

COURSE OUTLINE
Grading Systems



School of Arts & Science

BIOL 100 Non-Majors Biology1
WINTER 2010

COURSE OUTLINE

1. 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.

Time and Location

Section	Lab Time	Class Time
002 A	Tues 6:30-7:50PM (F226)	Thurs 6:30-9:20PM (F210)
002 B	Tues 8:00-9:20PM (F226)	Thurs 6:30-9:20PM (F210)
003 A	Fri 9:30-10:50AM (F244)	Mon/Wed 1:00-2:20PM (F202)
003 B	Fri 11:00-12:20 (F244)	Mon/Wed 1:00-2:20PM (F202)

2. Instructor Information

Instructor: David Raju

Office hours: TBA

Office location: EWING 304

Phone: 370-3925

e-mail: raju@camosun.bc.ca

3. Required Materials

(a) Textbook: TBA

(b) BIOL 100 Laboratory Manual. **Winter 2010**. Camosun College Biology Faculty.

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4. Content and Schedule

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

WK	DATE (week of)	TOPIC (D) / CASE STUDY (C)	Lab #	LAB TOPICS (Lab #)
1	Jan 6- 8	Introduction to Biology (D) Scientific Method (C) (NO class Monday or Tuesday)		NO LAB
2	Jan 11-15	Cell Structure and Function (D) Mitochondria (C)	1	(1) <u>Microscopes & Measurements</u>
3	Jan 18-22	Cell Membrane (D) Osmosis Mystery (C)	2	(2) Eukaryotic and Prokaryotic Cells
4	Jan 25-29	Enzymes (D) Catalase Study (C)	3	(3) Diffusion/ Osmosis (EGG Version)
5	Feb 1- 5	Biochemistry (D) Henry David Thoreau Case (C)	4	(4) Enzymes
6	Feb 8- 12	Mitosis/Meiosis (D) Onion Root Mitosis (C) LAB EXAM 1 Review	5	(5) Mitosis
7	Feb 15-17	Nutrition(D) Nutrition Take home (NO class Thursday or Friday)		NO LAB
8	Feb 22-26	MIDTERM Review MIDTERM		LAB EXAM 1
9	March 1-5	Introduction to Genetics (D) Ethics of Cloning (C)	7	(7) CATLAB
10	March 8-12	Genetics (D) DNA Case (C)	8	(8) Nutrition
11	March 15-19	Urinary/Reproductive/Nervous/Immune Systems (D) Transplant Case Study (C)	9	(9,10) Organ Systems
12	March 22-26	Digestive/Cardiovascular/Respiratory Systems(D) Animal System Case Study (C)	10	(9,10) Human Organ Systems
13	March 29-April 1	Anatomy and Physiology Case Study (C) LAB EXAM 2 Review (NO class Friday)		NO LAB
14	April 6- 9	Final Review (D) Case (TBA) (No class Monday)		LAB EXAM II

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5. Intended Learning Outcomes

- a) Work in a culture of Scientific endeavor and use critical thinking skills.
- b) Identify the critical roles played by water in the maintenance of life on earth.
- c) Explain the structures and roles of biological macromolecules, particularly carbohydrates, proteins and lipids.
- d) Describe the complexity and diversity
- e) Of cellular ultrastructure and the functions of significant cellular organelles, in particular: chloroplasts, mitochondria, ribosomes, Golgi apparatus, cilia and flagellae.
- f) Describe basic metabolism and energy producing pathways within the cell.
- g) Explain the concept of the gene in the contexts of both Mendelian inheritance as well as the biochemical expression of genetic information.
- h) Relate the structures of nucleic acids to the storage and replication of genetic information.
- i) Explain the mechanisms used to regulate and translate genetic information into the assembly of functional proteins
- j) Describe the interactions between the environment and long-term changes in genetic information, particularly in consideration of neoplasia.
- k) 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.
- l) Describe the structure and explain the functions of the human immune system. Apply this knowledge to immune dysfunction, particularly allergies and AIDS.

6. Basis of Student Assessment

Labs/Cases/Assignments	30%
Midterm Exam	10%
LAB EXAM I	15%
LAB EXAM II	15%
Final Exam	30%

Lab exams will be unit exams.

Please bring a pen *and* pencil to all exams.

7. Grading System

The following percentage conversion to letter grade will be used:

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

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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.

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:

Missed lab exams cannot be made up. Missed lecture exams cannot be made up except in case of documented emergency or illness (doctor's note required). Unless prevented by emergency, you need to contact the instructor prior to the exam being missed in order to be eligible for the make-up exam.

Labs and Case Studies:

You need to attend. Please come prepared with a pencil and a few sheets of unlined and graph paper, in case drawings are required. **YOU CAN NOT TURN IN A LAB OR CASE STUDY FOR MARKS IF YOU DID NOT PARTICIPATE IN THE ACTIVITY DURING ITS SCHEDULED TIME PERIOD!**

Assignments:

Unless otherwise stated, all assignments are due at the *beginning* of the lab/class of 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**.

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>