

	<p>School of Arts & Science BIOLOGY DEPARTMENT</p> <p>BIOL 126-002-A/B Physiological Basis of Life Semester/Year, Fall 2016</p>
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COURSE OUTLINE

The Approved Course Description is available on the web @ [D2L Biology 126](#)

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

(a)	Instructor:	William C. Hulbert, Ph.D.		
(b)	Office Hours:	10:30-11:30 Tu/Thurs and as arranged		
(c)	Location:	F340D		
(d)	Phone:	370-3434	Alternative Phone:	
(e)	Email:	hulbertw@camosun.bc.ca		
(f)	Website:	D2L		

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.)

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

- (a) Texts; Biology: Campbell & Reece **Canadian 1st Ed.**
- (b) Other Lab Workbook Biology 126

4. Course Content and Schedule

Timetable of lectures and Labs.

Week	Date	Lecture Topics	Text Book Chapters	Labs
1	Sept 6-9	Chemistry of Life, macromolecules	1,2,3	1-Concentration curves
2	Sept 12-16	Metabolism, Enzymes	4,5	2-Enzymes
3	Sept 19-23	Glycolysis and Respiration	8,9	3-Cellular Respiration
4	Sept 26-30	Fermentation / Photosynthesis	9,10	4-Fermentation
5	Oct 3-7	Photosynthesis /Plant structure Theory Exam 1 (Last Lecture Day 1 1/2hrs)	10	5-Photosynthesis
6	Oct 11-14 Oct 10 Monday College Closed	Plant growth and Nutrition Plant hormones	37	Lab Exam 1
7	Oct 17-21	Animal nutrition, digestion	41	6-Diffusion /Osmosis
8	Oct 24-28	Cell membranes – structure/function	6,7	7-Mitosis/Meiosis
9	Oct 31 – Nov 4	Cell communication - cell cycle	11/12	8-Fruit Fly -1
10	Nov 7-10 Nov 11 Friday College Closed	Cell cycle Mitosis/ Meiosis Theory Exam 2 (Last Lecture Day 1 1/2hrs)	12,16	No Labs
11	Nov 14-18	The molecular basis of inheritance	16	8-Fruit Fly -2
12	Nov 21-25	From gene to protein Regulation of gene expression, variation	17 18	9-DNA -1
13	Nov 28-Dec 2	Endocrine control	45,48	9-DNA – 2
14	Dec 5-9	Nervous system and nervous control	48,49	Lab Exam 2
		Final Exams		

5. Basis of Student Assessment (Weighting)

(a) Assignments & Quizzes:

Lab assignments	5%
Weekly quizzes (at the start of lab)	5%
Lecture assignments	5%

(b) Lecture Exams:

Midterm #1	15%
Midterm #2	15%
Final exam	25%

(c) Lab Exams:

Lab Exam #1	15%
Lab Exam #2	15%

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 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.

Kindly Note:

Interfering with the learning of others by distracting them with talking or with abuse of personal screens is grounds for expulsion

Biology 126 Lab Requirements. **Attendance in lab is required. Missing labs without a valid excuse will result in a deduction of 3% per lab missed from the final grade.**

Lecture material, assignments and any special notices will be posted on D2L. Students are requested to check D2L daily. Please note D2L has been updated and is somewhat different to the older version. Students should familiarize themselves fully with the new version as soon as possible.

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30 – 9:00					
9:00 – 9:20					
9:30 – 10:00			Biol 126		Biol 150
10:00 – 10:20			002B		002B
10:30 – 11:00			F-224		F-224
11:00 – 11:20		Biol 150	Lab	Biol 150	Lab
11:30 – 12:00		002AB	Lab	002AB	Lab
12:00 – 12:20		F-200	Lab	Y-211	Lab
12:30 – 1:00		Office		Office	
1:00 – 1:20		Hours		Hours	
1:30 – 2:00			Biol 126		Biol 150
2:00 – 2:20			002A		002A
2:30 – 3:00			F-224		F-224
3:00 – 3:20			Lab		Lab
3:30 – 4:00			Lab		Lab
4:00 – 4:20		Bio 126	Lab	Bio 126	Lab
4:30 – 5:00		002AB		002AB	
5:00 – 5:20		Y-211		Y-211	
5:30 – 6:00					
6:00 – 6:20					
6:30 – 7:00					
7:00 – 7:20					
7:30 – 8:00					
8:00 – 8:20					
8:30 – 9:00					
9:00 – 9:20					