



COURSE INFORMATION SHEET  
**Biology 213 – Introduction to Ecology and Evolution**

Tentative Course Outline and Schedule for fall semester, 2009.

**Prerequisites:** Biology 131 and 133.

**Instructor :** Dr. Carol A. Gibbons Kroeker  
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**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.

<u>Dates</u>	<u>Topic</u>	<u>Text Chapters</u>
<u>Week of</u>		
Sept. 7	Introduction to Biology 213 / Life on Land	1, 2
Sept. 14	Life on Water	3
Sept. 21	Temperature and Water relations	5, 6
Sept. 28	Energy and Nutrient relations	7
Oct. 5	Population Genetics / Evolution	4
Oct. 12	Evolution / Midterm I	4
Oct. 19	Behavioural Ecology / Life Histories	8/9
Oct. 26	Population Growth and Dynamics	10, 11
Nov. 2	Population Growth / Dynamics	11,12
Nov. 9	Competition / Midterm II	13
Nov. 16	Predation	14
Nov. 23	Parasitism / Mutualism	15
Nov. 30	Communities	16,17
Dec. 7	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 14<sup>th</sup>.

Lab Topics will include:

Sept.            Statistics – describing a population  
                  Sampling Populations  
                  Estimating population size  
                  Evolution – Natural Selection models  
                  Population distribution / Niches  
                  Population Growth  
                  Competition  
                  Optimal Foraging Theory  
                  Predation / parasitism  
                  Mutualism

## Grading Scheme

A+	97-100%	C+	67-69%
A	93-96%	C	63-66%
A-	89-93%	C-	60-62%
B+	83-89%	D+	54-59%
B	77-82%	D	50-53%
B-	70-76%	F	Below 50%