



UNIVERSITY OF
ALBERTA



REN R 364 / BIOL 230

PRINCIPLES OF MANAGING NATURAL DIVERSITY / CONSERVATION BIOLOGY

In Winter 2014, BIOL 230, *Conservation Biology*, is being offered at Yukon College concurrent with the University of Alberta's REN R 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 REN R 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 College students must be aware of, and adhere to, Yukon College's Academic Regulations, also referenced in the outline.

INSTRUCTOR:	DAVE MOSSOP, B.Sc.Hon., M.Sc.
OFFICE HOURS:	Most mornings (often in the field on Fridays)
OFFICE LOCATION:	NR 08 (in Yukon Research Centre <u>office</u> bldg)
TELEPHONE/E-MAIL:	668-8736 / dmosso@yukoncollege.yk.ca

DAYS & TIMES: Mondays/Wednesdays, 4:00-5:30 pm (room A2103)

COURSE DESCRIPTION:

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

LEARNING OUTCOMES:

- Students will be able to clearly understand the nature of and the reasons for the biodiversity crisis faced by life on earth. The places on the planet where biodiversity is greatest and under the greatest threats will be understood.
- Students will be able to understand and verbalize ethical debates about the role of humans in creating biodiversity collapse.
- The nature of the threats to all life on earth by the loss of diversity will be understood. Arguments against the threats posed by the loss of diversity will be exposed clearly.

- d) The process of extinction and the nature of population, community and ecosystem collapse will be understood.
- e) Methods for using statutes and other public processes for cataloguing, assessing, and listing species according to the risks they are under for extinction will be understood and applied.
- f) The basic recovery strategies for species at risk will be understood.
- g) Students will learn to use the concepts of defending and proposing management strategy addressing biodiversity crisis in verbal presentation and debate in small public forum.

DELIVERY METHODS/FORMAT (3-0-0):

The course content will be covered in lectures and short field trips during class time.

PREREQUISITES:

For students taking the course as BIOL 230: BIOL 101/102 or equivalent.

For students taking the course as REN R 364: Registration in Yukon College/University of Alberta B.Sc. in Environmental and Conservation Sciences degree program, and successful completion of U of A BIOL 108, or YC BIOL 101 and 102, or equivalent.

REQUIRED TEXTBOOKS/MATERIALS:

Primack, R.B. 2002. *Essentials of Conservation Biology*(3rd): Sinauer

COURSE REQUIREMENTS/EVALUATION:

Assignments/Exams

1. **Quizzes (50% of course):** The principles and factual material from lectures, handouts and assigned readings will be examined by short regular in-class quizzes. Combined, these will constitute the mark of a ‘final exam’.
2. **Class Briefs: oral and written (40% of course):** Students will be called upon to prepare brief advocacy papers and will present a 15-minute oral report on some conservation biology issue, (may be species, or ecosystem oriented). The reports should be in the form of a persuasive explanation and argument for some recommended biodiversity-affecting conservation action which the student is urging the assembled ‘decision makers’ to adopt. Evaluation will be on both content and effectiveness of presentation including responses to critical questions.

Credit for ENCS 364 will involve successfully preparing and presenting a more comprehensive product of the above: details will be provided in class.

3. **Participation (10% of course):** Class discussion, participation in brief out-of-class activities and simple class attendance constitute this portion.

Assignment of grades

Grades will NOT be adjusted to fit a predetermined distribution. The total numerical score will be converted to a grade on the University of Alberta's letter grading system (for students enrolled in REN R 364) or on Yukon College's letter grading system (for students enrolled in BIOL 230).

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 <http://www.governance.ualberta.ca/CodesofConductandResidenceCommunityStandards/CodeofStudentBehaviour.aspx>) 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.

Key components of the code include the following statements regarding Inappropriate Academic Behaviour:

30.3.2 Inappropriate Academic Behaviour

30.3.2(1) Plagiarism

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) Cheating

30.3.2(2) a No Student shall in the course of an examination or other similar activity, obtain or attempt to obtain information from another Student or other unauthorized source, give or attempt to give information to another Student, or use, attempt to use or possess for the purposes of use any unauthorized material.

30.3.2(2) b No Student shall represent or attempt to represent him or herself as another or have or attempt to have himself or herself represented by another in the taking of an examination, preparation of a paper or other similar activity. See also misrepresentation in 30.3.6 (4).

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.

30.3.2(2) d No Student shall submit in any course or program of study, without the written approval of the course Instructor, all or a substantial portion of any academic writing, essay, thesis, research report, project, assignment, presentation or poster for which credit has previously

been obtained by the Student or which has been or is being submitted by the Student in another course or program of study in the University or elsewhere.

30.3.2(2) e No Student shall submit in any course or program of study any academic writing, essay, thesis, report, project, assignment, presentation or poster containing a statement of fact known by the Student to be false or a reference to a source the Student knows to contain fabricated claims (unless acknowledged by the Student), or a fabricated reference to a source.

30.3.2(3) Misuse of Confidential Materials

No Student shall procure, distribute, or receive any confidential academic material such as pending examinations, laboratory results or the contents thereof from any source without prior and express consent of the Instructor.

YUKON COLLEGE ACADEMIC STANDARDS AND REGULATIONS

Yukon College students are expected to be familiar with academic standards and regulations as outlined in Yukon College's Academic Regulations, at http://www.yukoncollege.yk.ca/downloads/Academic_Regulations_2004.pdf.

Plagiarism

Plagiarism involves representing the words of someone else as your own, without citing the source from which the material is taken. If the words of others are directly quoted or paraphrased, they must be documented according to standard procedures. The resubmission of a paper for which you have previously received credit is considered a form of plagiarism. Plagiarism is academic dishonesty, a serious academic offence, and will result in you receiving a mark of zero (F) on the assignment or the course. In certain cases, it can also result in dismissal from the College. Do not underestimate the impact such a situation will have on your reputation.

STUDENTS WITH DISABILITIES OR CHRONIC CONDITIONS:

Reasonable accommodations are available for students with a documented disability or chronic condition. It is the student's responsibility to seek these accommodations. If a student has a disability or chronic condition and may need accommodation to fully participate in this class, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

EQUIVALENCY/TRANSFERABILITY:

BIOL 230 transfers as: UBC, UVIC, UNBC, SFU: 3Credits, 200 level; direct transfer in progress.

For current information on course transferability see <http://www.bctransferguide.ca>

OUTLINE OF THE LECTURE MATERIAL

TOPICS:

1. Major issues and definitions

Historical background	Ch 1
Ethical debate	Ch 1
Biodiversity examined, understood	Ch 2
Geo-biodiversity	Ch 3

2. About Conservation writing, reporting (Assignment)

3. The Values of Biological Diversity

The Economics of biodiversity	Ch 4
Indirect economic values	Ch 5
Ethical values	Ch 6

4. Threats to biodiversity

Extinction rates	Ch 7
Vulnerability	Ch 8
Habitat change effects to biodiversity	Ch 9
Exotic introductions and disease	Ch 10

5. Population Conservation

Small populations and genetic loss	Ch 11
Population Viability Analysis	Ch 12

6. What to do about it

(Extra reading: Population protection section)

(Extra reading: Exotics management section)

Reintroduction, 'rewilding'	Ch 13
Captive breeding (read it - not covered)	Ch 14
Protected areas establishment	Ch 15
Protected areas design	Ch 16
Protected areas management	Ch 17
Habitat restoration (not covered)	Ch 18

7. Conservation education issues

Environmental 'activism'	Ch 19
International initiatives	Ch 20