

**CAMOSUN COLLEGE**  
**School of Arts & Science**  
**Winter 2005 – Section 001**  
**BIOL 228 Ecology**  
**COURSE OUTLINE**

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

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Instructor: Rosemary Mason  
Office hours: M. 2:30 – 4:30, Tu. 2:30 – 4:00, F. 2:30 – 4:30  
Location: RH 303  
Phone: 370-3301  
E-mail: [masonr@camosun.bc.ca](mailto:masonr@camosun.bc.ca)

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Time and Location: Lecture M, Tu., Fri. 1:30 – 2:30 in F268  
Lab Sec. 01A 9:30 – 12:20 in F226  
Sec. 01B 2:30 – 5:20 in F226

Course Website: [www.camosun.bc.ca/~masonr](http://www.camosun.bc.ca/~masonr)

Prerequisites: Biology 124. Math 10 recommended.

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### **REQUIRED MATERIALS**

Stiling, Peter 2002, Ecology - Theories and Applications, Prentice Hall Publishing, New Jersey.

Biology Department Faculty Members. 2005. Biology 228 - Ecology Laboratory Manual, Camosun College, Victoria, B.C.

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### **Basis of Student Assessment (Weighting)**

Lecture Midterm		15%
Lecture Final	as scheduled	30%
Oral Presentations	as scheduled	3% (Group) 9% (Individual)
Abstracts	as scheduled	3% (Group) 5% (Individual)
Lab Exam		15%
Prelabs & Lab Assignments		20%

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## INTENDED LEARNING OUTCOMES

1. Define Ecology and employ the scientific method applying appropriate sampling techniques and data analyses to appraise suitable ecological questions.
  2. Differentiate between autecology, population, community and ecosystem. Explain and criticize key concepts and models appropriate to each level of inquiry.
  3. 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.
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## ADDITIONAL INFORMATION

Be sure that you are familiar with the General Department Policies, which are stated in the lab manual. These policies cover absenteeism, late assignments (but see below), attendance, exam scheduling, plagiarism as well as other topics and will be discussed during the first lab meeting.

Each student is required to sign a Laboratory Safety Contract and give it to the instructor prior to commencing laboratory work in the course.

No programmable devices are allowed in exams.

Assignments are due at the **beginning** of the class period on the due date. Assignments not handed in at the beginning of class will be considered late, for which there is a 15% penalty/day.

**Note:** 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 not receive credit.

You should plan on a minimum of 6 hours outside of scheduled class time for the completion of assignments and for general studying.

## 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, Registrar's Office or the College web site at <http://www.camosun.bc.ca>

## ACADEMIC CONDUCT POLICY

There is an Academic Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Academic Policies & Procedures Policy Section.  
<http://www.camosun.bc.ca/calendar/2004/academic.php>

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

<b>Week</b>	<b>Lecture Topics</b>	<b>Labs</b>
Jan. 10 - 14	Introduction to Ecology Genetics & Ecology	Start Lab. 1 – Intro. to statistics Set-up Lab. 2, 5, 7
Jan. 17- 21	Extinction Group/Individual Selection Life History Strategies	Lab. 1 - completed Lab. 2 count germinants Lab. 5 count <i>Lemna</i> AV presentation - in computer lab
Jan. 24- 28	Life History Strategies cont'd Population Growth	Complete Lab. 2 - Lab. 5 count <i>Lemna</i> 2 group talks
January 24 – Tuition fees due for students enrolled in Winter '05.		
Jan. 31 - Feb. 4	Population Growth Physical Environment	Lab. 3 mark/recapture Lab. 5 count <i>Lemna</i> 2 group talks
Feb. 7 - 9	Competition & Coexistence	Lab. 4 - <i>Artemia</i> Experiment Lab. 5 count <i>Lemna</i> 2 group talks
February 10 & 11 – Reading Break – College Closed		
Feb. 14 – 18	Competition & Coexistence	Lab. 5 count <i>Lemna</i> <b>LECTURE MIDTERM</b>
Feb. 21 – 25	Mutualism & Commensalism Predation & Herbivory	Lab. 7 Population Regulation Lab. 5 count <i>Lemna</i> 3 individual talks
Feb. 28 – Mar. 4	Parasitism Controls on Population size	Lab. 6 Niche Overlap 3 individual talks
Mar. 7 – 11	Species richness Species diversity	Lab. 9 Sampling, Density 3 individual talks
Mar. 14 – 18	Stability, Equilibrium & Nonequilibrium	Lab. 5 Complete <i>Lemna</i> 3 individual talks
March 14 - Last day to WITHDRAW from most Winter'05 courses without a failing grade. Last day to CHANGE to AUDIT for most Winter '05 courses.		
Mar. 21 – 24	Succession	Lab. 8 Line Intercept
March 25 – Good Friday – College Closed		
Mar. 29 – Apr. 1	Island Biogeography	Island Biogeography
March 28 - Easter Monday – College Closed		
Apr. 4 – 8	Trophic Structure Energy Flow	Review Remaining talks
Apr. 11 - 15	Energy Flow	<b>Lab Exam</b>
April 18-23, 25-26 - Examination period for Winter '05.		