

# Biol 422

## Conservation Biology

Winter Term 2024

### Calendar Description

The application of biological research to the conservation of biodiversity and natural resources, as well as the interaction of biology with philosophy, politics and economics in influencing conservation policy.

PREREQUISITE: BIOL 300/3.0 or 302/3.0 or BIOL303/3.0. EXCLUSION ENSC 310.

### Schedule

*Lectures* (3 per week, 50 minutes each):

*Tutorials* (1 per week, 1 1/2 hours):

### Learning Objectives

The goal of Biology 422 is to provide (i) an exploration of the field of Conservation Biology, (ii) a critical assessment of conservation issues and solutions, (iii) hands-on experience in addressing a conservation issue, (iv) experience presenting and discussing conservation problems, (v) exposure to various career options in Conservation Biology. The course will review the foundations of Conservation Biology, major threats to biodiversity, approaches to solving conservation problems, and societal challenges for conservation. Tutorials will highlight controversial issues in conservation, providing students opportunities to critically assess issues and solutions by applying approaches and concepts discussed in lecture.

By the end of the course, students will be able to:

- A. Explain the major threats to biodiversity, the most important approaches to conserving biodiversity, and the societal challenges that confront conservation.
- B. Think critically and creatively about conservation problems and solutions, recognizing the approaches that work better than others, and the importance of compromise in successful conservation.
- C. Understand how best to address a local conservation issue of their choice.
- D. Present scientific material to their peers and to the public in various formats (written, oral, graphic).

### Course Outline

The course will include four sections:

(1) *Importance of biodiversity*: What Conservation Biology is; history and perspectives; what biodiversity is; global distribution of biodiversity; ecological, economic and intrinsic values of biodiversity.

(2) *Threats to biodiversity*: Habitat degradation, loss and fragmentation; overexploitation; alien invasive species; climate change; and synergisms.

(3) *Mitigating threats to biodiversity*: Population viability; population reintroductions; conservation breeding; ecosystem restoration; designing and managing protected areas.

(4) *Managing people*: Ecological economics; environmental psychology; environmental policy.

Guest lectures will supplement the material by providing more detailed treatment within this framework.

### Learning Hours

<i>Teaching method</i>	<i>Average hours per week</i>	<i>Number of weeks</i>	<i>Total hours</i>
<i>In-class hours</i>			
Lecture	3	12	36
Seminar			
Laboratory			
Tutorial	1.5	12	18
Practicum			
Group learning			
Individual Instruction			
<i>Other</i>			
Online activity			
Off-campus activity			
Private study	3	12	36
Major Research Project	2.5	12	30
Total hours on task			120

### Textbooks/Readings

Sher, A.A. An Introduction to Conservation Biology, 3<sup>rd</sup> edition. Oxford University Press. PLUS Several assigned readings will be accessible through the course website.

### Grading Scheme

Midterm exam:	20%
Final Exam:	25%
Major Project:	30%
Tutorial Assignments:	25%

See OnQ for due dates.

### **Midterm and Final Exams**

The midterm and final exams for this course will be conducted in person. These assessments are designed to test your understanding of topics covered in lecture and the associated readings. The exams will consist primarily of short-answer style questions.

### **Tutorials**

Most tutorial exercises will be conducted during synchronous sessions. You are expected to attend the session that you signed up for through Solus. Most exercises can be completed during the tutorial session, and will be assigned participation marks. Two or three group exercises will require work outside the tutorial session. All exercises will be explained in detail during tutorials, with associated documents.

### **Major Project**

A large portion of the course marks involve a term project, to be explained during lecture with associated documents.

### **Late Policy**

The project proposal and final report include a built-in 48 hour grace period. This means that late penalties will not be applied if the assignment is submitted within 48 hours of the due date. Assessments submitted more than 48 hours after the deadline will be deducted 10% from the assignment grade for each 24 hour period thereafter.

Please note that it is your responsibility to ensure the correct files are submitted. Make sure to view and check your submission. Blank assignments or corrupt files will receive a grade of zero. If you encounter technical difficulties while trying to submit an electronic document, email the assessment to your TA along with a short explanation. We will use the timestamp on the email to evaluate late penalties.

### **Netiquette**

You are expected to maintain respect in your dealings with fellow students and the teaching team in any course. The following guidelines are a reference to guide your online communication in this course.

1. Make a personal commitment to learn about, understand, and support your peers.

2. Give others the benefit of the doubt.
3. Ensure your writing is respectful and inclusive.
4. Recognize and value the experiences, abilities, and knowledge that each person brings.
5. Carefully re-read your writing before posting or sending to others.
6. It's okay to disagree with ideas, but personal attacks will not be tolerated.

### **Academic Considerations for Students in Extenuating Circumstances**

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances that are beyond their control and are interfering with their ability to complete academic requirements related to a course for a short period of time. [Click here to view the Senate Policy on Academic Consideration for Students in Extenuating Circumstances.](#)

Please see the Academic Consideration Requests button on the course homepage to apply for an academic consideration in this course. Note that you will be taken to the student request portal where you will be required to provide the name and email address of the instructor/coordinator. For this course, please be sure to use the following email address: [biol200@queensu.ca](mailto:biol200@queensu.ca). Remember: there is a built-in 48 hour grace period for the project proposal and report - you do NOT need to request consideration to use this grace period.

### **Grading Method**

All components of this course will be graded using numerical percentage marks. Your course average will then be converted to a final letter grade according to Queen's Official Grade Conversion Scale:

<i>Queen's Official Grade Conversion Scale Grade</i>	<b>Numerical Course Average (Range)</b>
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

### **Academic Integrity**

Academic integrity is constituted by the six core fundamental values of honesty, trust, fairness, respect, responsibility, and courage.

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see Academic Regulation 1), on the Arts and Science website, and from the instructor of this course.

Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

### **Turnitin**

This course makes use of Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments through onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely for the purpose of detecting plagiarism.

Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. Turnitin compares submitted files against its extensive database of content, and produces a similarity report and a similarity score for each assignment. A similarity score is the percentage of a document that is similar to content held within the database. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to determine the authenticity of work as a part of a larger process.

Please read Turnitin's Privacy Pledge, Privacy Policy, and Terms of Service, which governs users' relationship with Turnitin. Also, please note that Turnitin uses cookies and other tracking technologies; however, in its service contract with Queen's Turnitin has agreed that neither Turnitin nor its third-party partners will use data collected through cookies or other tracking technologies for marketing or advertising purposes. For further information about how you can exercise control over cookies, see Turnitin's Privacy Policy:

Turnitin may provide other services that are not connected to the purpose for which Queen's University has engaged Turnitin. Your independent use of Turnitin's other services is subject solely to Turnitin's Terms of Service and Privacy Policy, and Queen's University has no liability for any independent interaction you choose to have with Turnitin.

### **Academic Integrity and Queen's Code of Conduct**

Students are expected to read and understand regulations concerning academic integrity and for ensuring that their assignments and conduct conform to the principles of academic integrity. Departures from academic integrity include plagiarism, use of unauthorized materials,

facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulations on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university. Information is available in the Arts and Science Calendar (see Academic Regulation 1 - <http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations>, on the Arts and Science website (see <http://www.queensu.ca/artsci/academics/undergraduate/academic-integrity>), on the Biology website (<http://www.queensu.ca/biology/undergrad/integrity.html>) and from the course instructor.

### **Accommodation Policy, Exam Conflicts, and Other Conflicts**

If students require special arrangements to meet their academic obligations during the term, please make requests for academic accommodation in writing during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. Students who feel they need accommodations for disabilities or extenuating circumstances, or have a conflict between exams or other commitments should consult the Biology Department's website for details about how to proceed (<http://www.queensu.ca/biology/undergrad/integrity.html>). In general, the earlier a course coordinator is apprised of an extenuating circumstance, the more likely an accommodation can be made. Students are encouraged to be proactive in anticipating difficulties, when it is possible to do so.

Students may apply to write a make-up or deferred exam if they have an exam conflict as defined in the Academic Regulations of the Faculty (See Arts and Science Calendar Regulation 8 - <http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations>). In this case, the student should report to the Exams Office first to verify that there is a genuine exam conflict. Biology professors will not consider your situation to be a conflict unless it meets the criteria set out by the Faculty of Arts and Sciences. Students may request a make-up or deferred exam if they have an exam conflict with off-campus travel associated with a field course (e.g. BIOL-307/3.0 or 407/3.0) that is held during the fall or winter terms.

### **Accommodation of Disabilities**

Queen's University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact the Disability Services Office (DSO) and register as early as possible. For more information, including important deadlines, please visit the DSO website at: <http://www.queensu.ca/hc/ds/>

### **Copyright**

Content (slides, photos, data, and readings) is designed for use as part of BIOL422 and is the property of the Instructor unless otherwise stated. Third party copyrighted materials have either

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