School of Arts & Science
DEPARTMENT OF BIOLOGY

Biology 126 - Sec. A, B
Winter 2005

COURSE OUTLINE

The Approved Course Description is available on the web @
http://camosun.bc.ca/calendar/2004/biol.php

1. Instructor Information

(a) Instructor: **Dr. Anna Colangeli**

(b) Office hours: **Posted on Office Door**

(c) Location**: F-340D**

(d) Phone**: 370-3459**

(e) E-mail: **through WebCT (see below)**

(f) Website: **http://webct.camosun.bc.ca**

2. Intended Learning Outcomes

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 a 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:** Campbell, Neil A. and Jane B. Reece 2002. **BIOLOGY, 6th edition.** Benjamin/Cummings Publishing Company, Inc. Redwood City, California.
(b) **Lab Manual:** Biology 126. **Laboratory Manual** Camosun College

4. Course Content and Schedule

Lecture:	**Sec. 01**	**F-202**	**M**	**1:30 - 2:20 pm**
		F-238	**W, Th**	**1:30 - 2:20 pm**
	Sec. 02	**F-238**	**M, Th, F.**	**10:30 - 11:20 am**
Laboratory:	**F-224**	**Sec. 01A**	**Tues.**	**9:30 - 12:20**
	F-224	**Sec. 01B**	**Tues.**	**2:30 - 5:20**
	F-224	**Sec. 02A**	**Wed.**	**9:30 - 12:20**
	F-224	**Sec. 02B**	**Wed.**	**2:30 - 5:20**

5. Basis of Student Assessment

Lecture Midterm 1:	**12.5%**	**February 14, 2005**
Laboratory Exam 1:	**12.5%**	**February 22/23, 2005**
Lecture Midterm 2:	**12.5%**	**March 21, 2005**
Laboratory Exam 2:	**12.5%**	**April 13/14, 2004**
Lecture Final Exam:	**25%**	During Scheduled exam period (Apr. 18-26)
Quizzes:	**5%**	
Reports/Assignments:	**20%**	

6. Grading System

The following percentage conversion to letter grade will be used:

A+ = 95 - 100%	B = 75 - 79%	D = 50 - 59%
A = 90 - 94%	B- = 70 - 74%	F = 0.0 - 49%
A- = 85 - 89%	C+ = 65 - 69%	
B+ = 80 - 84%	C = 60 - 64%	

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, Registrar's Office or the College web site at http://www.camosun.bc.ca

ACADEMIC CONDUCT POLICY

There is an Academic 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, Registration, and on the College web site in the Policy Section.

www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html

Important Dates:

January 10	First day of classes
February 10-11	Reading break
March 14	Last day to withdraw without academic penalty
March 25 and 28	College closed; Good Friday, Easter Monday
April 16	Last day of classes
April 18-26	Final Exams

8. General Course and Department Policies

(a) **Lab attendance is mandatory.** If you are unable to attend your regularly scheduled lab due to illness or other extenuating circumstance, contact the instructor. Unless the instructor has been notified, failure to attend a lab will result in an automatic zero for all assignments resulting from the lab.

(b) **The midterms and finals must be written at the scheduled times.** In case of illness or other extenuating circumstance, the instructor must be notified **prior to the time the exam is be written.** In order to write a make-up midterm or final a note from you physician will be required and will be verified by the Department. [N.B. The final may not be written in advance of the scheduled time.]

(c) All assignments are due at the **beginning** of class on the due date. **15% per day** will be deducted from all late assignments. Weekends count as **2 days.**

(d) Plagiarism is **not** accepted. All lab write-ups other than group reports, even those based upon data common to a lab group **should be presented individually**. Should two very similar assignments, labs or reports be turned in, - the original mark will be divided accordingly.

(e) Cheating on quizzes and exams is not tolerated. Any incidents will be documented and may result in the student being asked to forfeit the exam and perhaps the course.

(f) For safety reasons, there is **no eating or drinking in the lab rooms.**

COURSE SCHEDULE - BIOLOGY 126

Winter 2005

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	Date	Topics/exams	Chapter	Labs/exams
1	Jan. 10-14	**Introduction to Study of Life** **Macromolecules**	1 5	Appendix: Laboratory Techniques
2	Jan. 17-21	**Biological Membranes**	8	Lab. 1 Molecules of Life
3	Jan. 24-28	**Cellular Respiration**	9	Lab. 2 Movement of Molecules
4	Jan. 31 Feb. 1-4	**Photosynthesis**	10	Lab. 3 Cellular Respiration
5	Feb. 7-9 Feb. 10-11	**The Molecular Gene** **Reading Break**	16	Lab. 4 Photosynthesis
6	Feb. 14-18	**Lecture Midterm 1** **DNA Synthesis**	16	Lab completion / Review Lecture Catch-up
7	Feb. 21-25	**Protein Synthesis**	17	**Lab. Exam I**
8	Feb. 28 Mar. 1-4	**Cell Cycle Control**	12, 13	Lab. 5 The Chromosome
9	Mar. 7-11	**Chromosomal Heredity**	15	Lab. 6: restriction digest Lab. 7: one gene- one enzyme
10	Mar. 14-18	**Signal Transduction** **Plant Response Mechanisms**	11 39	Lab. 6: restriction digest Lab. 7: one gene- one enzyme
11	Mar. 21-24 Mar. 25	**Lecture Midterm 2** **Animal Control Mechanisms: Endocrine system** **Good Friday**	11, 45	Lab. 8: Plant Growth hormones
12	Mar 28 Mar. 29-31 Apr. 1	**Easter Monday** **Animals Control - continued**	45	Lab. 9: Animal control systems
13	Apr. 4-8	**Animal Control: Nervous System**	48	Lab completion / review Lecture Catch-up
14	Apr. 11-15	**Sensory and Motor Mechanisms**	49	**Lab. Exam 2**