



## Department of Biology

### SC/BIOL4245 ENVB 4245 ENVS 4110 3.0 CONSERVATION BIOLOGY

#### Course Outline – Fall 2022

**Course Instructor: Dr. Junyan Zhang**

**How to address me: Professor Zhang**

**Personal Pronouns:** (she/her/hers)

**Email:** [juzhang@yorku.ca](mailto:juzhang@yorku.ca)

Note: If you have a question or would like to talk with me, you can send an email, visit me during student hours, or approach me after class.

Please include “**BIOL 4245**” in the subject line.

**Student Hours: Friday 3:00PM–5:00PM**

**Via Zoom**

<https://yorku.zoom.us/j/97742916639>

#### **What are ‘Student Hours’?**

*Student hours are dedicated times through the week for the course instructor and TAs to meet with YOU. Pop in to introduce yourself, ask questions about the course, or discuss content from the course.*

*Note: If these times don’t work for you, email me and we can arrange an alternate time to meet.*

**Office Location:** 213 Lumbers Building

[Click here for visual directions.](#)

**Class Times:** Tuesday & Thursday, 11:30am – 12:20pm

**Class Location:** CB 115

[Click here for visual directions.](#)

**Laboratories:**

LAB 01 Tuesday, 14:30-17:30, HNE 206

LAB 02 Friday, 14:30-17:30, RN812

LAB 03 Thursday, 14:30-17:30, CC 318

**Laboratory Locations:**

**Study Spaces on Campus:**

<https://currentstudents.yorku.ca/study-spaces>

**Course Teaching Assistants: TBA**



**Teaching Assistant** (she/her/hers)  
(teaching.assistant.name1@yorku.ca)

**Course Format:** in-person

Some elements of the course (e.g., quizzes, exam, some labs and office hours) will be online throughout the term. Access to high-speed internet is required.

**Prerequisites:** Prerequisites: SC/BIOL 2050 4.00, SC/BIOL 2060 3.00

## Land Acknowledgement

York University recognizes that many Indigenous Nations have longstanding relationships with the territories upon which York University campuses are located that precede the establishment of York University. York University acknowledges its presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, and the Huron-Wendat. It is now home to many First Nation, Inuit, and Métis communities. We acknowledge the current treaty holders, the Mississaugas of the Credit First Nation. This territory is subject of the Dish with One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.

## Welcome to Conservation Biology!

Conservation Biology focuses on the welfare of biodiversity. Its scholarship is multidisciplinary, dealing variously with ecology, evolution, genetics, ethics, society, politics, and law. Extinction is natural, but current rates of extinction and processes promoting extinction and other ecological imbalances are exceptionally high compared to rates experienced over most of the past half billion years. Because these threats to biodiversity are mostly human-generated, we are said to have entered the Anthropocene, an era characterized by dramatic ecological changes caused by our highly influential species.

**Course Calendar Description:** This course explores the role of biological science in efforts to conserve natural resources, systems and the organisms therein. Two lecture hours, three laboratory hours. One term. Three credits.

**Prerequisites:** SC/BIOL 2050 3.00 Ecology; SC/BIOL 2060 3.00 Statistics for Biologists.

### Course Level Learning Objectives

Upon successful completion of this course students should be able to demonstrate an understanding of the following:

#### Area 1. Fundamental Understanding:

- 1) Explain the scales of biodiversity that are the focus of conservation
- 2) Use terminology appropriate to the field of conservation biology
- 3) Integrate knowledge of genetics, evolution, diversity, and population biology in demonstrating an understanding of conservation biology
- 4) Identify organisms, including Canadian ones, that are suffering population declines
- 5) Describe the processes and levels of government involved in assessing the status of threatened wildlife
- 6) Place the current period of extinction in paleo-historical context
- 7) Compare and contrast different solutions to declining population patterns
- 8) Apply economic thinking (costs, public resources) to conservation problems
- 9) Itemize techniques used by Conservation Biologists in managing conservation problems

**Area 2. Critical Thinking Skills**

- 1) Apply biological principles to the area of public policy
- 2) Assign conceptual categories of threat to particular cases of population decline
- 3) Articulate the limitations of recovery based upon different species' natural history and life history characteristics

**Area 3. Problem Solving Skills**

- 1) Devise ways of analyzing existing data to determine if populations are stable, including the use of basic statistics
- 2) Use sophisticated methods of literature searching to find material that is relevant for a particular subject area
- 3) Evaluate alternative biological and policy approaches to issues of conservation biology

**Area 4. Effective Communication**

- 1) Create a visual presentation of a data analysis problem
- 2) Create and deliver an audio of a particular research program
- 3) Write a political letter advocating for a particular conservation strategy or solution
- 4) Perform basic literature searches and find library resources relating to biological topics

**Area 5. Social Skills**

- 1) Work with one or more partners in producing and communicating scientific information
- 2) Advocate for a conservation position over a competing position
- 3) Demonstrate the connection between biological harm and societal or personal valuation

Lecture Topics	Lab Topics
1. Biodiversity Crisis	1. Synopses
2. Conservation Economics and Politics	2. News Article Presentation
3. Species-at-Risk Assessment	3. Recovery plan project Oral Presentation and Report
4. Threats to Biodiversity	
5. Conservation	

**Learning Materials**






**Textbook: (optional)** Conservation Biology for All. 2010. Edited by Navjot S. Sodhi and Paul R. Ehrlich. This text is available through the eClass for the course

**Lab Materials:** Lab Instructions, Synopsis papers and Recovery Plan project materials will be provided on the Course eClass webpage

**Course eClass Site** (<https://eclass.yorku.ca/>)

- Please check the course eClass site often for important information and updates.
- Make sure you receive course announcements to your email & check your email often (daily)

**Technology Checklist:**

 An internet-enabled computer to access eClass and materials	 Zoom software installed on computer	 Access to reliable internet	 Webcam	 Microphone
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**Note:** If you don't have access to a computer, webcam, microphone, consider [borrowing a laptop from York U](#), [financial aid from York](#), and [single workspaces available for student use on campus at the library](#). (<https://www.library.yorku.ca/web/ask-services/printing-and-computing/computing/public-computers-labs/>)

**Course Assessment**

<b>Lab Assignments</b>		
Three paper synopses, from a choice of six	15%	Six classic Conservation Biology papers will be posted. You are responsible for submitting three synopses for grading (5% each). You can choose which three to submit; Various dates
News Article Presentation	10%	Individually, students will find a news article that best captures the essence and importance of a recent (within the last 2 years) conservation issue and give a quick presentation to the class outlining the issue. Power-point slides are <b>not</b> to be used. (5%); Various dates, sign up your own time slot. The news article shall stimulate a class discussion (~5 min) after the presentation. Students will be given participation for insightful questions or comments pertaining to the discussion. (5%)
Recovery Plan Project	25%	In groups students will research the status of a Canadian species listed for evaluation via COSEWIC and write a recovery plan for the species. Students will be evaluated on their oral presentation and write-up. Oral Presentations weeks Oct 31 & Nov 4. Write up due 11:59PM, Friday, Nov 18. Teamwork, your grade may be adjusted based on the team evaluation you received from your team members
<b>Mid-term Exam (2)</b>	20%	Two midterm exams; 50 minutes each, online, during class time (Oct 6 & Nov 10)
<b>Final Exam</b>	30%	Cumulative; one-third of the final exam will be comprehensive (i.e., from the entire semester's material). Scheduled by Registrar

**Note:** There will be two midterm exams giving during-class time. The final exam consists of two parts: Part 1 will cover lectures after the midterm II (20%), Part 2 will be comprehensive (10%). The best 2 of 3 (midterm 1, midterm 2 and final exam Part 1) plus final exam part 2 (10%) will be used to calculate toward your final grade. This provides flexibility to accommodate a multitude of different circumstances (including illness, accidentally missing a deadline, technical difficulties, other obligations) and give everyone a chance to complete this course successfully. If you are satisfied with your Midterm 1 and Midterm 2, you don't have to write final exam part 1. However, you must write Final exam part 2 to earn toward a full grade. **As such, there is no make-up for midterm exams.** If you miss a midterm exam, your mark will consist of the midterm written plus your final exam.

## Plagiarism

**Your work must be your own: assignments and answers to assessment questions MUST be in your own words, you cannot copy anything from anyone else, nor from the internet, textbooks or course slides. Copying a sentence, paragraph or more and then just changing some of the words is still considered plagiarism!** If you copied from someone else it is not your own work and thought process and you will not receive credit for it! Go to the Spark Academic Integrity site if you need a reminder on what is ok and what is not: <https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/> and <https://spark.library.yorku.ca/creating-bibliographies-plagiarism/>

Tests, exams, reports and write-ups may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating (e.g. **Turnitin**).

## Laboratory

**Attendance at tutorials is mandatory.** This course includes a major component of project research on topics related to Conservation Biology that is of interest to you. You will deliver oral presentations and submit write-ups based on your findings. A full description of project details is provided on eClass. The Tutorial sessions will guide you throughout this process. Students must sign in at the beginning of each tutorial. Failure to attend any laboratory will be reflected in a reduced grade on the laboratory section of the course. Because tutorials are largely offered as work/study periods, you and your group members generally decide how long you wish to stay up to the scheduled 3 hours. If you cannot attend a particular laboratory for a good reason, such as illness, inform your TA at your earliest convenience.

## Course Policies

### Email etiquette:

Meant to help foster a respectful and efficient correspondence, which ultimately benefits everyone!

- Please use your @yorku email address when emailing Professor Zhang or your TA as other email addresses are filtered out by the university and will not reach us. **Don't use the eClass emailing system** – these messages will not reach us.
- Please include **BIOL 4245** in the subject line.
- Please include your name and student number at the end of each email.
- If your question is about course material, please post in the forum on eClass instead of sending an email as others may have the same/similar questions, or ask it during a class!

- Whether you email me, TA's or classmates, please remember that this is a **professional environment**, so please be respectful and avoid e.g. all CAPS or text-messaging language, which can also make it very hard to read and understand your message.
- Response time: I will do my best to respond within 48 hours (2 work days, not including weekends), please be patient (remember there are many of you, but only one of me).

### Copyright and Intellectual Property:

- **Lectures and other course materials are designed for use as part of this course at York University only and are the intellectual property of the instructor. They cannot be distributed without explicit written permission. ALL course materials are copyrighted.** This includes but is not limited to slides, videos and lecture recordings, assignment instructions, quizzes, questions of the week, final exam questions, in-class activities etc.. **You do NOT have the right to post these anywhere or share them with anyone outside of this course.** Third party copyrighted materials (such as book chapters, journal articles, music, videos, photos etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law or permission for their use in this course has been obtained from the copyright holder.
- Copying this material for distribution (e.g. uploading material to a commercial third-party website) is a violation of Copyright law and may lead to a charge of misconduct under [York's Code of Student Rights and Responsibilities](#) and the [Senate Policy on Academic Honesty](#) and/or legal consequences for violation of copyright law.

### Late policy:

I am generous with extensions, but will watch for abuse!

- Generally, if you indicate you cannot meet a submission deadline, let me know in advance and let me know why, and we should be able to negotiate a short extension
- Otherwise, there will be daily deductions 5% for late submission

### Missed exam policy:

- **There is no make-up for midterm exams.** If you miss a midterm due to an unpredicted reason, you do not need to bring physician's documentation. The two tests (midterm you taken and final exam part 1) will be used to calculate your final grade. Details see the [Grade Breakdown](#).
- The **final exam** will take place during the Final Exam period and will be scheduled by the Registrar's Office. If you miss the final exam, you must email me (juzhang@yorku.ca) within one week of the date of the final exam with a completed DSA attached and petition your home faculty for deferred standing. **It is the Petition Committee's decision whether deferred standing is granted; if it is, the committee will set the deadline for writing the deferred exam. Denied petitions will result in a zero on this assessment.**

**Accommodations:**

- If you are entitled to extra test writing time, you will be accommodated via extended time set up through eClass or Crowdmark.
- Please provide Professor Zhang and your TA three weeks' notice of any **religious observance conflicts** occurring at any point during the term, for which accommodations will be required.
- Students who feel that there are extenuating circumstances that may interfere with their ability to successfully complete the course requirements are encouraged to discuss the matter with the Course Director as soon as possible.

**Regrading/Reappraisal Procedures**

For all re-grading requests, please submit your request via the reappraisal form on eClass. In this form you'll be asked to include your (1) Your Name and Student Number, (2) A summary of the request (e.g., the total was miscounted), and (3) a copy of the assessment. We will strive to review all re-grading requests within 3 weeks.

**Inclusive teaching statement:**

I am committed to fostering an environment for learning that is inclusive for everyone.-All students in the class, the instructor, and any guests should be treated with respect during all interactions.

It is my hope that our class will support diversity of experience, thought, and perspective. Please feel free to contact me via email or in person to let me know about any experiences you have had related to this class that have made you feel uncomfortable. I will continually strive to create inclusive learning environments and would therefore appreciate your support and feedback.

**Community Guidelines**

The following values are fundamental to academic integrity and are adapted from the International Center for Academic Integrity\*. In our course, we will seek to behave with these values in mind.

	<b>As students, we will...</b>	<b>As a teaching team, we will...</b>
<b>Honesty</b>	<ul style="list-style-type: none"> <li>• Honestly demonstrate our knowledge and abilities on assignments and exams</li> <li>• Communicate openly without using deception, including citing appropriate sources</li> </ul>	<ul style="list-style-type: none"> <li>• Provide honest feedback on your demonstration of knowledge and abilities on assignments and exams</li> <li>• Communicate openly and honestly about the expectations and standards of the course via the syllabus, and with respect to assignments and exams</li> </ul>
<b>Responsibility</b>	<ul style="list-style-type: none"> <li>• Complete assignments on time and in full preparation for class</li> <li>• Show up to class on time, and be mentally/physically present</li> <li>• Participate fully and contribute to team learning and activities</li> </ul>	<ul style="list-style-type: none"> <li>• Provide timely feedback on your assignments and exams</li> <li>• Show up to class on time, and be mentally and physically present</li> <li>• Create relevant assessments and class activities</li> </ul>



	<b>As students, we will...</b>	<b>As a teaching team, we will...</b>
<b>Respect</b>	<ul style="list-style-type: none"> <li>• Speak openly with one another, while respecting diverse viewpoints and perspectives</li> <li>• Provide sufficient space for others to voice their ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Respect your perspectives even while we challenge you to think more deeply and critically</li> <li>• Help facilitate respectful exchange of ideas</li> </ul>
<b>Fairness</b>	<ul style="list-style-type: none"> <li>• Contribute fully and equally to collaborative work, so that we are not freeloading off others</li> <li>• Not seek unfair advantage over fellow students in the course</li> </ul>	<ul style="list-style-type: none"> <li>• Create fair assignments and exams, and grade them in a fair, and timely manner</li> <li>• Treat all students equitably</li> </ul>
<b>Trust</b>	<ul style="list-style-type: none"> <li>• Not engage in personal affairs while on class time</li> <li>• Be open and transparent about what we are doing in class</li> <li>• Not distribute course materials to others without authorization</li> </ul>	<ul style="list-style-type: none"> <li>• Be available to all students when we say we will be</li> <li>• Follow through on our promises</li> <li>• Not modify the expectations or standards without communicating with everyone in the course</li> </ul>
<b>Courage</b>	<ul style="list-style-type: none"> <li>• Say or do something when we see actions that undermine any of the above values</li> <li>• Accept a lower or failing grade or other consequences of upholding and protecting the above values</li> </ul>	<ul style="list-style-type: none"> <li>• Say or do something when we see actions that undermine any of the above values</li> <li>• Accept the consequences (e.g., lower teaching evaluations) of upholding and protecting the above values</li> </ul>

<sup>2</sup> This class statement of values is adapted from Tricia Bertram Gallant, Ph.D.

## University Policies

### Important Dates

**Drop Deadline:** Nov. 11, 2022 (last day to drop without course on transcript)

**Course Withdrawal Deadline:** Nov. 12 - Dec. 7, 2022 (course still appears on transcript with 'W')

### Grading Scheme

In accordance with the York University Undergraduate Calendar Regulations, the letter grades assigned in undergraduate courses at York conform to the descriptions and grade ranges shown here:

<https://calendars.students.yorku.ca/2022-2023/grades-and-grading-schemes>

### Academic Honesty and Integrity

Academic misconduct undermines the values of honesty, trust, respect, fairness, and responsibility that we expect in this class. York University provides supports such as academic integrity workshops to ensure that all students understand the norms and standards of academic integrity that we expect you to uphold.



York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty. The Policy (<http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>) affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards. Please review and familiarize yourself with the policy.

There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve your research and writing skills, and cope with University life. Students are expected to review the materials on the Academic Integrity website:

**Examples of actions that do not adhere to York’s Academic Integrity Policy include:**

- Plagiarism (passing off someone else’s work as your own)
- Accessing unauthorized sites for assignments or tests
- Unauthorized collaboration on assignment and exams
- Uploading work to third party repository sites (e.g., Course Hero, One Class, etc.)
- Scanning, sharing, uploading, or publishing exams, tests, or scholarly work

For more information on what academic integrity is and why it is important see:

<https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/>. Information on the process of investigations into breaches of academic honesty:

<https://spark.library.yorku.ca/academic-integrity-breach-of-policy-on-academic-honesty/>

**Important Note from the FSc Committee on Examinations & Academic Standards (CEAS):**

Numerous students in Faculty of Science courses have been charged with academic misconduct when materials they uploaded to third party repository sites (e.g., Course Hero, One Class, etc.) were taken and used by unknown students in later offerings of the course. Whenever a student submits work obtained through an external site (e.g., Course Hero, Chegg), the **submitting student will be charged with plagiarism** and the **uploading student will be charged with aiding and abetting**. To avoid this risk, students are urged not to upload their work to these sites.

**Assistance for Students (Academic and Well-Being)**

**Academic Advising\***: <https://www.yorku.ca/science/academic-advising/> \* Departments also offer program-specific advising. Check with your Department’s Undergraduate Office.

**Centre for Human Rights, Equity, and Inclusion**: <https://rights.info.yorku.ca>

**Centre for Indigenous Students Services**: <https://aboriginal.info.yorku.ca/>

**Good2Talk 24-hour Ontario Student Helpline**: 1-866-925-5454 /Text: GOOD2TALKON to 686868

**Keep.meSAFE**: <https://myssp.app/keepmesafe/ca/home>

**Learning Commons** (general academic learning supports including library research, time management, study skills, career planning, etc.): <https://learningcommons.yorku.ca/>

**Peer Assisted Study Sessions (PASS)**: <https://www.yorku.ca/colleges/bethune/get-help/pass/>

**Peer Tutoring**: <https://www.yorku.ca/colleges/bethune/get-help/peer-tutoring/>

**Sexual Violence Response and Support**: <https://thecentre.yorku.ca>

**Student Counselling, Health & Well-being:** <https://counselling.students.yorku.ca/>

**Support Services for International Students:** <https://yorkinternational.yorku.ca/international-student-support/>

**Writing Services:** <https://www.yorku.ca/colleges/bethune/get-help/writing/>

**York University Student Services:** <https://family.yorku.ca/student-services/#SCD>

**York University Student Well-being Resources:** <https://www.yorku.ca/well-being/resources/students/>

## Accessibility

York University is committed to principles of respect, inclusion, and equality of all persons with accessibility needs across campus. The University provides services for students with accessibility needs (including physical, medical, learning, and psychiatric needs) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University.

Students in need of these services are asked to register with accessibility services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Please note that registering with accessibility services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs.

**Additional information is available at the following websites:**

**Student Accessibility Services:** <https://accessibility.students.yorku.ca>

**York Accessibility Hub:** <http://accessibilityhub.info.yorku.ca/>

## Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course Director immediately. To arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete and submit an accommodation request form at least 3 weeks before the exam period begins. <https://secure.students.yorku.ca/pdf/religious-accommodation-agreement-final-examinations.pdf>

## Student and Instructor Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person

to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive and/or harassing behaviour by students in academic situations is available at <http://secretariat-policies.info.yorku.ca/policies/disruptive-andor-harassing-behaviour-in-academic-situations-senate-policy/>.

Academic accommodation refers to educational practices, systems and support mechanisms designed to accommodate diversity and difference. The purpose of accommodation is to enable students to perform the essential requirements of their academic programs. At no time does academic accommodation undermine or compromise the learning objectives that are established by the academic authorities of the University.

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<https://calendars.students.yorku.ca/2021-2022/policies-and-regulations>

**I wish you great success in BIOL 4245!**

**If you need any help, please do not hesitate to contact me (or your TA, depending on your question).**