Saint Mary's University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq.
We are all Treaty people

Conservation Biology (BIOL 4422)
Winter 2024

Instructor: Caitlin Cunningham (she/her) (calling me Caitlin is fine!)
Instructor Contact: caitlin.cunningham@smu.ca

Lectures: Tuesdays and Thursdays, 11:30 a.m. to 12:45 p.m., Burke Building 218
Lab: Thursdays, 2:30 p.m. to 5:30 p.m., Science Building 310
Office Hours*: Wednesdays, 12:00 p.m. to 2:00 p.m., Virtually on Teams, Appointments can be booked here. Appointments with the instructor outside of these hours can be scheduled by email.

*What are office hours? Why should you come to office hours?

Office hours are an opportunity for you to meet with your instructor one-on-one outside of class. While this might sound intimidating, they can be a great resource in helping you succeed. They are an opportunity for you to ask questions about what is being discussed in class or other related interests you have. They are time for you to get clarification on assignments or to get feedback on your coursework. Office hours are also a great time to discuss majors and programs of study or ask questions about various career or graduate school goals. Overall office hours are there to help you and support you in your learning both in and outside of this course!

Tips for Office Hours

1. Come early in the semester and make it a habit
2. Be honest about where you are in the course and in life
3. Have a specific question in mind to start the discussion
4. Ask as many clarification questions as you need – don't pretend to understand something you don't!

Academic Calendar Course Description

This course introduces students to how the principles of evolutionary-ecology can be applied to help us understand how human exploitation of natural resources affects biodiversity. Students characterize biodiversity and explore topics such as the biology of small populations, conservation genetics, ecological economics, and landscape ecology. In the lab students explore current topics in conservation biology through critiques, population modeling and independent research.

Credit Hours
This is a 3-credit hour course

Course Pre-Requisites
Ecology (BIOL 2324)

Learning Outcomes
Through participation in this course and completion of the assignments, you will be able to:

- ✓ Define key terms, such as viable population, focal species, connectivity
- ✓ Identify the key paradigms and approaches used in conservation biology
- ✓ Understand the role of conservation biology in management, particularly in the context of climate change
- ✓ Identify and discuss a broad range of theoretical and socio-ecological issues, scientific bias, methods, and practices related to protected areas and conservation biology
- ✓ Articulate diverse perspectives on central topics in conservation biology and rationally justify your own perspectives on these issues
- ✓ Recognize how the different interests and values of social groups and cultures impact what would be considered an appropriate, sustainable, or politically acceptable conservation solution

Required Learning Materials

There is no textbook for this course, and all materials will be made available online through Brightspace.

Readings will consist of a mixture of journal articles, articles from popular media, short videos, and podcasts. This to increase the number of different perspectives included in the course while also being responsive to a variety of different learning styles.

Methods of Course Delivery
This course is designed as a co-operative teaching and active learning module and has both a lecture and a lab component. On Tuesdays, the lecture will be instructor-led and will focus on covering key concepts and theories in conservation biology. During the Thursday lecture timeslot (beginning in week 4), you will engage in student-led debates on some of the most contentious issues in conservation biology. During lab sessions, structured, guided workshops will be used to learn foundational skills in geographic information systems (GIS), which will then be applied through a more independent project and culminate in a class conservation planning exercise.

Ground Rules

Everyone in this class, regardless of sex, gender, race, ethnicity, class, physical ability, or any other identity category is a valued and equal member of this class. Everyone has the right to be addressed by their correct name and pronouns, and you have the right to adjust either of these at any point. We all bring different life experiences to the classroom, and all students are encouraged to share their own experiences that are relevant to the course, but no one is ever presumed to speak for anything or anyone more than their own experience or point of view. Parents are welcome to bring their children to class if needed.

Please remember you are a person first, and a student second. Your mental and physical health matters. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to talk with your instructor. An anonymous form has also been set up to allow you to contact the instructor at any time, for any reason, just note that this may result in an email to the entire class to address any issue brought up. There are also campus resources that are there to help you listed at the end of this syllabus.

For Students

You should arrive to our classroom on time, having done the readings, and prepared to engage with the course content as laid out in the course schedule below. You should be present, free from distraction and listening to whomever is speaking, especially during student-led debates.

We will be covering several contentious issues within conservation during the course, and a healthy amount of disagreement is expected. Although you will not always agree with your classmates, you are expected to be respectful of those viewpoints that do not coincide with your own and to engage in respectful and responsible discussion.

Please be conscious of your immune-compromised classmates and stay home if you are sick or test positive for COVID-19. If you are unable to come to class, please let the instructor know so we can make alternative arrangements for missed course work.

For the Instructor

I view teaching as a collaborative process where all of us will increase our knowledge base and hone our research, analytical and writing skills within the intersections of socio-ecology, biodiversity conservation and system design. I commit to providing a classroom space that is instructive, engaging, and welcoming. My aim is to provide thought provoking materials and questions that will spark your curiosity. I will communicate expectations to you clearly and will respond to and integrate your feedback into the course and aim to respond to emails within 24 hours. I will provide grades that are transparent and consistent among all students.

Academic Integrity

At Saint Mary's University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect. As a student, you are required to demonstrate these values in all the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

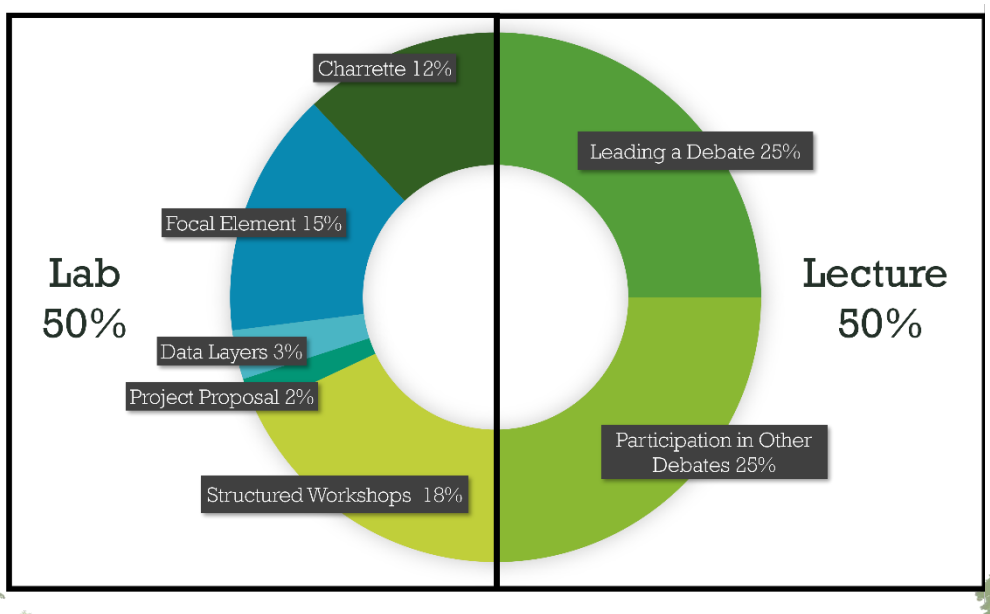
Assessment

Late Assignments

A deduction of 20% of the assignment's grade will be taken off for each day that an assignment is late. However, each student will have 3 "saving throws" that may be used on any assessment throughout the course, except for the debate presentation and charette activity. Each saving throw buys a 24-hour extension with no questions asked. One, two, or all three saving throws may be applied to the same assessment for a maximum total of a 72-hour extension.

Please note, that you need to inform the instructor via. email that you wish to use one or more saving throws prior to the deadline for the assessment for it to apply. If a saving throw is used after the deadline has already passed, half the late penalty, or "half damage" will be applied for that saving throw (i.e., a late penalty of 10% per day that a saving throw is used).

Please note that saving throws do not need to be used when you are sick or need a short leave during this course for personal reasons. In these cases, please let the instructor know and we will make arrangement for alternative deadlines. Saving throws are for things like you had three tests in a week and need to be cut some slack or got a little carried away and had too much soda at your Bachelor watch party.



Lecture (50%)

The grade from the lecture component of the course will come from student-led debates, which will take place during the Thursday lecture sessions beginning in the fourth week of the course. Debate topics, stances, and dates will be selected during the first week of the course. Topics can be found in the lecture schedule below.

Leading a Debate (25%)

The debates are designed to give you the opportunity to delve into a complex conservation issue with your peers. Working in pairs (or groups of three if necessary, based on student numbers), you will synthesize the literature and formulate arguments in favour of or against the resolution of the week to deepen your understanding of complex, integrative issues in conservation biology.

The position you will take (for or against the resolution) will be decided upon ahead of time, but when preparing for the debate, it will be important to consider the strengths and weaknesses of both sides. The debate format will be in the form of an oral presentation only. The use of visual tools – such as whiteboards, PowerPoint slides or props – will not be permitted and so it will be critical to come to the debate with the topic and potential counterarguments well researched.

Note that one or two readings have been provided for each resolution, but these sources are not exhaustive. They are meant to be a starting point for your research and to provide some context for audience members.

Each debate will follow the following format:
'For the Resolution' Opening Presentation: 7 minutes
'Against the Resolution' Opening Presentation: 7 minutes
'For the Resolution' Rebuttal: 7 minutes
'Against the Resolution' Rebuttal: 7 minutes
Opening the Floor to the Audience, Students Outside the debate will ask questions: 30 minutes
'For the Resolution' Closing: 3 minutes
'Against the Resolution' Closing: 3 minutes

Grades will be based on:

(1) The presentation, structure, and soundness of the different arguments (i.e., they should be backed up with scientific evidence from the literature)
(2) The ability of groups to address the counterarguments of the opposing group and those raised by members of the audiences
(3) The demonstration of active involvement of all group members (all group members should be involved in the presentations), which will include the use of a peer-evaluation

Participation in Other Debates (25% - 7 x 3.6%)

This course is designed to take a co-operative and participatory learning approach. When not debating, you should come to the debates prepared, having read the assigned reading(s) on the resolution, and ready to ask questions and contribute your opinions on the topic.

Participation grades will be based on the quality and thoughtfulness of the questions and opinions raised (i.e., showing up is not enough to gain participation marks). Students will automatically get full participation points for the week of their debate.

Students who are unable to attend a debate will have the option of submitting a short-written reflection (500 words max) on the debate resolution to Brightspace within 72 hours of the completion of the debate (i.e. by Sunday at 1:00 p.m.).

Lab (50%)

The grade from the lab component of the course will come a mix of structured workshops, an independent project and a collaborative charette activity.

For our labs, we will be using QGIS (Version 3.34), a free, open-source geographic information system. It is available for free for Windows, Mac, and Linux operating systems.

Structured Workshops (18% - 6 x 3%)

There are six structured workshops which are designed for you to learn the foundational skills that will be applied in your independent projects. These workshops will be worked on during our scheduled lab time and will be due by the start of the following week's lab (i.e. Thursday at 2:30 p.m.).

For the structured workshops, the lowest score will be dropped from the final grade. If a student does not submit a workshop, it will be assigned a grade of 0 and will count as the lowest score.

Structured Workshop Due Dates (2:30 p.m.)

Workshop 1 (Intro to GIS): January 25
Workshop 2 (Identifying Ecosystems): February 1
Workshop 3 (Habitat Suitability Analysis 1): February 15
Workshop 4 (Habitat Suitability Analysis 2): February 29
Workshop 5 (Connectivity1): March 14
Workshop 6 (Connectivity 2): March 21

Independent Project

A major component of this course is to apply the skills learned in the structured workshops to an independent project centred around mapping a focal element for conservation in Nova Scotia.

The ultimate goal as a class will be to create a conservation network for the province that aims to maintain, enhance, and restore resilience and regional flows that should serve to conserve biodiversity in the province over the long term. Each student will create a GIS layer for a focal element that warrants conservation attention in the province. The culmination of the project will be a charrette, in which students will work in groups of 4 to 6 to combine their individual focal elements into a conservation network plan.

Independent Project Due Dates (2:30 p.m.)
Project Proposal: February 8
Data Layers: March 7
Focal Element: April 4

1. Project Proposal (2%)

This first step in your independent project is intended to get you thinking about this project early!

Hand in a short document (one page max) that describes the focal element that you hope to address in your independent project, the context of the element, and why it is important to consider in Nova Scotia conservation planning. The proposal is due at the start of lab (2:30 p.m.) on February 8.

Some ideas for potential focal elements include, but are not limited to:

- A habitat suitability analysis for a species at risk or some other focal species
- A connectivity analysis from the perspective of a particular species
- A structural connectivity analysis of a particular habitat
- The distribution of a particular threat, such as the road effect zone

Keep in mind that the goal of this project is to create a GIS layer that can be combined with some of those created by your classmates to develop a conservation plan for Nova Scotia. Thus, you will want to pick something that is broadly relevant to conservation planning across the province.

2. Data Layers (3%)

To help ensure that you are taking on a feasible project, it is important to ensure that the data that you need to carry out your project exists and is available to you. To assist you in this part of the project, a number of publicly available datasets will be made available to you on Brightspace, but you are not limited to using these datasets, and the instructor will be more than happy to assist you in tracking down other datasets.

Hand in a map showing at least 3 data layers that you intend to use in your individual project, and a short (one page max) explanation of how you intend to use them to create your final focal element layer. This assignment is due at the start of lab (2:30 p.m.) on March 7.

3. Focal Element (15%)

You will create a piece summarizing your chosen focal element. In this piece, you will need to explain why chosen focal element should be included or considered in designing a biodiversity conservation network for Nova Scotia, the methods you used to create the GIS layer, the results of your analysis (including a map of your results) and a discussion of what this means for conservation in Nova Scotia more broadly.

The format in how you choose to present this information is up to you, and you are encouraged to be creative. Some mediums that you might use, but are not limited to using, are a paper, a poster, a video, a PowerPoint, or a podcast. Whichever format you choose, you need to include at least one map of your results.

Note that if a saving throw is used on this assignment, you still need to have your GIS layer complete by the due date to be able to participate in the charette. This assignment is due at the start of lab (2:30 p.m.) on April 4.

Charrette (12%)

The charrette activity will occur during the final lab session of the course on April 4. A charrette is a short, collaborative design activity that is often used to foster creative problem solving in landscape architecture and urban planning. Because they occur over a short time frame, they are not meant to generate the perfect solution to any problem. Instead, they are meant to be a space that fosters creativity and the first cut of a solution that gets refined later.

Each student will contribute the GIS layer they created of their focal element for use in an in-class design charette. Students will be put into groups of 4 to 6 by the instructor based on the focal elements and will have 1.5 hours to work together to combine their separate elements into a conservation network design.

The goal for the charrette activity will be to use the GIS layers created by you and your groupmates to identify key areas for protection which would help move Nova Scotia towards its goal of 30% protected area – or how to roughly double the area currently protected across the province. As a group, your goal will be to identify:

(1) Core areas for protection (i.e., new protected areas to complement existing ones)
(2) Key areas for connectivity between protected areas
(3) Priority areas for threat mitigation (if applicable)

Following the charrette activity, each group will make a short presentation of their results to the rest of the class, and we will discuss as a group the similarities and differences of the different conservation systems produced.

Grades will be based on:

(1) Preparedness for the activity (i.e., coming to class with your GIS layer ready to go)
(2) Focus and participation during the activity
(3) The results of the conservation network identified
(4) The rationale for your decision making

Extra Credit

There are several opportunities to earn extra credit in this course. Requests for extra credit opportunities beyond what is described below will not be considered.

Future of Conservation Survey (1%)

Submit a screenshot of your results from the Future of Conservation Survey on Brightspace before the start of class on January 23. The results of this survey will be used as a jumping off point for a discussion on the influence of worldviews in conservation biology.

Applied Workshops (4% - 2 x 2%)

There are two applied workshops (one focused on habitat suitability and one focused on connectivity) which are designed for you to apply what you have learned in the structured workshops to more self-directed research problems. The applied workshops will be due at the same time as the second structured workshop on the related topic.

Extra Credit Due Dates
Future of Conservation Survey: February 8 (11:30 a.m.)
Applied Workshop 1 (Habitat Suitability): February 29 (2:30 p.m.)
Applied Workshop 2 (Connectivity): March 21 (2:30 p.m.)

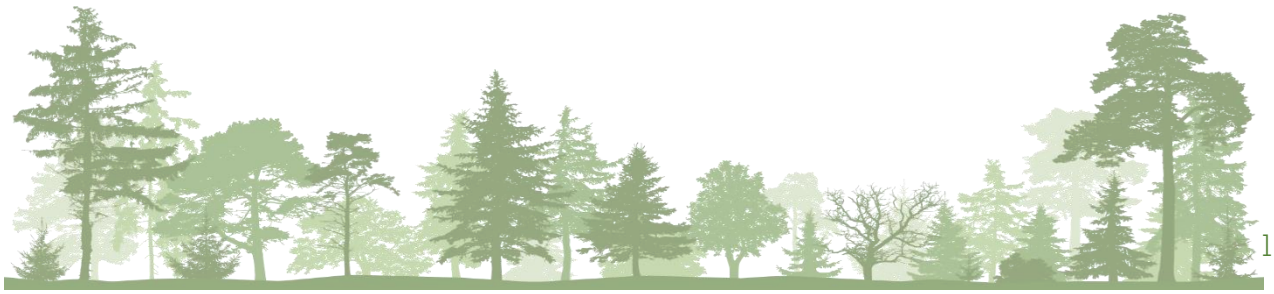
Saint Mary's University Undergraduate Grade Scale

Grade	Grade Points	Percentage Points	Definition & Expectations
A+	4.30	90-100	**Excellent:** Considerable evidence of original thinking; demonstrated outstanding capacity to analyze and synthesize; outstanding grasp of subject matter; evidence of extensive knowledge base
A	4.00	85-89	
A-	3.70	80-84	
B+	3.30	77-79	**Good:** Evidence of grasp of subject matter; some evidence of critical capacity and analytical ability; reasonable understanding of relevant issues; evidence of familiarity with the literature
B	3.00	73-76	
B-	2.70	70-72	
C+	2.30	67-69	**Satisfactory:** Evidence of some understanding of the subject matter; ability to develop solutions to simple problems; benefiting from their university experience
C	2.00	63-66	
C-	1.70	60-62	
D	1.00	50-59	**Marginal Pass:** Evidence of minimally acceptable familiarity with subject matter, critical and analytical skills
F	0.00	0-49	**Inadequate:** Insufficient evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature

Course Content/Schedule: Lab

Date	What are we doing?	What is due?
Jan 11	No Lab	-
Jan 18	Workshop 1: Introduction to GIS	-
Jan 25	Workshop 2: Identifying Ecosystem Types	Workshop 1
Feb 1	Independent Project: Project Proposal	Workshop 2
Feb 8	Workshop 3: Habitat Suitability Analysis 1	Independent Project: Proposal
Feb 15	Workshop 4: Habitat Suitability Analysis 2	Workshop 3
Feb 22	Reading Week: No Lab!	-
Feb 29	Independent Project: Data Layers*	Workshop 4 Applied Workshop 1 (Extra Credit)
Mar 7	Workshop 5: Connectivity 1	Independent Project: Data Layers
Mar 14	Workshop 6: Connectivity 2	Workshop 5
Mar 21	Independent Project: Work Period	Workshop 6 Applied Workshop 2 (Extra Credit)
Mar 28	Independent Project: Work Period	-
Apr 4	Charrette	Independent Project: Focal Element

*Note that the instructor will be out of town this day. The lab will still be available to you as a quiet place to work and the instructor will hold additional office hours before and after this lab session for you to access one-on-one help and to troubleshoot any problems.



Course Content/Schedule: Lecture

Module 1: What is Conservation Biology?

The first three weeks of the course will set up the course and introduce key concepts that we will be drawing on throughout the course.

While conservation biology involves a lot of science, it is also a heavily value-laden discipline. Values are an inextricable part of the equation, as values influence what science we chose to engage in and what we do with the results. It is important to understand this context, and the influence of culture and worldview on conservation to understand the 'why' behind conservation. Therefore, in addition to introducing the key scientific concepts that we will be using throughout the course, this module will go over the history of conservation biology, and how this history and different worldviews influence conservation today. We will also examine the effects that colonialism has had on conservation, and how conservation can be a tool for reconciliation.

Week 1	Introduction to the Course	
Jan 9	**Topic:** Introduction to the Course	**Readings:** - None
Jan 11	**Topic:** Key Concepts **Sub-Topics:** - Defining and Measuring Biodiversity - What is Conservation Biology?	**Readings:** - Gaston 2011 - Biodiversity and Conservation 2022
Week 2	**Patterns and Crises of Biodiversity**	
Jan 16	**Topic:** Biogeography **Sub-Topics:** - Patterns of Species Diversity - Island Biogeography	**Readings:** - Gaston 2000 - What is the Theory of Island Biogeography?
Jan 18	**Topic:** The Biodiversity Crisis **Sub-Topics:** - Threats to Biodiversity - Role of Conservation in Fighting the Crisis	**Readings:** - The Biodiversity Crisis in Numbers - More than 5000 wild species are at risk of Extinction in Canada
Week 3	**Worldviews in Conservation**	
Jan 23	**Topic:** Conservation Biology as a Scientific Discipline **Sub-Topics:** - History of Conservation Biology - The New Conservation Debate	**Readings:** - Future of Conservation Survey * - Soulé 1985 * Submit a screenshot of your survey results on Brightspace before the start of class for a 1% bonus mark
Jan 25	**Topic:** Indigenous Perspectives on Conservation **Sub-Topics:** - Colonialism and Conservation - Indigenous Protected and Conserved Areas	**Readings:** - M'sit No'kmaq et al. 2021 - What are IPCAs?

Module 2: Species-Based Approaches to Conservation Biology

There are millions of species on the planet (scientists estimate that the total number is somewhere in the neighbourhood of 8.7 million!), and it would be impossible to develop a specific conservation plan for each one of them. Instead, conservation biologists focus their attention of just a handful of species that warrant special attention – species which are known as focal species. This module will address the characteristics of focal species, the science behind building a species-specific conservation plan, and tools such as species reintroduction campaigns.

In this module, we will also begin our student-led debates, with debates on the role of hunting in conservation and whether there is a point at which species recovery efforts should be abandoned.

Week 4	Genetics and Metapopulations	
Jan 30	**Sub-Topics:** - Focal Species - Minimum Viable Population/Area - Source-Sink Dynamics	**Readings:** - Newmark 1985 - Dussex & Knapp 2022
Feb 1	**Student-led Debate:** Hunters play a critical role in the global conservation system.	**Readings:** - Flynn 2019 - Semcer 2019
Week 5	Species Recovery Planning	
Feb 6	**Sub-Topics:** - Species Recoveries - Species Reintroductions - The role of zoos in conservation	**Readings:** - Banff Bison Reintroduction Project - Lamb et al. 2022
Feb 8	**Student-led Debate:** Conservation biologists are obligated to never give up on species recovery efforts. Confirmed extinction is the only point at which recovery efforts should stop.	**Readings:** - Cornwall 2018

Module 3: Landscape-Based Approaches to Conservation Biology

In addition to species-specific approaches to conservation, there is a need to focus on broader, ecosystem-level approaches that can account for multiple conservation values at once and are able to operate over large landscapes. In this module, we will draw on the science of landscape ecology to understand how individual conservation elements and protected areas can come together to form conservation networks, which provide more conservation value than the sum of their parts.

The student-led debate in this module will address market-based incentives for conservation.

Week 6	Dynamic Landscapes	
Feb 13	**Sub-Topics:** - Systematic Conservation Planning - Adaptive Management - Core, Corridor, Matrix Model	**Readings:** - Margules & Pressey 2000 - Promoting Resiliency Through Fire Management
Feb 15	**Student-led Debate:** Market-based incentives for conservation (e.g., offset schemes, payment for ecosystem services) are inherently at odds with the core goals of conservation.	**Readings:** - Büscher & Fletcher 2016 - Bilmes 2021
Feb 19, 22	READING WEEK	
Week 7	Road Ecology and Connectivity	
Feb 27	**Sub-Topics:** - Multi-Scale Connectivity - Road Ecology - Cross Border Conservation	**Readings:** - Hilty et al. 2019 - Bonnin et al. 2020 - Road Ecology Episode of Ologies
Feb 29	**No Class: Instructor will be out of town**	

Module 4: Conservation in Special Systems

This module will look at conservation in systems that haven't always been the focus of conservation biology. Specifically, we will be addressing conservation in marine and urban systems. These systems present different challenges to conservation biologists, such as three-dimensional, highly dynamic environments, the close proximity to huge amounts of people.

Student-led debates in this module will address the utility of area-based targets and how non-native species ought to be framed in conservation.

Week 8	Marine Conservation	
Mar 5	**Sub-Topics:** - Marine Protected Areas - Dynamic Protected Areas - The role of OECMs in Conservation	**Readings:** - Warrior et al. 2022 - Creating a Marine Protected Area Network in British Columbia's Northern Shelf Bioregion
Mar 7	**Student-led Debate:** Area-based conservation targets (e.g., 30% by 2030) are vulnerable to a 'quantity over quality' approach to protected areas establishment and should therefore be replaced with another approach.	**Readings:** - Carroll & Noss 2022 - Lemieux et al. 2022
Week 9	**Urban Conservation**	
Mar 12	**Sub-Topics:** - Urban Ecology - Urban Equity and Green Spaces	**Readings:** - Soanes & Lentini 2019 - NYT 2023
Mar 14	**Student-led Debate:** The geographic origin of a species has no impact on its potential role in conservation – non-native species have value to conservation efforts.	**Readings:** - Schlaepfer et al. 2011 - Simões Vitule et al. 2011

Module 5: Looking to the Future of Conservation Biology

From rising sea levels and warming oceans to longer and more intense drought conditions, climate change will impact every part of the planet, posing a fundamental threat to species and ecosystems. In this module, we will be looking at some of the changes to biodiversity that are occurring and that are predicted to occur because of climate change, and how conservation biology is, and will need to adapt, both on the small, local scale and on the broader, more landscape and even global scale.

Student-led debates in this module will look at the complexities of predator reintroductions and the technology and ethics behind the emerging techniques of de-extinction.

Week 10	Restoration Ecology and Reconciliation Ecology	
Mar 19	**Sub-Topics:** - Restoration Ecology - Rewildling	**Readings:** - Kimmerer 2011 - Rewildling Magazine 2022
Mar 21	**Student-led Debate:** In 2020, Colorado voters passed Proposition 114 by a slim margin. The ballot measure directed the state's Parks and Wildlife Commission to develop a plan to reintroduce gray wolves in the state. Following through with the will of the voters, the first five wolves were released in December 2023. This marked the first time that a state-level vote led to a reintroduction, and it should be viewed as a positive for the state of Colorado and predator conservation more broadly.	**Readings:** - Niemiec et al. 2022 - National Wildlife Federation 2022
Week 11	**Climate Change and Conservation Biology**	
Mar 26	**Sub-Topics:** - Range Shifts - Assisted Migration - Conserving the Stage	**Readings:** - Groves et al. 2012 - A Story of Wrong-Way Migration - Enhanced Migration of Trees for Climate Adaptation
Mar 28	**Student-led Debate:** The revival of extinct species through advances in genetic techniques (processes known as de-extinction or resurrection biology) are valuable emerging techniques for the future of conservation biology and should be pursued.	**Readings:** - Adams 2016 - Evans Ogden 2014

Course Wrap-Up

The topics covered in the last lecture will be decided on by you. Perhaps there were things that you were expecting to see on this syllabus that aren't on it? This is your opportunity to suggest them! Maybe there are things that you want to go back to and take a deeper look at? Or maybe there was something conservation related in the news this term that you want to talk about as a class. This week is your opportunity to set the agenda and tailor the class to your interests.

The Thursday lecture session of this week will be used only if necessary to cover lecture material or debates missed due to inclement weather or other university closures.

Week 12	Course Wrap-Up	
Apr 2	**Student's Choice**	**Readings:** - None
Apr 4	**Make-Up Class:** If necessary due to university closure	

Learning and Support Resources

Service	Support Provided	Contact Information
Academic Advising	Academic advisors are committed to providing a supportive environment that focuses on your educational, professional, and personal development.	Website Atrium 301 advisor.science@smu.ca Book an Appointment
African Descended/Black Student Support	Resources and supports for African Descended and Black Students at Saint Mary's	Website
Career Counselling	Career Counselling is a confidential, in-depth service tailored to addressing your career goals and help ensure you are getting the most out of your university experience.	Website Student Centre, 4th Floor cel@smu.ca Book an Appointment
Counselling Centre	Access to free confidential counselling, mental health services and opportunities to support your wellbeing. You can access individual counselling appointment virtually and in person.	Website Student Centre, 4th Floor counselling@smu.ca Book an Appointment
Community Food Room	The on-campus food bank for the SMU community. The goal is to offer access to safe, nutritious, and culturally acceptable foods in a welcome environment.	Website Student Centre, 5th Floor food.room@smu.ca Book an Appointment Hours: Monday 4:00p.m.-6:00p.m. Tuesday-Friday 10:00a.m.-8:00p.m.
Fred Smithers Centre for Student Accessibility	The Centre provides accommodations to students with disabilities. Various services are available to help students succeed in their studies.	Website Student Centre, 3rd Floor Monday-Friday 8:30a.m.-12:00p.m. and 1:00p.m.-4:30p.m. fredsmithers.centre@smu.ca

Health Clinic	Access to registered nurses, doctors, social workers, psychiatrists, counselors and psychologists.	Website Student Centre, 4th Floor student.health@smu.ca Book an Appointment Hours: Monday-Friday 9:00a.m.-12:00p.m., 1:00p.m.-4:00p.m.
Indigenous Community	Resources and supports for Indigenous Students at Saint Mary's including advising and community supports.	Website
International Student Centre	Supports for International Students including help with visas, social activities, mentorship programs and help registering for local services	Website Room 300, Student Centre international.centre@smu.ca
Patrick Power Library	Access Saint Mary's print and electronic resources and get reference and research assistance from librarians.	Website Live Help Hours: Monday-Thursday 10:00a.m.-7p.m. Friday 10:00a.m.-5:00p.m. Sunday 1:00p.m.-5:00p.m.
Sexual Violence Support	Resources for people who have experienced sexual violence or who want to know more about available supports.	Website Get Help Now
Saint Mary's University Students' Association (SMUSA)	Works to provide services, support, advocacy, and representation to all students at SMU.	Website
Student Success	A number of resources and opportunities such as Study Hall and Study Skills Workshops to help support your learning	Website studentsuccess@smu.ca