into your career.
- Gain experience in the process of applying to attend a scientific conference by creating an abstract submission for the Ambrose Research Day Conference poster session.
- Gather, interpret, and critically evaluate scientific literature to synthesize the most important information to present to your peers in a conference setting.

Textbooks

No textbook is required for this course. Lecture slides and required readings will be available to download from Moodle. There are however several conservation textbooks that you may find helpful, and these are listed below:

1. An introduction to Conservation Biology, 3rd edition, by Anna Sher (available at the bookstore).
2. Biodiversity Conservation in Canada: from Theory to Practice, by Richard Schneider.
3. Conservation Biology for All, by Sodhi and Ehrlich (pdf is freely available and uploaded on Moodle).

I will base my lectures on various sources, including the textbooks listed above. Therefore, it will be best to annotate the lecture slides with notes during class. Often, I provide the most important notes associated with slides together with the PowerPoint presentation.



Course Schedule

The following schedule provides a general guideline and timetable for topics, tests, and assignments. It may change depending on progress through the semester. The table is highlighted as follows:

Orange = Important dates for assignments

Blue = dates where there will be no classes

Green = Midterms and Poster presentation day at the Ambrose Research Conference

Week		Required readings and assignments	Lecture topic
1	10 Jan	Mini-in class assignment 1	Defining Conservation Biology – new perspectives and challenges
	12 Jan	Godet & Devictor. 2018: What conservation does	Biodiversity 1
2	17 Jan		Biodiversity 2
	19 Jan		Biodiversity 3
3	24 Jan		Habitat change Guest speaker: Impact of wildfires on the roosting ecology of <i>Myotis</i> bats at Waterton National Park, by Erin Low.
	26 Jan	Abstract draft deadline	No class- program day
4	30 Jan	Brennan et al. 2022. Wildlife overpass structure size, distribution, effectiveness, and adherence to expert design recommendations.	Habitat fragmentation
	2 Feb		Climate change
5	7 Feb		Midterm 1
	9 Feb	Abstract submission deadline	Invasive species
6	14 Feb	Class presentations	
	16 Feb		
7	21-24 Feb	No classes- reading week	
8	28 Feb		Extinction risk
	2 Mar	Zhou et al. 2022. Plant and soil biodiversity is essential for supporting highly multifunctional forests during Mediterranean rewilding	Re-wilding and ecological restoration
9	7 Mar		Poster preparation day
	9 Mar	Mini in class assignment 2	Conservation in action
10	14 Mar		Conservation in action continued Guest speaker: Turtle Conservation Program at the Cape Town Aquarium, by Inga Adams.
	16 Mar		Midterm 2
11	21 Mar		Protected areas
	23 Mar		Community conservation Guest speaker: The Alberta Community Bat Program, by Susan Holroyd
12	28 Mar		Poster practice day
	29 Mar		Ambrose research conference

	30 Mar	Sheherazade et al. 2022. The power of woman-to-woman mentorship in creating long-term changes in biodiversity conservation in Southeast Asia	Indigenous conservation and the role of women in conservation Guest speaker: To be announced
13	4 Apr		Urban conservation
	6 Apr	Sampson and Patter. 2020. Advancing best practices for aversion conditioning (humane hazing) to mitigate human–coyote conflicts in urban areas	Human – wildlife conflict
14	11 Apr		International and national conservation policies
	13 Apr		Review, exam prep

My commitment to you, and my expectations of you:

I am committed to providing a safe, respectful, and inclusive classroom environment to ensure that you achieve your learning outcomes and develop the skills necessary to excel in future senior courses in the biology program. I hope that my enthusiasm for the subject is contagious, and that you will enjoy the course even if you find some aspects more challenging than others. In turn, I ask that you too remain respectful of me and your classmates, as well as to communicate any special needs you have, so that I can better assist you in achieving your goals.

Requirements:

My aim is to create a collaborative and inclusive environment in the classroom. This means that I expect and encourage you to be actively engaged in class discussions and the course material. Your learning will mainly be evaluated by two midterms, in class mini assignments and discussions, a final theory exam and a term project.

Midterms and final theory exam: In the two midterms and final exam you will be asked to write short and in-depth answers that will demonstrate your knowledge about the topics covered in the course. Questions will also include multiple choice, true/false, and drawing of diagrams and plots. The final exam will be like the midterms, with a combination of question formats. Approximately 70% of the final exam will cover new material (since midterm 2). Approximately 30% of the exam will consist of comprehensive material, with questions that will reflect critical thinking and not memorizing. *Don't worry-* we will practice these kinds of questions and how to answer them.

Term project: The term project essentially consists of 3 components, and all are related to the main product of the project, which is a poster presentation on any conservation topic of your choice, that will be presented at the Annual Ambrose Research Day conference on the 29 March 2023. The first component is to develop an abstract of the poster you will create, which will be submitted to the organizers for consideration. Once you have been accepted to present your poster at the conference, the second component of the term project is to deliver a short (maximum 8 minutes) PowerPoint presentation on your topic to your classmates. This will allow you to gain valuable feedback from me, and your classmates, that can be incorporated into your final poster presentation. Rubrics will be uploaded onto Moodle to help guide you.

In class assignments and discussions: The two in class mini assignments will mainly involve a short essay (150 - 200 words) reflecting on a certain conservation topic. It will test your conceptual understanding of the issues and provide an opportunity for you to reflect on your views regarding the topic of choice. There will be no right or wrong answer! In class discussions will center around the required readings, which should be read before class begins. It will test your understanding of the journal article, and participation in the discussion is key to receiving a good grade.

Attendance:

Regular attendance of lectures will be essential for success on all tests and assignments. No points will be deducted from your grade for not attending lectures. However, in class assignments cannot be made up and, if missed, will receive a grade of zero. This term, lectures will not be provided over Zoom, unless there is a change in the University policy because of changing pandemic conditions. If you miss a class, it is your responsibility to review the lecture slides provided and discuss the content with your classmates. If anything is still unclear, I am happy to schedule a meeting to assist your understanding of the material.

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>.

Grade Summary:

You will be assessed as follows:

Activity	Percent of grade
Participation in class discussions	10%
Midterm 1	15%
Midterm 2	15%
Final theory exam	20%
Abstract draft	2%
Abstract final	3%
Short presentation	10%
Mini assignments (x2)	5%
Poster presentation	20

The available letters for course grades are as follows:

Grade	Interpretation	Percentage
A+	Excellent	90-100%
A		85-89%
A-		80-84%
B+	Good	77-79%
B		73-76%
B-		70-72%
C+	Satisfactory	67-69%
C		63-66%
C-		60-62%
D+	Poor	55-59%
D		50-54%
F	Failure	< 50%

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 out.

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 Final Exam Time Application* to the Office of the Registrar by the deadline noted in the Academic Calendar. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; or 2) the scheduled final examination slot results in three consecutive examination periods. 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/academics/academic-calendar>

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 registrar. 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.

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

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/sas/writing-services>

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 <https://ambrose.edu/student-life/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