AMBROSE UNIVERSITY COLLEGE | FACULTY OF ARTS & SCIENCE

Biology 213 Introduction to Ecology and Evolution
Winter 2010

Course Outline and Schedule

Prerequisites: Biology 131 and 133.

Instructor : Dr. Carol A. Gibbons Kroeker
Office : A2156
Phone: 403-410-2000, ext. 5910
Email: ckroeker@ambrose.edu

Texts : Ecology Concepts and Applications – Canadian Edition, 2008, by Molles and Cahill. McGraw-Hill,

Learning Objectives:

1. Students will gain a greater understanding of the evolution principles that shape determine phylogeny and be able to discuss the evolutionary history, biological diversity and modern relationships between species
2. Students will learn and apply the principles of population genetics, natural selection, predation, competition, and those of symbiotic relationships
3. Students will learn the principles of ecology that determine population growth and communities
4. Students will collaborate with peers in a laboratory setting

Mark Distribution :

2 Midterm Exams	40%
Lab reports / quizzes	20%
Presentations	5%
Final Exam	35%

This course consists of 3 hours of lectures per week, plus a 3-hour lab.

The midterm and final exam will be a combination of multiple choice questions, as well as short and long answer questions. While most questions will be based on lecture material, the textbook reading will absolutely help in the understanding of this material. Attendance at lectures will help ensure success on course exams and assignments.

Dates	**Topic**	**Text Chapters**
Week of		
Jan. 5	Introduction to Biology 213 / Life on Land	1, 2
Jan. 12	Life on Water	3
Jan. 19	Temperature and Water relations	5, 6
Jan. 26	Energy and Nutrient relations	7
Feb. 2	Population Genetics / Evolution	4
Feb. 9	Evolution / Midterm I	
Feb. 16	Reading Week	
Feb. 23	Behavioural Ecology / Life Histories	8/9
Mar. 2	Population Growth and Dynamics	10, 11
Mar. 9	Population Growth / Dynamics	11,12
Mar. 16	Competition / Midterm II	13
Mar. 23	Predation	14
Mar. 30	Parisitism / Mutualism	15
Apr. 6	Communities	16,17
Apr. 13	Review	

Laboratory Schedule

Attendance at the laboratory sessions is COMPULSORY. Any lab missed without a valid excuse cannot be made up. A valid excuse (such as illness, death in the family etc.) must be validated by written proof from a doctor or counselor. Lab coats are not required. Labs will begin the week of January 14th.

Lab Topics will include:

Jan. 14	Statistics – describing a population
Jan. 21	Sampling Populations
Jan. 28	Estimating population size
Feb. 2	Evolution – Natural Selection models
Feb. 9	Population genetics
Feb. 16	Reading Week
Feb. 23	Foraging Theory
Mar. 2	Population distribution / Niches
Mar. 9	Competition in Plants / Project begins
Mar. 16	Competition
Mar 23	Predation / parisitism
Mar 30	Mutualism
Apr. 6	Project due

Grading Scheme

A	90-100%	C	63-66%
A-	85-89%	C-	60-62%
B+	80-84%	D+	54-59%
B	76-79%	D	50-53%
B-	70-75%	F	Below 50%
C+	67-69%		