

**COURSE OUTLINE**  
Grading Systems

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*School of Arts & Science*

*BIOL 100 Inquiry into Life*  
*WINTER 2009*

**COURSE OUTLINE**

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**1. Information**

Course Description

This course is intended for the student interested in the 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
002A	Tues 6:30-7:50PM (F244)	Thurs 6:30-9:20PM (F202)
002B	Tues 8:00-9:20PM (F244)	Thurs 6:30-9:20PM (F202)
003A	Tues 9:30-10:50AM (F244)	M W 1:30-2:30PM (F210)
003B	Tues 11:00AM-12:20 (F244)	M W 1:30-2:30PM (F210)

**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** 2009v. Camosun College Biology Faculty.

## COURSE OUTLINE

### Grading Systems

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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)	CLASS TOPIC (D) / CASE STUDY (C)	LAB #	Tuesday BIO 100 LAB TOPICS
1	Jan 5-9	Introduction to Biology (D) Scientific Method (C)		Introduction, Lab Safety
2	Jan 12-16	Cell Structure and Function (D) Mitochondria/Stem Cell (C)	1	Microscopes and Measurements
3	Jan 19-23	Cell Membrane (D) Diffusion and Osmosis (C)	2	Prokaryotic and Eukaryotic Cells
4	Jan 26-30	Enzymes (D) Catalase Study (C)	Appendix	Diffusion and Osmosis
5	Feb 2-6	Organic Compounds (D) Henry David Thoreau Diet Case (C)	4	Enzymes
6	Feb 9-13	Cell Division (D) Cell Cycle/Mitosis and Meiosis (C) Lab Exam 1 Review	5	<u>Mitosis: Onion Root</u>
7	Feb 16-18	Nutrition (D)(C) <b>NO CLASS THURS or FRI 002A and B will get take home case</b>		<b>LAB EXAM 1</b>
8	<b>Feb 23-27</b>	Midterm Review <b>Midterm Exam</b>	6	Inheritance of Human Traits
9	<b>Mar 1-6</b>	Genetics 1 (C) Case Study TBA (C)	7	CATLAB
10	Mar 9-13	Genetics 2 (D) Cloning (C)	8	Nutrition
11	Mar 16-20	Urinary/Digestive (D) TBA (C)	9	Human Organ Systems
12	Mar 23-27	Reprod./Nervous/Immune (D) Cancer (C) Lab Exam 2 Review	10	Human Organ Systems: Models
13	Mar 30 – Apr 3	Cardiovascular/Respiratory(D) Organ Transplant (C)		<b>LAB EXAM 2</b>
14	<b>Apr 6-9</b>	Final Review (D) TBA Case (C) <b>NO CLASS FRI</b>		<b>NO LAB</b>

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### 5. Intended Learning Outcomes

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 of 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.

### 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 = 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%	

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### Grading Systems

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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](http://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 during your assigned section (A or B). Switching between sections on a permanent or temporary basis requires instructor's permission. 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>