



**School of Arts & Science
BIOLOGY DEPARTMENT**

**BIOL 116
AP Biology Laboratory
Winter 2011**

COURSE OUTLINE

1. Instructor Information

Instructor:	Don MacRae, Ph. D.
Office Hours:	W/Th (8:30-9:30 AM), W/Th/F (10:30-11:30 AM)
Location:	Fisher F346A
Phone:	370-3437
Email:	dmacrae@camosun.bc.ca

2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

1. Use basic laboratory techniques to prepare standard solutions and perform serial dilutions.
2. Use a spectrophotometer for analysis of solutions, including preparation of action spectra of plant pigments.
3. Use plant bioassays for illustrations of the effects of selected plant hormones on plant germination and growth.
4. Illustrate the relationship between tonicity of a solution and movement of fluids into and out of cells.
5. Use a simple respirometer to assess the relationship between environmental conditions and the rate of cellular respiration.
6. Identify and classify a wide variety of selected organisms to their major taxonomic groupings, and identify their defining characteristics and structures.
7. Apply evolutionary principles to interpret and devise phylogenetic trees and dichotomous keys.
8. Identify evidence for evolution and discuss its significance to evolutionary theory.
9. Interpret evolutionary case studies and apply the Hardy-Weinberg theorem to calculate allele and genotype frequencies.

3. Required Materials

Texts: Biol 116 Lab Manual

4. Course Content and Schedule

Week	Date	Subject
1	Feb 1	Exercise 0: Some Lab Techniques
2	Feb 8	Exercise 1: Movement of Molecules
3	Feb 15	Exercise 2: Factors Influencing Enzyme Activity
4	Feb 22	Exercise 3: Mitosis in Plant Roots
5	March 1	Exercise 4: Photosynthesis
6	March 8	Exercise 5: Cell Respiration
7	March 15	Lab test 1 Exercise 8: Control Systems in Animals
8	March 22	No Lab – Spring Break
9	March 29	Exercise 6: Restriction Enzymes and Electrophoresis (start) Exercise 7: Fruit Fly Eye Pigments (start)
10	April 5	Exercise 6: Restriction Enzymes (complete) Exercise 7: Fruit Fly Eye Pigments (complete)
11	April 12	Exercise 9: Inheritance of Human Traits
12	April 19	Exercise 10: Physiology of the Circulatory System
13	April 26	Exercise 11: Animal Population Dynamics
14	May 5	Lab test 2

5. Basis of Student Assessment (Weighting)

In-lab assignments	50%
Lab test 1	25%
Lab test 2	25%

6. Grading System

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

Temporary Grades

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.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. <i>(For these courses a final grade will be assigned to either the 3rd course attempt or at the point of course completion.)</i>
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

7. 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.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED