CAMOSUN COLLEGE	***School of Arts & Science*** ***BIOLOGY DEPARTMENT*** **BIOL 126-001** **Physiological Basis of Life** **Semester/Year, Fall 2014**

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:	Geoffrey Haywood, Ph.D.		
(b)	Office Hours:	Wed 11.00-11.50 am; Thurs 2.30 – 3.20 pm		
(c)	Location:	F246		
(d)	Phone:	370-3196	Alternative Phone:	
(e)	Email:	haywoodg@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 Haywood

4. Course Content and Schedule

Timetable of lectures and Labs.

Day	LECTURE TOPIC	CHAPTER	LAB + #
Sep 2 - 5	Chemistry of Life, macromolecules	2,3,4,5	**Familiarization Lab**
Sep 8 – 12	Metabolism, Enzymes	8	1-Tools for discovery
Sep 15 –19	Glycolysis and Respiration	9	2-Enzymes
Sep 22 –26	Fermentation / Photosynthesis	9, 10	3-Cellular Respiration
Sep 29 – Oct 3	Photosynthesis /**Theory Exam 1(Thurs 9)**	10	4-Fermentation
Oct 6 – 10	Plant structure, growth and Nutrition	37	5-Photosynthesis
October 13	**Thanksgiving no classes**	41	**No labs**
Oct 14 - 17	Animal nutrition, digestion		**No Labs**
Oct 20 – 24	Cell membranes – structure/function	7	**Lab Exam 1**
Oct 27 - 31	Cell communication - cell cycle	11	6-Diffusioon/Osmosis
Nov 3 – 7	Cell cycle Mitosis	12	7-Mitosis/Meiosis
Nov 10 – 14	Revision period **Theory Exam 2 (Thurs Nov 13)**		**No labs Remembrance Day**
Nov 17 – 21	DNA replication	15/16	8-Fruit Fly -1 9-Lambda DNA -1
Nov 24 – 28	Protein Synthesis	17	8-Fruit Fly -2 9-Lambda DNA - 2
Dec 1 – 5	The Genome Sources of Variation	21	**Lab Exam 2**

(Can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)

5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

(a) Assignments, Quizzes lab reports: 20% (10% theory – 10% lab)

(b) Exams: Midterm Theory 1 15% Midterm Theory 2 15% Final Theory 30%
Lab Midterm 1 10% Lab midterm 2 10%

(c) Other (e.g., Attendance, Project, Group Work)

6. Grading System

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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 on the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED

STUDENT ASSIGNMENTS

Assignments will be given out on the Thursday of each week and are due in on the following Wednesday – by the end of the lecture period.

Assignments received on the day due will be marked out of 100% - but if not received until the following day will be marked out of 80%. There will be a further drop of 20% for any assignment not received until Wednesday. Any assignment not received by the following Thursday (1 week after given out) will receive a zero mark.

Labs may involve a short quiz at the beginning – in order to ensure students have read-up on the upcoming lab protocol. Tardiness on attending a lab – especially if later than the initial quiz – will result in a zero mark for that quiz.

Assignments MUST be printed as hard copies. Assignments will NOT be accepted as emails unless there is a serious illness involved in their tardy return – for which a doctor's note will be mandatory. Hand written assignments are NOT acceptable.

Plagiarism will be treated severely and any student who has clearly demonstrated plagiarism will automatically fail the course.

Lecture material, assignments and any special notices will be posted on D2L. Students are STRONGLY ADVISED 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.