



COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/biol.html>

Please note: the College electronically stores this outline for five (5) years only.
It is **strongly recommended** you keep a copy of this outline with your academic records.
You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

1. Instructor Information

Instructor:	Dr. Kate Pettem
Office Hours:	By Appointment (see below)
Location:	F352
Phone:	250-370-3445
Email:	pettemk@camosun.bc.ca

Important Note: Daytime drop-in office hours will not be held as I assume most of you have classes during the day. I am happy to answer any questions during lab time, and I will also usually be available before your lab section in the evening. If you would like to meet to discuss anything pertaining to the course, simply arrange an appointment by e-mail and I'll be very pleased to meet with you at a mutually convenient time. Many questions can also be answered via email.

2. Calendar Description

This course consists of Biology laboratory exercises at the first-year level, suitable for Advanced Placement Biology students. Exercises are drawn from topics in cellular physiology and evolution theory.

3. Intended Learning Outcomes

(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)

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.

4. Prerequisites

- "C" in English 12 or assessment
- "C+" Biology 12

5. Required Materials

Lab Manual

Biology 116 Lab Manual (Winter 2013), Camosun College.

6. Course Schedule

Lab: Thurs. 6:30 PM – 9:20 PM
(At Camosun College, Fisher Building Rm 238)

Course Content: See last page

7. Basis of Student Assessment (Weighting)

Lab Quizzes	20%
Lab Notebook / Preparation	10%
Journal Questions	20%
Lab Reports	50%

This lab mark will be combined with your other marks by your high school teacher to form your final grade for AP Biology. You will have your final lab mark entered into Camosun's records as your final grade for BIOL 116, based on the grading system outlined below.

8. Grading System

(No changes are to be made to this section unless the Approved Course Description has been forwarded through the Education Council of Camosun College 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 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.

9. 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 the College web site in the Policy Section.

Plagiarism

Plagiarizing is appropriating the work of another or parts or passages of another's writing (including the ideas or language) and passing them off as the product of one's own mind or manual skill. **Plagiarism will not be tolerated.** Plagiarism, **including the copying of any part of assignments or lab assignments**, is a serious offence and is considered to be academic misconduct. In some cases, the lab instructor may prefer a lab assignment to be written as a group. In such cases, handing in one assignment for the group will be acceptable. Otherwise, lab assignments handed in by individuals are expected to be individually prepared.

Cheating

A student caught cheating on an exam will forfeit all credit for that exam and perhaps for the course. Cheating is a serious offence and is considered to be academic misconduct. **Cheating includes, but is not limited to, using unauthorized materials in a quiz/exam and providing information to another person regarding exam content.**

The consequences for cheating and plagiarism are outlined by Camosun College policies (see <http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.pdf> and <http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.1.pdf>) and may be severe.

Lab Safety

Under **NO** circumstances will students ingest food or drink in the lab. Taking oral medication or applying makeup or lip balm in the lab is also prohibited. You may leave the lab at a convenient time if you are thirsty, need a snack or require medication. For safety reasons students are **required** to wear closed shoes and pants in all lab times. Flip flops, sandals or shoes with holes are not acceptable. The spirit of this is safety, so make sure your 'closed-toed' shoes are actually safe!

Failure to adhere to the lab safety principles will result in the inability to enter the lab, or expulsion from the lab, and the subsequent **loss of credit** for that lab, including any pre-lab assessment credit.

Laboratory Attendance

The laboratory experience is critical to the course objectives and so attendance throughout the entire laboratory session is mandatory and will be noted. Failure to attend the lab, lateness in arriving or leaving the lab before its scheduled finish time will result in forfeiting credit for that lab, including any written assignments or assessments. If a lab session is missed, another student's data **may not** be used to complete a lab assignment for credit. Exceptions can be made **at the instructor's discretion** in legitimate cases of emergency (e.g. illness); in such cases the instructor must receive **advance notification** and **documented evidence** of the situation (e.g. medical certificate) and grant approval for any accommodation.

Missed Assessments

Lab quizzes must be written at the scheduled times. Lab quizzes will occur at the beginning of laboratory sessions (except the first). If you are late and the class has finished writing the quiz, you will not be eligible to write the quiz and will receive a mark of zero. Under no circumstances will a lab make-up quiz be administered. However, it is understood that emergency circumstances occur (e.g. illness or emergency in the immediate family); for such circumstances accommodation may be offered at the discretion of the instructor, provided (a) the instructor is notified in advance of the quiz (not after) and (b) the student provides documented evidence of the circumstance (i.e. medical certificate). Without exception, the accommodation will be in the form of adjusting the weighting of the other quizzes to make up the missing marks.

Please note: holidays or scheduled flights are not considered to be emergencies!

Late Penalties

Any assignments or reports must be handed in on the scheduled date **at the start of lab**. Late assignments will be graded but marks equivalent to 10% of the total value of the assignment will be deducted per day past the deadline. No late assignments or reports will be accepted after one week (ie. Once the following laboratory period begins).

Student Responsibilities

1. Students are expected to hand in any required reports on time. Late assignments will be penalized (see above).
2. All written work (including numerical entries in data tables) is to be submitted in word processed form. Electronic submissions (e.g. as e-mail attachments) will not be accepted, except where specified **by the instructor**. Failure to comply will result in late penalties (as indicated).
3. Examinations must be written as scheduled. Exceptions may be made for emergencies at the discretion of the instructor (see above). The student must notify the instructor in advance of the examination.
4. Any evaluation of work for in-class/lab assignments, reports and/or participation will not be given if a student is not present for any reason.
5. Students are expected to work independently on reports unless instructed that the evaluation is based on group effort and evaluation.
6. Students must know and follow all Safety Rules and Procedures. Students must sign the Safety Contract before participating in any laboratory activity. Failure to follow the Safety Rules and Procedures will result in penalties at the discretion of the instructor.
7. Eating or drinking is **strictly prohibited** and failure to comply may result in expulsion from the lab and loss of any associated lab credit. **No exceptions** will be tolerated.
8. Students must turn off cell phones during lectures and laboratory sessions.
9. All laboratories start punctually. Information necessary for performing the laboratory correctly and safely is given at the beginning of the lab. Late attendance may result in inability to attend the lab and subsequent loss of credit for any assignments.

Biology 116 – W2013 - Course Schedule (Note: Scheduled dates are subject to change)

Date	Lab Number	Lab Activity
Feb. 7	1	Enzyme Activity
Feb. 14	2	Cellular Respiration
Feb. 21	NO LAB	(CAMOSUN READING BREAK)
Feb. 28	3 ; 4	Photosynthesis; Fruit Fly Behaviour (wk 1)
Mar. 7	4	Fruit Fly Behaviour (wk 2)
Mar. 14	NO LAB	(HIGH SCHOOL SPRING BREAK)
Mar. 21	NO LAB	(HIGH SCHOOL SPRING BREAK)
Mar. 28	4; 5	Fruit Fly Behaviour (wk 3); Cell Division / Mitosis
Apr. 4	6	Mathematical Modelling
Apr. 11	7 ; 8	Bacteria Transformation (wk 1); DNA (wk 1)
Apr. 18	7 ; 8	Bacteria Transformation (wk 2); DNA (wk 2)
Apr. 25	8	DNA (wk 3)
May 2	9	DNA Sequences and BLAST