



**School of Arts & Science  
BIOLOGY DEPARTMENT**

**BIOL 116  
AP Biology Laboratory  
2008Q2**

## **COURSE OUTLINE**

The Approved Course Description is available on the web @ \_\_\_\_\_

Ω Please note: this outline will be electronically stored for five (5) years only.  
It is strongly recommended students keep this outline for your records.

### **1. Instructor Information**

Instructor:	Geoffrey Haywood, Ph.D.		
Office Hours:	Mondays 1.30 - 2.30 pm and Thursdays 10.30 - 11.30 AM		
Location:	Ewing 304		
Phone:	370-3984	Alternative Phone:	
Email:	haywoodg@camosun.bc.ca		

### **2. Intended Learning Outcomes**

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

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**

<b>Week</b>	<b>Date</b>	<b>Subject</b>
1	Feb 7 <sup>th</sup> , 2008	Introduction and lab safety
2	14	<b>Exercise 1:</b> Tools for Scientific Inquiry
3	21	<b>Exercise 2:</b> Movement of Molecules
4	28	<b>Exercise 3:</b> Factors Influencing Enzyme Activity
5	March 6 <sup>th</sup> , 2008	<b>Exercise 4:</b> Mitosis in Plant Roots
6	13	<b>Exercise 5:</b> Photosynthesis
7	20	<b>March Break – No Lab</b>
8	27	<b>No Lab</b>
9	April 3 <sup>rd</sup> , 2008	<b>Exercise 6:</b> Cellular Respiration
10	10	<b>Lab Exam 1</b>
11	17	<b>Exercise 7:</b> Restriction Digest and Analysis of Lambda DNA ( <b>Week 1</b> )
12	24	<b>Exercise 7:</b> Restriction Digest and Analysis of Lambda DNA ( <b>Week 2</b> )
13	May 1 <sup>st</sup> , 2008	<b>Exercise 8:</b> Fruit Fly Eye Pigments ( <b>Week 1</b> )
14	8	<b>Exercise 8:</b> Fruit Fly Eye Pigments ( <b>Week 2</b> ) <b>Exercise 9:</b> Inheritance of Human Traits
15	15	<b>Exercise 10:</b> Measurement of the Rate of Transpiration
16	22	<b>Exercise 11:</b> Control Systems in Animals (Online Lab)
17	29	<b>Exercise 12 :</b> Ecological Simulations
18	June 5 <sup>th</sup> , 2008	<b>Lab Exam 2</b>

## 5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

### In-lab assignments (55%)

- Lab 2 – 10%
- Lab 3 – 10%
- Lab 4 – 10%
- Lab 6 – 10%
- Lab 7 – 5%
- Lab 8 – 5%
- Lab 11 – 5%

### Lab exams (45%)

- Lab exam 1 - April 10 – 20%
- Lab exam 2 – June 5 – 25%

## 6. Grading System

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

### Standard Grading System (GPA)

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](http://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. (For these courses a final grade will be assigned to either the 3 <sup>rd</sup> course attempt or at the point of course completion.)
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

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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](http://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**