

**CAMOSUN COLLEGE**  
**ENVR 219: QUANTITATIVE ECOLOGY**  
**Course Information – Fall 2002**

**INSTRUCTOR:** Dr. DAVID BLUNDON  
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**CONSULTATION:**  
**Office hours:** Monday, Tuesday & Friday: 12:30 – 1:30 PM  
Wednesday 11:30 – 12:30 and 2:30 - 3:30 PM

*For an appointment or to leave a message call or email anytime.*

**LECTURE:** Monday (F-200: 3:30 - 5:20)  
**LABORATORY:** Wednesday (E-103: 3:30 - 5:20)

**PREREQUISITES:** BIOL 224 & 228, ENVR 112, MATH 240

**COMPUTER PROGRAMS and WORD PROCESSING:** Computers are available in Ewing

**WEEKLY SCHEDULE:** Two hours of lecture and two hours of lab  
Expect to spend an additional 6 hours a week on this course outside of class time.

**COURSE TEXTS (Available for purchase in the College Bookstore):**

- Krebs, C.J. 1998. Ecological Methodology 2nd Edition. Addison Wesley Longman, Menlo Park, CA

**COMPUTER PROGRAMS (available for use in Ewing 103**

- Programs for Ecological Methodology, Version 5.02 by Krebs, C.J. 1998.

**ADDITIONAL REFERENCE MATERIAL:**

- MATH 240 text
- Other suggested and optional reading will be given in class.

**ABSENCES:**

- If you should miss a class, you should arrange to borrow notes from another student. You are responsible for all information (including exam dates and changes in course content or emphasis) covered in class.
- If you miss an exam you will receive a grade of zero for that exam unless you provide a note from your MD.

**LATE ASSIGNMENTS:**

- If assignments are handed in late they will be marked down accordingly and will be refused if the other student assignments have already been returned.
- A late assignment will be assessed at 15% of its graded value for each day it is late!

**LABORATORY INFORMATION:**

- *Please comply with the general department policies. These will be outlined in your first lab period.*
- *Make-up labs are not offered. If you are unable to attend your regularly scheduled lab due to illness, contact the instructor who will try to schedule you into another lab section during the same week. Lab attendance is compulsory. You will lose 3% of your lab mark for each lab period missed.*

**MARK DISTRIBUTION:****Lecture - 60%**

- Midterm Exam I - 15% (Week 8: Monday, October 21: 1.5 hours)
- Midterm Exam II - 15% (Week 12: Monday, November 18: 1.5 hours)
- Final Exam - 30% (Week 15: December 9 - 17: 3 hours)

**Laboratory - 40%**

- Lab Assignments - 40% (12 assignments, one each week)

**LETTERS GRADES:**

A+ 95 – 100%	B+ 80 - 84%	C+ 65 - 69%	D 50 - 59%
A 90 – 94%	B 75 - 79%	C 60 - 64%	F 0 - 49%
A- 85 – 89%	B- 70 - 74%		

**IMPORTANT DATES:**

- September 4: First Day of Classes
- October 1: Final Exam Schedule Posted
- October 14: Thanksgiving Day – College Closed
- November 5: Last day to withdraw without a F grade
- November 11: Remembrance Day – College Closed
- December 6: Last day of classes
- December 9 – 17: Final exam period

**A. LECTURE TOPICS:**

- Introduction to Quantitative Ecology: Chapter 1
- Review Of Descriptive Statistics
- Review Of Parametric versus Non-Parametric Statistics
- Mark-Recapture Techniques: Chapter 2
- Removal Methods: Chapter 3
- Quadrat Counts: Chapter 4
- Line Transects and Distance Methods: Chapter 5
- Distance Methods and Removal Methods: Chapter 4
- Sample Size Determination: Chapter 7
- Sampling Designs: Chapter 8
- Experimental Designs: Chapter 10
- Review of ANOVA: Chapter 10
- Similarity Coefficients: Chapter 11
- Species Diversity Measures: Chapter 12
- Non-Parametric Statistics

**B. LABORATORY TOPICS AND EXERCISES:**

- EXCEL Data Entry: Germination & Establishment in an Annual and a Perennial Grass
- EXCEL Formula Creation & Statistical Functions: Germination & Establishment Expt.
- EXCEL and MINITAB: Parametric and Non-Parametric Statistics
- Population Estimation:
  - Peterson, Schnabel & Jolly-Seber Mark-Recapture Sampling Methods
  - Catch Effort Methods for Exploited Populations
  - Line Intersect Methods
  - Aerial Methods
  - Maximum Likelihood Resight Method
- Sampling: Random, Stratified and Two-Stage
- Experimental Design: Random and Block
- Regression Analysis
- Similarity Coefficients
- Species Diversity Measures