BIOLOGY 228
Section 01
ECOLOGY
FALL 2009

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1. Calendar Description

An introduction to the factors controlling the distribution and abundance or organisms. Topics include physiological ecology, population dynamics, competition, predation, herbivory, mutualism, conservation biology, community structure and function, succession, nutrient cycles, and biogeoclimatic zones.

2. Intended Learning Outcome:

At the end of the course the student will be able to:

- Define Ecology and employ the scientific method by applying appropriate sampling techniques and data analyses to appraise suitable ecological questions.
- Differentiate between autecology, population, community and ecosystem. Explain and criticize key concepts and models appropriate to these levels of inquiry.
- Integrate and synthesize ecological concepts predicting organism abundance and distribution, recommending strategies for management and conservation and evaluating the long-term stability of ecological systems.

3. **Weekly Schedule:** 3 hours of lecture and 3 hours of lab. The student should expect to spend an additional **6** hours per week outside of scheduled class time for completion of assignments and for general studying.

Text: Krebs J Charlie. 2009 Ecology, 6th Edition Benjamin Cummings

Biology Department Faculty Members. 2010. Biology 228 - Ecology Laboratory Manual, Camosun College, Victoria, B.C.

Evaluation:	Lecture Midterm	week 7	15%
	Lecture Final	as scheduled	30%
	Oral Presentations	as scheduled	15%
	Abstracts	as scheduled	5%
	Lab Exam	as scheduled	10%
	Lab Assignments	as scheduled	25%

4. Grading System

☐ *Standard Grading System (GPA)*

A+ =	90-100%	B+ =	77-79%	C =	60-64%
A =	85-89%	B =	73-76%	D =	50-59%
A- =	80-84%	B- =	70-72%	F =	0-49%
		C+ =	65-69%		

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

5. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, at Student Services or the College web site at camosun.ca

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and on the College web site in the Policy Section.

6. General Policies:

1. Students are responsible for contacting their instructors if they are absent from exams or do not hand in an assignment on time. The instructor must be notified **prior to the time the exam is to be written or the assignment is due.** A note from your physician will be required to write a make-up midterm or final. All notes will be verified.

2. Attendance is **mandatory** in lab periods because many activities depend upon work by pairs or groups of 4 students. **Make-up labs are not offered**. In the case of illness, lab work will be reviewed for the student as much as possible. A note from your physician will be required.

3. All assignments are due at the beginning of class on the due date. **15% per day** will be deducted from all late assignments. Weekends count as two days.

4. There is the option of 1 free late assignment. There will be no penalty provided the assignment is received **prior** to it being marked and returned to the class. Any assignment received after its return to the rest of the class will be marked but will receive no credit.

5. Final exams must be written when they are scheduled. The final may not be written in advance of the scheduled time.

6. Plagiarism is not accepted. All lab write-ups other than group reports, even those based upon data common to a lab group should be presented individually. Should two very similar assignments, labs or reports be turned in, -- the original mark will be divided accordingly.

7. Cheating on quizzes and exams is not tolerated. Any incidents will be documented and may result in the student being asked to forfeit the exam and perhaps the course.

The schedule, which follows, is an attempt to outline the weekly activities of the class. It is subject to change or modification as the need arises.

Week	Lecture Topic	Lab/Data
1	Introduction to Ecology	Start Lab. 1 - Intro to statistics Set-up Lab. 2, 5, 7
2	Genetics and Ecology Extinction	Lab. 1 - continued (Excel & Stats) Lab. 2 count germinants Lab. 5 count Lemna AV presentation - in computer lab
3	Group/Individual Selection: Life History Strategies	Complete Lab. 2 - Germination Lab. 5 count Lemna
4	Population Growth	Lab. 3 mark/recapture Lab. 5 count Lemna
5	Population Growth	Lab. 4 - *Artemia* Experiment Lab. 5 count Lemna
6	Competition and Coexistence **Reading Break**	Lab. 5 count Lemna **NO LABS**
7	Mutualism Predation	**Lecture Midterm/ Lab Midterm** Lab. 5 count Lemna
8	Herbivory Parasitism	Lab. 6 Niche overlap Lab. 5 count Lemna 3 presentations
9	Controls on Population size.	Lab. 7 harvest grass Lab. 5 final Lemna count 3 presentations
10	Species richness	Lab. 7 complete calculations 6 presentations
11	Species diversity	Lab. 8 line intercept (at Cattle Point)
12	Stability, Equilibrium and Nonequilibrium	Complete Lab. 8 6 presentations
13	Succession	6 Presentations Review
14	Island Biogeography	**Lab Exam**
	Exam Period	

Lab. 1: Excel and Statistical Analysis
Lab. 2: Germination of Grasses
Lab. 3: Mark-recapture
Lab. 4: Habitat preference of *Artemia salina*
Lab. 5: Population growth of Lemna and Azolla
Lab. 6: Niche Overlap and Diet Analysis
Lab. 7: Population Regulation in Grasses
Lab. 8: Line Intercept