



COURSE OUTLINE

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

Ω 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

(a)	Instructor:	Geoffrey Morris
(b)	Office Hours:	Tuesday 12:30-1:30 (Belmont) Tuesday and Thursday 2:30-3:45 (Lansdowne) Friday 12:30-1:30 (Lansdowne)
(c)	Location:	A119 (Camosun @ Belmont) and F352 (Lansdowne)
(d)	Phone:	250-370-3909
(e)	Email:	MorrisG@camosun.bc.ca
(f)	Website:	http://online.camosun.ca

2. Intended Learning Outcomes

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

1. Classify and describe the unique structure and function of the four groups of macromolecules and discuss how these relate to their properties within living cells.
2. Differentiate among the various transport mechanisms available to mobilize molecules across cell membranes.
3. Name and outline the pathways utilized by cellular respiration and photosynthesis and explain the importance of these processes to living organisms.
4. Describe the basic steps of DNA replication and indicate its role in cell division and inheritance.
5. Demonstrate knowledge of the basic steps of protein synthesis, identifying the roles of DNA, mRNA, tRNA, amino acids and proteins in the processes of transcription and translation.
6. Identify and explain the principles and consequences of the cell cycle, including both mitosis and meiosis.
7. Examine the basic principles of Mendelian genetics and describe how these relate to other topics encompassed in this course.
8. Describe and explain the role of growth regulators in the control of plant growth, development and physiology.
9. Describe and explain the diversity of control mechanisms in animal systems, including the role of the endocrine and nervous systems.
10. Conduct experiment tests and use analytical techniques in the laboratory to demonstrate a few biological properties of macromolecules, cellular respiration, photosynthesis, DNA technology and plant and animal control systems.

3. Required Materials

- 1) Textbook: Reece, J.B. et al. 2014. Campbell Biology, Canadian Edition. Pearson Education, Inc., San Francisco, CA.
- 2) Camosun College Biology Faculty. Winter, 2017. Biology 126 Lab Manual, Camosun College, Victoria, B.C.

4. Course Content and Schedule

Lecture..... Tuesdays 9:30-12:20..... Camosun @ Belmont Campus, A111

Lab..... Fridays 9:30-12:20..... Lansdowne Campus, Fisher 224

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.

Week	Lecture Topic (Tuesday)	Ch.	Laboratory Exercise (Friday)
1 (Jan 9-13)	Introduction & Characteristics of Life	1,4,5,6	Concentration, Standard Curve
2 (Jan 16-20)	Metabolism - Introductory	8	Enzyme Activity
3 (Jan 23-27)	Glycolysis & Respiration	9	Cellular Respiration
4 (Jan 30-Feb 3)	Respiration completed Photosynthesis	9 10	Fermentation
5 (Feb 6-10)	Lecture Midterm 1 Photosynthesis/Plant Growth	10,39	Photosynthesis
6 (Feb 13-17)	February 13 Family Day College closed, February 14-17 Reading Break College Closed		
7 (Feb 20-24)	Membrane structure and Function	7	Lab Exam 1
8 (Feb 27-Mar 3)	Intracellular Communication Mitosis & Cell Cycle	11 12	Diffusion and Osmosis
9 (Mar 6-Mar 10)	Mitosis Meiosis	12 13	Mitosis & Meiosis
10 (Mar 13-17)	Lecture Midterm 2 Sources of Variation	14 - 16	Fruit Fly (Part 1)
11 (Mar 20-24)	Inheritance DNA Replication	15, 16	Fruit Fly (Part 2) DNA Lab (Part 1)
12 (Mar 27-31)	From Gene to Protein	17	DNA Lab (Part 2)
13 (Apr 3-7)	Endocrine System	45	Lab Exam 2
14 (Apr 10-14)	Neurons and Nervous System	48,49	No labs (Friday April 14 Good Friday, College Closed)

5. Basis of Student Assessment (Weighting)

Lab Exam 1	February 24	12.5%
Lab Exam 2	April 7	12.5%
Lecture Midterm 1	February 7	12.5%
Lecture Midterm 2	March 14	12.5%
Lecture Final Exam	TBA	30%
Assignments/Labs/Quizzes		20%

6. Grading System

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.

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 the College web site in the Policy Section.

Plagiarism

Plagiarizing is appropriating the work 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 (see <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.1.pdf>). Plagiarism is a serious offence and is considered to be academic misconduct, and so **will not be tolerated**.

Except where work is assigned to a group, all written work, **including lab data processing** and graphs, must be done individually.

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:

- (a) using unauthorized materials or resources in a quiz/exam, and
- (b) 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-and-support/e-2.5.pdf>) and penalties may be severe.

Student Safety

NOTHING is more important to the instructor than students enjoying a safe class and lab environment. Consider the following issues:

Lab footwear	<ul style="list-style-type: none">• For safety reasons WorkSafeBC mandates that students are required to wear closed shoes in all lab times. Flip flops, sandals or shoes with holes are not acceptable.
Eating & drinking	<ul style="list-style-type: none">• Absolutely NOTHING may be ingested while in the lab. Chewing gum and applying makeup or lip balm are similarly prohibited. NO EXCEPTIONS will be made, even for medications.• If something must be consumed, then it may be taken out of the lab.
Hair	<ul style="list-style-type: none">• It is recommended that long hair be tied securely to prevent it from being exposed to lab equipment.
Handwashing	<ul style="list-style-type: none">• Hands should be thoroughly washed AFTER removing lab coats and BEFORE leaving the lab.

Laboratory Attendance

Lab work is critical to the course objectives and much effort has been expended to ensure the lab experience is interesting and educational, both from academic and practical points of view. Therefore, attendance throughout the entire laboratory session is mandatory and will be noted. Labs will start promptly (after a five-minute grace period) because 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. Lateness in arriving, failure to attend the lab or leaving the lab before its scheduled finish time will result in forfeiting credit for that lab, including any written assignments. 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. In cases when a lab is done over two weeks, missing one of the weeks without instructor approval will result in a 50% reduction in the grade for any assignment associated with that lab.

Missed Lecture Exams

Without exception, all lecture exams must be written at the scheduled times. 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 the student:

- (a) notifies the instructor **in advance** of the exam (not after), and
- (b) provides documented evidence of the circumstance (i.e. medical certificate).

*** HOLIDAYS OR SCHEDULED FLIGHTS ARE NOT CONSIDERED TO BE EMERGENCIES ***

Be sure not to make travel plans for the end of semester until the final exam schedules are finalized and posted. Please ask any family members who might make travel plans on your behalf to consult you before booking tickets.

Without exception, the accommodation will be in the form of adjusting the weighting of the final exam to make up the missing marks. **Under no circumstances will a make-up lecture exam be administered.** In such cases, the final exam will include extra questions to thoroughly examine knowledge of previously untested subject matter.

Missed Lab Exams

Lab exams differ from lecture exams in their formatting and the fact that they cover lab content in a non-cumulative manner. Administering a makeup lab exam will be at the discretion of the instructor.

Written Work

Lecture and lab assignments may be assigned at the instructor's discretion. It is the student's responsibility to be informed of any work expected and the dates the work is due. Assignments may be intended to be completed as individuals or as groups. The instructor will make clear which is which. Work intended to be submitted by an individual must be completed independently, keeping in mind student conduct requirements. Work intended for completion by a group **MUST NOT** be completed by an individual. Each person in a group will receive the same mark on any group work.

Unless otherwise indicated, all written material to hand in (including numerical entries in data tables) must be prepared using word processing (typically MS Word) or graphing software (e.g. Excel). The only exceptions are calculations and **some** graphs, which may be submitted handwritten or hand drawn. **Any exceptions will be clearly indicated.** Work submitted inappropriately formatted, which includes last-minute handwritten corrections, will not be marked until all formatting is correct. Since correcting formatting requires time, this will likely mean a late penalty will be assessed.

Late Penalties

All assignments must be handed in by the **time indicated on the assignment**. If the instructor is not in the office, then slide your work under the office door. Late assignments will be graded but marks equivalent to 15% of the total value of the assignment will be deducted for each day past the deadline (weekends only count as one day).

Study Habits

Good (and regular!!) study habits are required to do well in this course. You should plan on a minimum of 6 hours outside of scheduled class time for the completion of assignments and for general studying. Joining a study group can help make this more fun.

Lecture notes will be provided in point form. These should be used as a study guide, not as your sole source of information! You will need to write down additional key words for examples and explanations given during lecture. It is also recommended practice to transcribe these notes into a study-friendly format after each lecture, incorporating additional information from your textbook. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Please take advantage of office hours if you need extra clarification and help, or simply would like to discuss a topic a little further.

Summary of Student Responsibilities

1. Attending classes and actively engaging in lecture times are optimal for learning and therefore are in the best interests of student success. Should it be necessary to miss a lecture, however, it is the student's responsibility to catch up on anything that may have been missed (e.g. important announcement or assignments).
2. Students must hand in required assignments on time or be subject to penalty.
3. Evaluation of written or oral work will not be given if a student is not present.
4. Students must work independently, except when a group effort is required.
5. Students must know and follow all Safety Rules and Procedures. Students must sign the Safety Contract before participating in any laboratory activity.
6. All safety measures must be followed, with **NO EXCEPTIONS**.
7. The use of cell phones is prohibited in the lab.
8. All laboratories start punctually.