



RENr 364 / BIOL 230

PRINCIPLES OF MANAGING NATURAL DIVERSITY / CONSERVATION BIOLOGY

In Winter 2022, BIOL 230, *Conservation Biology*, is being offered at Yukon University concurrent with the University of Alberta's RENr 364, *Principles of Managing Natural Diversity*, as part of the Northern Environmental and Conservation Sciences, B.Sc. Program. All students registered in BIOL 230 or RENr 364 must adhere to requirements outlined in this course syllabus. University of Alberta students must also be aware of, and adhere to, the University's Code of Student Behaviour, referenced in the outline; Yukon University students must be aware of, and adhere to, Yukon University Academic Regulations, also referenced in the outline.

INSTRUCTOR: Tara Stehelin, PhD
Instructor, Biology, Yukon University

OFFICE HOURS: Thurs. 12:30 – 2:00

OFFICE LOCATION: A2806

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CLASS DAYS & TIMES: Mon/Wed. 2:30 – 4:00

CLASS LOCATION: A2603

COURSE DESCRIPTION

This is an introductory course assessing the essentials of a broad and sometimes value-laden discipline addressing the crisis faced in the management of species at risk. The diversity of life on planet Earth is the focus, its values, its threats and potential solutions to its demise. Three aspects will be emphasized: factual content and principles of species at risk and extinction; individualized research and reporting; class interaction and discussion skills.

COURSE REQUIREMENTS

For students taking the course as BIOL 230: BIOL 101 at YukonU or equivalent.

For students taking the course as RENR 364: Registration in YukonU/University of Alberta Environmental and Conservation Sciences degree program, and successful completion of UofA BIOL 108 or YU BIOL 101, or equivalent.

EQUIVALENCY OR TRANSFERABILITY

Receiving institutions determine course transferability. Find further information at: <https://www.yukonu.ca/admissions/transfer-credit>.

Students in the B.Sc. ENCS program should contact an ENCS advisor if they have questions about equivalency or transferability of this course.

LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

1. understand the scope, nature of, and reasons for the biodiversity crisis faced by life on planet Earth, including identifying the places where biodiversity is greatest and under the greatest threat,
2. understand and verbalize ethical debates about the role of humans in creating biodiversity collapse,
3. understand and pose arguments of threats to and the nature of the threats to all life on earth by the loss of diversity,
4. understand the process of extinction and impacts to population, community and ecosystem,
5. understand and apply methods for using statutes and other public processes for cataloguing, assessing, and listing species according to the risks for extinction, and outlining basic recovery strategies for species at risk, and
6. utilize the practise of defending and proposing management strategies to address biodiversity crises in verbal presentation and debate in a small public forum.

COURSE FORMAT

The course content will be covered in two 1.5 hour lectures per week, and two short field trips during class time per semester (details TBA depending on university-mandated restrictions). Although it will vary by individual, students should expect to spend 4 – 6 hours per week on studying or reading course materials outside of class time.

Delivery format

This course will be delivered in a face-to-face format, although remote attendance of lectures via Zoom may be possible.

EVALUATION

The course grade will be determined as follows:

Midterm exam	15 %
Course, discussion, and field trip participation	20 %
Advocacy paper, presentation or poster	35 %
Final exam	30 %
Total	100%

Participation

Students are expected to participate actively in classroom discussions and debates, including presenting an informed viewpoint based on previously-conducted research. A portion of the marks (20%) will be assigned based on active classroom participation and attendance of field trips.

Assignments

Students will be required to prepare an advocacy paper and will present on this topic in a 10-15 minute oral presentation on a conservation biology issue (may be species or ecosystem focused). The report will summarize the scientific knowledge about a particular species or ecosystem followed by a persuasive explanation and argument for recommended conservation action, which the student is urging the assembled 'decision makers' to adopt. The paper may also be summarized in the form of a poster for public display. *Students registered in the course as RENR 364* will prepare a detailed and comprehensive research paper as part of this project.

A detailed marking guide for the advocacy paper and presentation will be provided in class.

Exams

There will be a midterm exam and a final exam for this course. If a midterm or final exam are missed, a mark of zero will be assigned.

Due Dates and Late Assignments

Late assignments will be deducted -5% per day. If a student cannot attend an exam or field trip, the instructor must be informed well in advance to determine if alternate

arrangements can be made. Alternate arrangements will be considered for things such as specialist medical appointments, emergency situations, or exam conflicts.

Assignment of grades

The total numerical score will be converted to a grade on Yukon University's letter grading system.

COURSE WITHDRAWAL INFORMATION

Students registered in BIOL230: the Last date to withdraw without academic penalty is Mar. 11, 2022. The Last date to apply to graduate is Feb. 15, 2022. Refer to the YukonU website for other important dates. <https://www.yukonu.ca/admissions/important-dates>

Students registered in RENR 364 should refer to the UAlberta calendar for important dates (calendar.ualberta.ca).

TEXTBOOKS AND LEARNING MATERIALS

Students are required to purchase a textbook; either as a hard copy from the YU bookstore, or another source if they prefer.

Sher, A and R. Primack. 2020. *Introduction to Conservation Biology, 2nd Edition*. Oxford University Press. ISBN-13: 9781605358970

Additional material will be provided from (students do not need to purchase this textbook):
Schneider, R. R. 2019. *Biodiversity Conservation in Canada, from Theory to Practise*, Publisher: The Canadian Centre for Translational Ecology
ISBN: 978-1-9995078-0-0

COURSE WEBSITE

Many course materials are available on the online learning platform at Yukon University (Moodle); these include pdf versions of lecture slides, scientific journal articles, reminders, and other material, such as website links.

YukonU's Information Technology Services website contains information on support for how to use Moodle (and Zoom platforms) <https://www.yukonu.ca/student-life/technical-resources>

ACADEMIC INTEGRITY

Yukon University Academic Standards and Regulations

Students are expected to contribute toward a positive and supportive environment and are required to conduct themselves in a responsible manner. Academic misconduct includes all forms of academic dishonesty such as cheating, plagiarism, fabrication, fraud, deceit, using

the work of others without their permission, aiding other students in committing academic offences, misrepresenting academic assignments prepared by others as one's own, or any other forms of academic dishonesty including falsification of any information on any Yukon University document.

Please refer to YukonU Academic Regulations & Procedures for further details about academic standing and student rights and responsibilities.

University of Alberta Academic Integrity and Code of Student Behaviour

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at www.governance.ualberta.ca) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students at the University of Alberta are subject to the Code of Student Behaviour, as outlined at:

<http://www.governance.ualberta.ca/en/CodesofConductandResidenceCommunityStandard/CodeofStudentBehaviour.aspx> Please familiarize yourself with it and ensure that you do not participate in any inappropriate behavior as defined by the Code. Key components of the code include the following statements.

30.3.2(1) No Student shall submit the words, ideas, images or data of another person as the Student's own in any academic writing, essay, thesis, project, assignment, presentation or poster in a course or program of study.

30.3.2(2) c. No Student shall represent another's substantial editorial or compositional assistance on an assignment as the Student's own work.

PROFESSIONALISM AND CLASSROOM RULES OF ENGAGEMENT

Students are expected to attend all lectures and field trips, be engaged and courteous in all course activities, and to be on time for class. Please do not use cellular phones during class. Laptops are permitted for note taking and in-class work; however, please do not use laptops in class for non-class-related activities. While in computer labs, students are expected to refrain from using the computers to engage in non-class-related activities (e.g. social media).

ELECTRONIC DEVICES

During exams no electronic devices are permitted, except approved non-programmable calculators.

RECORDING OF LECTURES

Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).

Please note that some classes may be recorded using web conferencing software, and links to recordings may be posted on the class website.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon University Academic Regulations (available on the Yukon University website). It is the student's responsibility to seek these accommodations by contacting the Learning Assistance Centre (LAC): LearningAssistanceCentre@yukonu.ca.

TOPIC OUTLINE

WEEK	TOPIC	Chapters and notes
1	Course Introduction <i>First class Jan. 5th</i>	CH 1
2	What is <i>Biodiversity</i> ? Where is the greatest biodiversity found?	CH 1 CH 2
3	Values of biodiversity	CH 3
4	Threats to biodiversity	CH 4
5	Overexploitation, invasive species	CH 5
6	Extinction Measuring risk of extinction Problems of small populations	
7	Conserving populations and species Applied population biology	CH 6
7	<i>Midterm Exam Feb 16th</i>	
	READING WEEK - NO CLASSES	<i>Feb. 21 - 24th</i>
8	Legal protection of species Protecting biodiversity and bringing species back from the brink	CH 6, <i>continued</i> CH 7
9	Protected areas	CH 8
10	Landscape ecology Managing protected areas Ex Situ Conservation strategies First Draft of Advocacy Paper <i>due Mar. 3rd</i>	
11	Ecosystem management Restoration ecology	CH 9 CH 10
12	The challenges of sustainable development	CH 11
13	An agenda for the future Council of all Beings	CH 12
<i>Final Advocacy Paper due Mar. 30, 2:30 pm</i> <i>Final Presentations April 4th and 6th</i>		
	Course Review, <i>Last Class April 11</i>	
	<i>Final Exam between Apr. 13 - 23rd</i>	