



BIOL 230

Conservation Biology

**45 HOURS
3 CREDITS**

PREPARED BY: _____
Dave Mossop, Instructor

DATE: _____

APPROVED BY: _____
Shelagh Rowles, Dean

DATE: _____

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Course Outline prepared Dave Mossop January 2011.

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Conservation Biology

Instructor: Dave Mossop, B.ScH, M.Sc Classes: Mondays and Wednesdays

Room: A2103

Time: 4:00Pm

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Office hours: most mornings (sometimes in the field on Fridays)

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 endangered species. 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.

Course Transfer

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

Course Prerequisites

Biol 101/102 or equivalent.

Course Format

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

Attendance Policy

Attendance is mandatory. A student may be withdrawn from a course if more than 10% of the scheduled contact hours are missed in any one course. Withdrawal from a course may result in loss of full-time status and loss of sponsorship funding.

Grading

1. **Quizzes (60% 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 (30% of course):** Students will be called upon to 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.
3. **Participation (10% of course):** Class discussion, participation in brief out-of-class activities and simple class attendance constitute this portion.

Course Text

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

Outcomes:

- a) Students will be able to clearly understand the nature of 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.
- b) Students will be able to understand and verbalize ethical debates about the role of humans in creating biodiversity collapse.
- c) 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.

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
(Extra reading: Population protection section)	
(Extra reading: Exotics management section)	

6. What to do about it

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