



**School of Arts & Science
BIOLOGY DEPARTMENT**

**BIOL 100-02
Non-Majors Biology 1
2006F**

COURSE OUTLINE

The Approved Course Description is available on the web @ _____

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:	Charles Molnar		
(b)	Office Hours:	drop-in: M,T,W 10:30-11:15, W 2:30-3:20 <i>and</i> by appointment when necessary		
(c)	Location:	Richmond House 302 Can be tricky to find!! Next to the greenhouse. Go out the west door (past the printshop and receiving), in the same house as the student health insurance office and the birth control clinic. I am on the top floor.		
(d)	Phone:	370-3449	Alternative Phone:	
(e)	Email:	molnar@camosun.bc.ca		
(f)	Website:			

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.)

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)	Texts	1) Textbook: T Audesirk, Audesirk, G and Byers, B. 2005. Biology: Life on Earth , 7 th ed., Pearson Education, San Francisco. 2) BIOL 100 Laboratory Manual
(b)	Other	

4. Course Content and Schedule

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

The following tentative schedule is subject to change if deemed necessary by the instructor.

Note: **mid-terms** are scheduled for the **first lecture of the week**, unless specified otherwise.

Wk #	Week of	BIO 100 LECTURE TOPICS	TEXT CH.	BIO 100 LAB TOPICS
1	Sept. 4 (Labor Day)	Course Introduction; Characteristics & Organization of Life; Scientific Method	1	<u>NO LAB</u>
2	Sept. 11	Biochemistry Basics; Water; Organic Macromolecules	2, 3	1. Introduction, Safety; Microscopes & Measurements
3	Sept. 18	Cell Membranes & Transport; Types of Cells; Organelles	4, 5	2. Prokaryotic and Eukaryotic Cells
4	Sept. 25	Energy; Enzymes; <u>Summary</u> of Photosynthesis and Cellular Respiration	6, parts of 7, 8	3. Diffusion & Osmosis
5	Oct. 2	MID-TERM I (<i>1st lec of wk</i>) DNA; Replication	--- 9	4. Enzymes
6	Oct. 9 (Thanksg.)	Protein Synthesis; Mutation	10	<u>NO LAB</u>
7	Oct. 16	Cell Cycle; Cell Division: Mitosis/Meiosis; Cancer	11	5. Mitosis: Onion Root
8	Oct. 23	Patterns of Inheritance; Medelian Genetics; Genetic Disorders	12	LAB EXAM I (<i>during regular lab time</i>)
9	Oct. 30	MID-TERM II (<i>1st lec of wk</i>) Circulatory System	--- 28	7. CATLAB
10	Nov. 6	Lymphatic System Gas Exchange/Respiration	28 29	8. Nutrition
11	Nov. 13 (Remembr.)	Nutrition & Digestion	30	<u>NO LAB</u>
12	Nov. 20	Urinary System/Excretion	31	9. Human Organ Systems: Models
13	Nov. 27	Homeostasis; Tissue Types	27	10. Human Organ Systems: Models (10=9 cont.)
14	Dec. 4	Immune System	32	LAB EXAM II (<i>during regular lab time</i>)
FINAL EXAM during final exam period: Dec. 11-19, 2006 (scheduled by registrar) do <u>not</u> make holiday plans during this period!				

5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

(a)	Assignments	15%
(b)	Quizzes	
(c)	Exams	Midterm I 15%
		Midterm II 15%
		Lab Exam I 15%
		Lab Exam II 15%
		Final Exam 25%
(d)	Other (eg, Attendance, Project, Group Work)	

Midterms and lab exams will be unit exams; the final exam will be comprehensive.
 Midterm and final exams will be a mix of multiple choice and short answer questions.
 Lab exams will consist of a series of “stations” consisting of equipment and/or specimens, with accompanying questions testing both practical and theoretical knowledge.
 Please bring a pen *and* pencil (with eraser) to all exams

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
95-100	A+		9
90-94	A		8
85-89	A-		7
80-84	B+		6
75-79	B		5
70-74	B-		4
65-69	C+		3
60-64	C		2
50-59	D		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 at camosun.ca or 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 are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.

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.
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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.

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.

Please note: Plagiarism will not be tolerated in any form, and may result in "0".

No programmable devices are allowed in exams.

Each student is required to sign a Laboratory Safety Contract and give it to the instructor prior to commencing laboratory work in the course.

Attendance: You are expected to attend all classes and labs, and be on time. It is your responsibility to acquire *all* information given during a class missed, incl. notes, hand-outs, assignments, changed exam dates etc.

Exams: Exams have to be written when scheduled. There are no make-up exams during the term. A missed exam results in "0" except in case of documented emergency or illness (doctor's note required stating that student is too sick to attend class during a specified time period). If possible, contact the instructor *prior* to the exam being missed. With a valid excuse, the weighting of the missed exam will be added to the final exam, along with additional questions on untested course material.

Labs: You need to attend labs and lab exams during your assigned section (A or B). Switching between sections on a permanent or temporary basis requires instructor's permission. Lab assignments can only be handed in for labs actually attended (except in cases of documented illness). You are encouraged to discuss assignments with your lab partner, however, **each assignment has to be your individual work – beware of plagiarism.**

It is absolutely necessary to read and mentally **work through each exercise before coming to lab**. Otherwise you may not be able to finish on time, annoy your lab partner, or flunk a pre-lab pop quiz. Please also come prepared with a pencil and a few sheets of unlined and graph paper, in case drawings are required.

Assignments: Unless otherwise stated, all assignments are due at the *beginning* of the lab/class of the due date. There is a **10%/day non-negotiable late penalty** (rounded to the nearest full mark) *except in cases of documented illness or emergency*. Late assignments will **not** be accepted after marked assignments have been returned to the rest of the class one week after the due date. A **professional format** is expected, i.e. a neat, legible, clean copy. "Rough" drafts risk rejection and a subsequent late penalty or reduced marks. If the assignment is more than one page, separate pages **must be stapled**.

Study Habits: You will probably find this course not very difficult, but surprisingly labor-intensive. Good (and regular!!) study habits are required to do well in this course. You should plan on a **minimum of 6 hours** outside of scheduled class time for the completion of assignments and for general studying. Joining a study group can help this make more fun. Some "study hints" are posted on my web site, and the college also offers study skill courses and individual consultations.

Lecture notes will be provided in point form and posted on the web. These should be used as a guide line, not as your sole source of information! You will need to write down additional notes of examples and explanations given during lecture. It is also recommended practice to transcribe these notes into a study-friendly format after each lecture, incorporating additional information from your textbook and other sources. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Exam questions will be based only on material covered in class. However, studying additional details in the corresponding textbook sections will help you understand the material more thoroughly. It is not sufficient simply to memorize point-form notes! Please keep up with your readings, and take advantage of office hours if you need extra clarification and help, or simply would like to discuss a topic a little further.