CAMOSUN COLLEGE	***School of Arts & Science*** ***BIOLOGY DEPARTMENT*** **BIOL 126-003-A/B** **Physiological Basis of Life** **Semester/Year, Winter 2016**

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; 1:00-2:00 Tu/Thurs		
(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	Jan 11 – 15	Chemistry of Life, macromolecules	1,2,3	1-Concentration curves
2	Jan 18 - 22	Metabolism, Enzymes	4,5	2-Enzymes
3	Jan 25 - 29	Glycolysis and Respiration	8,9	3-Cellular Respiration
4	Feb 1 - 5	Fermentation / Photosynthesis	9,10	4-Fermentation
5	Feb 8 – 12 Feb 8 Family Day College Closed	Photosynthesis /Plant structure	10	**Lab Exam 1**
6	Feb 15 – 19 Feb 18,19 Reading Break College Closed	Plant growth and Nutrition Plant hormones **Theory Exam 1 (Last Lecture Day 1 1/2hrs)**	37	5-Photosynthesis
7	Feb 22 – 26	Animal nutrition, digestion	41	6-Diffusioon/Osmosis
8	Feb 29 – Mar 4	Cell membranes – structure/function	6,7	7-Mitosis/Meiosis
9	Mar 7 – 11	Cell communication - cell cycle	11/12	8-Fruit Fly -1
10	Mar 14 – 18	Cell cycle Mitosis/ Meiosis	12,16	8-Fruit Fly -2
11	Mar 21 – 25 Mar 25 Good Friday College Closed	**Theory Exam 2 (Last Lecture Day 1 1/2hrs)** The molecular basis of inheritance	16	9-DNA -1
12	Mar 28 – Apr 1 Mar 28 Easter Monday College Closed	From gene to protein Regulation of gene expression, variation	17 18	**No Labs**
13	Apr 4 – 8	Endocrine control	45	9-DNA – 2
14	Apr 11 – 15	Nervous system and nervous control	48,49	**Lab Exam 2**
	Apr 18 – 22	Final Exams		

5. Basis of Student Assessment (Weighting)

(a) Assignments & Quizzes:

Lab assignments	5%
Weekly quizzes (at the start of lab)	5%
Lecture assignments (total of 8)	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	*Incomplete*: 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	*In progress*: 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 3rd course attempt or at the point of course completion.)*
CW	*Compulsory Withdrawal:* 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 1% per lab hour 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		Biol 150		Biol 150	
9:00 – 9:20		001AB		001AB	
9:30 – 10:00	Biol 150	Y-2i1	Biol 126	Y-211	
10:00 – 10:20	001B		003B		
10:30 – 11:00	F-226	Office	F-224	Office	
11:00 – 11:20	Lab	Hours	Lab	Hours	
11:30 – 12:00	Lab		Lab		
12:00 – 12:20	Lab		Lab		
12:30 – 1:00					
1:00 – 1:20		Office		Office	
1:30 – 2:00	Biol 150	Hours	Biol 126	Hours	
2:00 – 2:20	001A		003A		
2:30 – 3:00	F-226		F-224		
3:00 – 3:20	Lab		Lab		
3:30 – 4:00	Lab	Bio 126	Lab	Bio 126	
4:00 – 4:20	Lab	003AB	Lab	003AB	
4:30 – 5:00		F-100		F-100	
5:00 – 5:20					
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					