CAMOSUN COLLEGE	**School of Arts & Science** **BIOLOGY DEPARTMENT** **BIOL 126** **Physiological Basis of Life** **Fall 2010 (Sep-Dec)**

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:	Dr. Larry Anthony			
(b)	Drop-In Office Hours:	Mon 11:30 AM – 12:20 PM Tue 11:30 AM – 12:20 PM Wed 11:30 AM – 12:20 PM		Thu 3:30 PM – 4:20 PM Fri 11:30 AM – 12:20 PM	
(c)	Location:	F340A			
(d)	Phone:	250-370-3388	Alternative Phone:		
(e)	Email:	anthonyl@camosun.bc.ca			
(f)	Website:	http://online.camosun.ca/			

IMPORTANT NOTE: I understand that my scheduled drop-in office hour times will not fit into everyone's class schedules. ***This should not deter you from trying to visit me in my office!*** My schedule will be posted on my office door and on the course D2L website: I can be available at almost any time that I'm not already in class or lab. Simply arrange an appointment by phone or e-mail and I'll be very pleased to meet with you at a mutually convenient time.

2. 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. 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) Text
Neil A. Campbell and Jane B. Reece. 2007. Biology 8th ed. Pearson Education, Inc.

(b) Other
Biology 126. Laboratory Manual. Camosun College.

4. Course Content and Schedule

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

Class Schedule:

Lectures:	Tue	4:30 PM – 5:20 PM
	Thu	4:30 PM – 5:20 PM
	Fri	12:30 PM – 1:20 PM
Lab Section A:	Tue	8:30 AM – 11:20 AM
Lab Section B:	Thu	2:00 PM – 4:50 PM

Course Content:

See Last Page

5. Basis of Student Assessment (Weighting)

(This section should be directly linked to the Intended Learning Outcomes.)

Lab Exam I	15%
Lab Exam II	15%
Midterm I	10%
Midterm II	15%
Final Lecture Exam	30%
Assignments/labs/quizzes	15%

Note: Lecture exams will be cumulative. Lab exams will be unit exams (i.e. not cumulative).

6. 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	*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.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED

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.** All written material must be done individually. This **includes lab data and graphs**; although lab work is done in groups, material submitted for grading must be processed and submitted independently. Plagiarism, **including the copying of any part of assignments or lab assignments**, is a serious offence and is considered to be academic misconduct.

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.

Missed Exams

Without exception, all lecture and lab exams must be written at the scheduled times. **Under no circumstances will a make-up exam 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 exam (**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 final exam to make up the missing marks. In such cases, the final exam will include extra questions to examine knowledge of the untested subject matter.

Late Penalties

All assignments must be handed in on the scheduled date **before 5:00 PM**. Late assignments will be graded but marks equivalent to 15% of the total value of the assignment will be deducted per day past the deadline.

Laboratory Attendance

Attendance throughout the entire laboratory session is mandatory and will be noted. Failure to attend the lab or leaving the lab before its scheduled finish time will result in forfeiting all credit for that lab, including any written assignments; another student's data ***may not*** to write complete a lab assignment for credit. The only exceptions will be in the case of emergency (e.g. illness), in which case 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.

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

Be sure not to plan airline flights for the end of semester until the final exam schedules are finalized and posted.

Student Responsibilities

1. It is believed that attending and actively engaging in lecture times is 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 are expected to hand in any required reports on time. Late assignments will be penalized (see above).
3. All written work (including numerical entries in data tables) is to be submitted in word processed form. The only exceptions are calculations or graphs, which may be submitted handwritten or hand-drawn. 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).
4. Attendance is important to ensure success. If unable to attend a session, the student is responsible for arranging with a classmate to obtain information such as notes, handouts and announcements.
5. 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.
6. 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.
7. Students are expected to work independently on reports unless instructed that the evaluation is based on group effort and evaluation.
8. 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.
9. 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.
10. **All students must wear a lab coat during laboratory sessions.** Failure to bring a lab coat to the lab may result in being unable to work in the lab and loss of credit for the lab.
11. Students must turn off cell phones and pagers during lectures and laboratory sessions.

12. 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 126 - F10 - Course Schedule (Note: Scheduled dates are subject to change)

Lecture or Lab topics may be added, deleted or shuffled around depending upon interest and time constraints

Wk	Day	Date		Lecture Topic	Ch	Lab Activity
1	Tue	7-Sep-10	Lec/Lab	Course Introduction	-	**LAB INTRODUCTION**
1	Thu	9-Sep-10	Lec/Lab	Characteristics of Life	1-6	**LAB INTRODUCTION**
1	Fri	10-Sep-10	Lec	Characteristics of Life	1-6	
2	Tue	14-Sep-10	Lec/Lab	Characteristics of Life	1-6	Tools for Scientific Discovery
2	Thu	16-Sep-10	Lec/Lab	Characteristics of Life	1-6	Tools for Scientific Discovery
2	Fri	17-Sep-10	Lec	Characteristics of Life	1-6	
3	Tue	21-Sep-10	Lec/Lab	Introductory Metabolism	8	Enzyme Activity
3	Thu	23-Sep-10	Lec/Lab	Introductory Metabolism	8	Enzyme Activity
3	Fri	24-Sep-10	Lec	Introductory Metabolism	8	
4	Tue	28-Sep-10	Lec/Lab	Making ATP	9	Respiration
4	Thu	30-Sep-10	Lec/Lab	Making ATP	9	Respiration
4	Fri	1-Oct-10	Lec	Making ATP	9	
5	Tue	5-Oct-10	Lec/Lab	Making ATP	9	Photosynthesis
5	Thu	7-Oct-10	Lec/Lab	Making ATP	9	Photosynthesis
5	Fri	8-Oct-10	Lec	Making ATP	9	
6	Tue	12-Oct-10	Lec/Lab	**MIDTERM LECTURE EXAM 1**		**NO LAB (Thanksgiving Week)**
6	Thu	14-Oct-10	Lec/Lab	Making Sugar	10	**NO LAB (Thanksgiving Week)**
6	Fri	15-Oct-10	Lec	Making Sugar	10	
7	Tue	19-Oct-10	Lec/Lab	Making Sugar	10	**LAB EXAM 1A**
7	Thu	21-Oct-10	Lec/Lab	Making Sugar	10	**LAB EXAM 1B**
7	Fri	22-Oct-10	Lec	Making Sugar	10	
8	Tue	26-Oct-10	Lec/Lab	The Cell Membrane	7	Movement of Molecules
8	Thu	28-Oct-10	Lec/Lab	The Cell Membrane	7	Movement of Molecules
8	Fri	29-Oct-10	Lec	The Cell Membrane	7	
9	Tue	2-Nov-10	Lec/Lab	Intracellular Communication	11	Mitosis & Meiosis & Eye Pigments (Pt 1)
9	Thu	4-Nov-10	Lec/Lab	Intracellular Communication	11	Mitosis & Meiosis & Eye Pigments (Pt 1)
9	Fri	5-Nov-10	Lec	Intracellular Communication	11	
10	Tue	9-Nov-10	Lec/Lab	Mitosis, Meiosis and Cell Cycle	12-13	**NO LAB (Remembrance Day Week)**
10	Thu	11-Nov-10	Lec/Lab	**REMEMBRANCE DAY**		**NO LAB (Remembrance Day Week)**
10	Fri	12-Nov-10	Lec	Mitosis, Meiosis and Cell Cycle	12-13	
11	Tue	16-Nov-10	Lec/Lab	**MIDTERM LECTURE EXAM 2**		Fruit Fly Eye Pigments (Part 2)
11	Thu	18-Nov-10	Lec/Lab	Mitosis, Meiosis and Cell Cycle	12-13	Fruit Fly Eye Pigments (Part 2)
11	Fri	19-Nov-10	Lec	Inheritance	14-15	
12	Tue	23-Nov-10	Lec/Lab	Inheritance	14-15	DNA Lab (Part 1)
12	Thu	25-Nov-10	Lec/Lab	Inheritance	14-15	DNA Lab (Part 1)
12	Fri	26-Nov-10	Lec	Inheritance	14-15	
13	Tue	30-Nov-10	Lec/Lab	DNA Replication	16	DNA Lab (Part 2)
13	Thu	2-Dec-10	Lec/Lab	DNA Replication	16	DNA Lab (Part 2)
13	Fri	3-Dec-10	Lec	DNA Replication	16	
14	Tue	7-Dec-10	Lec/Lab	Gene Expression	17-18	**LAB EXAM 2A**
14	Thu	9-Dec-10	Lec/Lab	Gene Expression	17-18	**LAB EXAM 2B**
14	Fri	10-Dec-10	Lec	Gene Expression	17-18	
	Mon	13-Dec-10		**FINAL EXAM PERIOD BEGINS**		