



**School of Arts & Science  
BIOLOGY DEPARTMENT**

**BIOL 100- 001A and 001B  
Non-Majors Biology 1  
2009W**

## COURSE OUTLINE

### 1. Instructor Information

(a)	Instructor:	Tom Mace
(b)	Office Hours:	Monday – Friday 12:30 – 1:30
(c)	Location:	F248B
(d)	Phone:	250 370 3436
(e)	Email:	mace@camosun.bc.ca
(f)	Website:	N/A

### 2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

1. Work in a culture of scientific endeavor and use critical thinking skills.
2. Identify the critical roles played by water in the maintenance of life on earth.
3. Explain the structures and roles of biological macromolecules, particularly carbohydrates, proteins and lipids.
4. Describe the complexity and diversity of cellular ultrastructure and the functions of significant cellular organelles, in particular: chloroplasts, mitochondria, ribosomes, Golgi apparatus, cilia and flagellae.
5. Describe basic metabolism and energy producing pathways within the cell.
6. Explain the concept of the gene in the contexts of both Mendelian inheritance as well as the biochemical expression of genetic information.
7. Relate the structure of nucleic acids to the storage and replication of genetic information.
8. Explain the mechanisms used to regulate and translate genetic information into the assembly of functional proteins.
9. Describe the interactions between the environment and long-term changes in genetic information, particularly in consideration to neoplasia.
10. Describe the anatomy of the human digestive, cardiovascular and excretory systems and explain how the physiology of these organ systems is related to organization at the molecular and cellular level.
11. Describe the structure and explain the functions of the human immune system. Apply this knowledge to immune dysfunction, particularly allergies and AIDS.

### 3. Required Materials

(a) Textbook: T Audesirk, Audesirk, G and Byers, B. 2008. Biology: Life on Earth, 8<sup>th</sup> ed., Pearson Education, San Francisco.

(b) BIOL 100 Laboratory Manual

#### 4. Course Content and Schedule

WK	DATE	LECTURE TOPICS	TEXT.	LAB #	LAB TOPICS
1	Jan.5 - 9	Course Introduction Chemistry, water & pH	1 & 3		Introduction, Safety
2	Jan.12 - 16	Organic Macromolecules Cell Membranes & Transport	3 & 4	1	Microscopes & Measurements
3	Jan.19 - 23	Cell Biology Energetics	4 & 5	2	Eukaryotic and Prokaryotic Cells
4	Jan.26 - 30	Enzymes Photosynthesis Cellular Respiration	5	3	Diffusion & Osmosis
5	Feb.2 – 6	Cell Division: Mitosis Meiosis	6	4	Enzymes
6	Feb.9 - 13	Cancer Mendelian Genetics	6	5	Mitosis: Onion Root
7	Feb.16 - 20	MID-TERM Exam Reading Break – Thurs.,Fri.	7		LAB EXAM I
8	Feb.23 - 27	Inheritance Patterns Human Genetics	7		Inheritance of Human Traits
9	Mar.1 - 6	DNA Replication Transcription/Translation Mutations	8	7	CATLAB
10	Mar.9 - 13	Gas Exchange/Respiration	23	8	Nutrition
11	Mar.16 - 20	Circulation	23	9/10	Human Organ Systems
12	Mar.23 - 27	Nutrition Digestion	24	9/10	Human Organ Systems
13	Mar.30 – Apr.3	Homeostasis	24	.	LAB EXAM II
14	Apr.6 - 10	Catch-up & Review			No Scheduled Lab

**Final Examination** to be scheduled during formal exam period, April 14 -22

## 5. Basis of Student Assessment (Weighting)

Midterm Lecture Exam	15%	Lab Exam I	15 %
Final Lecture Exam	35 %	Lab Exam II	15 %
Assignments	20%		

## 6. Grading System

### 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](http://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. (For these courses a final grade will be assigned to either the 3 <sup>rd</sup> course attempt or at the point of course completion.)
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](http://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.