

COURSE OUTLINE

Grading Systems



CAMOSUN COLLEGE
School of Arts & Science
Department

BIOL 100 Non-Majors Biology I
Fall 2007

COURSE OUTLINE

1. Course Information

Course Description

Fundamentals of Biology in the context of contemporary issues. Topics include basic principles of biochemistry and cell biology, genetics and nutrition, animal structure and function.

Prerequisites: English 12 **or** assessment. *Math 10 recommended.*

(Students who have recently completed grade 12 Biology will notice an overlap of course content.)

Time and Location

Lecture: 02A/B Tu F-202, W F-206, Th F-338 1:30-2:20

Lab: Section A: M 2:30-3:50 in F244

Section B: M 4:00-5:20 in F244

Lecture: 03A/B M,Tu,W 11:30-12:20 in E-348

Lab: Section A: F 9:30-10:50 in F-244

Section B: F 11:00-12:20 in F-244

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.

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2. Instructor Information

Instructor: Charles Molnar

Office hours: TBA

Office location: F-340B

Phone: 370-3449

e-mail: molnar@camosun.bc.ca

3. Required Materials

(a) Textbook: Johnson, G.B., 2003. **The Living World**. 3rd edition. McGraw Hill.

(b) **BIOL 100 Laboratory Manual**

Optional: Study Guide for *The Living World*.

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4. Course Content and Schedule

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	DATE (week of)	LECTURE TOPICS	TEXT CH.	LAB #	LAB TOPICS
1	Sept.3	Course Introduction Scientific Method Biochemistry Basics Water & pH	1 & 3		<u>NO LAB</u>
2	Sept.10	Organic Macromolecules Cell Membranes & Transport	3 & 4	1	Introduction, Safety; Microscopes & Measurements
3	Sept. 17	Cell Biology Energetics	4 & 5	2	Eukaryotic and Prokaryotic Cells
4	Sept. 24	Enzymes Photosynthesis Cellular Respiration	5	3	Diffusion & Osmosis
5	Oct.1	MID-TERM I Cell Division: Mitosis	--- 6	4	Enzymes
6	Oct. 8 Thanks- giving	Cancer Meiosis	6		<i>No Lab</i>
7	Oct. 15	Mendelian Genetics Sex-linked Traits	7	5 & App. 3	Mitosis: Onion Root & Genetics Problems
8	Oct. 22	Inheritance Patterns Human Genetics	7		LAB EXAM I
9	Oct. 29	Replication Protein Synthesis: Transcription/Translation Mutations	8	6 & App. 3	CATLAB
10	Nov. 5	MID-TERM II Circulation <i>NO CLASS</i> Nov. 11 (Remembrance Day)	--- 23	7	Nutrition
11	Nov. 12 Remem brance	Circulation cont. Gas Exchange/Respiration	23	8	No Lab
12	Nov. 19	Nutrition Digestion	24	9	Human Organ Systems: Models
13	Nov. 26	Homeostasis Excretion	24	10 = 9 cont.	Human Organ Systems: Models
14	Dec. 3	Catch-up & Review			LAB EXAM II

Nov. 6 Last day to Withdraw

Exam Period Dec.10-15, 17,18 **Do not book flights!** Exam schedule out in Oct. Wait!!!!

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5. Basis of Student Assessment

Assignments/quizzes	15%
Exams:	
Midterm I	15%
Midterm II	15%
Lab Exam I	15%
Lab Exam II	15%
Final Exam	25%

Midterms I and II, as well as the lab exams, will be unit exams.
The final lecture exam will be cumulative.
Please bring a pen *and* pencil to all exams.

6. Grading System

The following percentage conversion to letter grade will be used:

A+ = 90 - 100%	B = 73 - 76%	D = 50 - 59%
A = 85 - 89%	B- = 70 - 72%	F = 0 - 49%
A- = 80 - 84%	C+ = 65 - 69%	
B+ = 77 - 79%	C = 60 - 64%	

ADDITIONAL INFORMATION

General:

Be sure that you are familiar with the General Department Policies, which are stated in the lab manual. A student conduct code will also be observed.

ACADEMIC CONDUCT POLICY

There is an Academic Conduct Policy. 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

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.

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Attendance:

You are expected to attend all classes, 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.

Missed exams or quizzes cannot be made up except in case of documented illness (doctor's note required). Lab attendance is *mandatory*.

Do not book trips until the exam schedule is known.

Labs:

A **1% final grade penalty** applies to any unexcused absence from lab. Frequent lates may count as an absence. Should you miss roll call at the beginning of lab, please identify yourself to the instructor as "late" or you may remain marked "absent." 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.

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 late penalty**. The format is expected to be professional, i.e. a neat, legible, clean copy. "Rough" drafts risk rejection and a subsequent late penalty. If the assignment is more than one page, **separate pages must be stapled** before you come to class.

Study Habits:

You will probably find Biology 100 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.

Lecture notes will be provided in point form. These should be used as a study guide, not as your sole source of information! You will need to write down additional key words for 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. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Due to time constraints, not all details can be covered in lecture, and you may be held responsible for textbook material not specifically discussed in class. 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.

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>