



COURSE OUTLINE

RRMT 121

Northern Field Biology

3 Credits

PREPARED BY: _____ DATE: _____
Darrell Otto, Instructor

APPROVED BY: _____ DATE: _____
Shelagh Rowles, Dean

YUKON COLLEGE

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Course Outline prepared Darrell Otto , September 2011.

Yukon College
P.O. Box 2799
Whitehorse, YT
Y1A 5K4

NORTHERN FIELD BIOLOGY (3-3)

Instructor: Darrell Otto **Lectures:** Tues. 1300-1430 Thurs. 1300-1430 Room
A2204

Office: T126C **Lab:** Fri. 0900-1200h. Room A2803

Office Hours: Tues. and Thurs. 0900-1200h.

Phone: 668-8868 **Fax:** 668-8828
Email dotto@yukoncollege.yk.ca

COURSE DESCRIPTION

This is a one-term introduction to biology focusing on the acquisition of skills and knowledge of particular use to field workers in the North. Studies concentrate at the organismal and community level and provide a thorough appreciation of the diversity of northern organisms, community structure and processes. Included are aspects of taxonomy, anatomy, physiology, evolution, genetics and animal behaviour necessary to understand the functioning of northern ecosystems.

LEARNING OBJECTIVES

On successful completion of this course students will:

- Understand the principles of biology appropriate to technical fieldwork related to renewable resources management at the organismal through ecosystem scale.
- Possess skills to classify macro-organisms, collect field data and perform basic analyses of ecosystem processes.

FORMAT

The course is delivered by lectures/discussions, labs, field studies, and assigned readings. Discussion and small group learning will be encouraged. There are many opportunities for evaluation of lab and fieldwork including a major project/essay, mid-term exam, lab reports, weekly lecture quizzes, and a final exam.

PREREQUISITES

Registration in the Renewable Resources Management program, or permission of the instructor.

EVALUATION

Essay	20%	
Presentation	5%	
Lab Reports	25%	
Mid-term Exam		20%
Lecture Quizzes		5%
Final Exam	<u>25%</u>	
Total	100%	

ATTENDANCE

Regular attendance and participation in all activities is **mandatory**. **Unexcused absence from more than 10 percent of activities in either the lecture or laboratory component may result in withdrawal from the course at the Instructor's discretion.** If you are going to miss a class or laboratory session please contact me by phone or email or leave a message at the Arts and Sciences Office.

LATE ASSIGNMENT POLICY

Deadlines given for laboratory reports will normally be two weeks from the date of the lab. The due date for the major project/essay will be November 20. Unless there are documented extenuating circumstances, all deadlines are firm and assignments not received by 2359h on the due date may be given a grade of 0.

PLAGIARISIM

Plagiarism (academic dishonesty) is a serious academic offence and will result in your receiving a mark of zero on the assignment or the course. In certain cases, it can also result in dismissal from the College. 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 cited according to standard procedures. The resubmission of a paper for which you have previously received credit and the submission of the same paper for two courses also constitutes plagiarism and academic dishonesty.

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.

TEXTS

Inquiry into Life, 13th Ed. Mader, Sylvia S. McGraw Hill. U.S.A.

A plant identification or “field book” specific to the Northern Boreal Forest would be helpful but is not necessary.

Readings and references from other sources may be assigned, either by putting them on reserve in the library or in the form of photocopies.

NOTEBOOKS

You will require a notebook with blank pages as well as a soft pencil and eraser for drawings in laboratory sessions.

Outdoor Clothing:

Some of our laboratory session will be held outdoors and will proceed regardless of weather conditions. You should check the lab session scheduled each week and bring appropriate footwear and clothing to the lab session.

The Yukon College Renewable Resources policy on alcohol and drug use applies during all field trips.

TENTATIVE CLASS SYLLABUS

WEEK ENDING	LECTURE TOPICS	READINGS	LAB
Sept 09	Course introduction. Biology and the scientific process.		No Lab.
Sept. 16	Organism Classification - Viruses, Prokaryotes	Ch. 28.5, 28.1 & 28.2	Wetlands
Sept 23	Plant Characteristics, nonvascular plants, seedless vascular plants, seed plants.	Ch. 28.2 & 28.4 Ch. 29.1 – 29.4	TBA – J. Line
	Animal evolution/classification. Invertebrates.	Ch. 30.1 & 30.2	
Sept. 30	Molluscs, Annelids and Arthropods	Ch. 30.3 - 30.5	Stream and Pond Invertebrates
	Echinoderms and Chordates	Ch. 31.1 & 31.2	
Oct.7	Vertebrate Evolution	Ch. 31.3 & 31.4	Mollusc Dissection
Oct 14	Early developmental stages. Patterns of gene inheritance.	Ch. 22.1 – 22.3 Ch. 23	Plant Reproduction.
Oct. 21	Molecular basis of inheritance???	Ch. 24	????
	Mid-term Exam.		
Oct 28	Evolution of life Speciation and classification	Ch. 27.1 – 27.3 Ch. 27.4	Vertebrate Dissection - Muscles I
	Tissues	Ch. 11	
Nov. 4	Nutrition and Digestion	Ch. 14	Vertebrate Dissection – Muscles II
	Respiration and Circulation	Ch. 15	
Nov 11	Excretion????	Ch. 16	Vertebrate Dissection - Digestion
	Reproduction???	Ch. 21	
	Essays Due Nov. 10th!!!!!!		
Nov 18	Animal behaviour	Ch. 32	Vertebrate Dissection - Circulation
	Population Ecology	Ch. 33	
Nov 25	Ecosystem Concepts	Ch. 34	Winter Ecology
	The Northern Boreal Forest/Taiga	Readings on library reserve	

Dec. 2	Tundra	Readings on library reserve	Winter Ecology II
	Plants in Winter	Marchand Ch. 3 On library reserve	
Dec 09	Animals in Winter	Marchand Ch. 4 On library reserve	Lab Exam