



COURSE OUTLINE

The College electronically stores this outline for five (5) years only. It is recommended you keep a copy of this outline with your academic records. You may need this outline for future application/s for transfer credit/s to other colleges/universities.

Course Website:	http://online.camosun.ca/ (D2L)
Instructor:	(William) Don MacRae
Office Hours:	Mon - Thurs (8:30-9:30 AM) & Thurs (2:00-3:00 PM)
Location:	F346A
Phone:	250-370-3437
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Intended Learning Outcomes

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

1. Describe the concept of homeostasis.
2. Explain how basic physicochemical changes can impact cell function.
3. Work in a culture of scientific endeavor and use critical thinking skills.
4. Identify the critical roles played by water in the maintenance of life on earth.
5. Explain the structures and roles of biological macromolecules, particularly carbohydrates, proteins and lipids.
6. Describe the complexity and diversity of cellular ultrastructure and the functions of significant cellular organelles, in particular chloroplasts, mitochondria, ribosomes, Golgi apparatus, cilia and flagella.
7. Describe basic metabolism and energy producing pathways within the cell.
8. Explain the concept of the gene in the contexts of both Mendelian inheritance as well as the biochemical expression of genetic information.
9. Relate the structure of nucleic acids to the storage and replication of genetic information.
10. Explain the mechanisms used to regulate and translate genetic information into the assembly of functional proteins.
11. Describe the interactions between the environment and long-term changes in genetic information, particularly in consideration to neoplasia.
12. 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.
13. Describe the structure and explain the functions of the human immune system. Apply this knowledge to immune dysfunction, particularly allergies and AIDS.

Required Materials

Textbook: Openstax Concepts of Biology

- can be downloaded from: <https://openstaxcollege.org/textbooks/concepts-of-biology>

Lab manual: available on the D2L course site

- print the lab manual and bring to each lab period

Internet access is required to access the course D2L website for course management and to complete assignments

Course Content and Schedule

Lectures: Monday and Thursday 11:00 AM– 12:20 PM, Fisher 200

Lab: Section A: Tuesday, 9:30 – 12:20 PM, Fisher Rm. 226

Section B: Tuesday, 1:30 – 4:20 PM, Fisher Rm. 226

Biology 103 is a 1st year College non-majors course. It is assumed that you did not complete Biology 12 or that you want to upgrade your understanding of Biology to that level. If you plan to major in Biology, it will be necessary for you to also complete two 1st year majors courses in Biology.

We will explore the topics listed in the “learning outcomes,” searching for ways to best apply them to our lives. People differ in their experiences and ideas and this approach to a subject works best if we can share these with each other. You will often be asked to work in groups to accomplish the learning tasks associated with this course.

Basis of Student Assessment (Weighting)

Tests*	15%
Lab Exam 1	10%
Lab Exam 2	10%
Assignments*	25%
Exam 1	20%
Exam 2 (Final Exam)	20%
Record of Attendance**	

*Tests and Assignments will be based on work carried out in groups. If a student does not participate in all group work the missing portion of their mark in these categories will be based on the marks that they obtain on Exams 1 and 2.

**Each student is asked to keep a record of the dates of all classes, whether or not they attended and, for any classes not attended, a brief explanation.

Course content and schedule

Wk	Dates	Lecture	Lab
1	Tues Sept 6		Course Intro (No Lab)
	Thurs Sept 9	Chemistry of Life (Ch 2)	
2	Mon Sept 12	Chemistry of Life (Ch 2)	
	Tues Sept 13		Measurement
	Thurs Sept 15	Cell Structure and Function (Ch 3)	
3	Mon Sept 19	Cell Structure and Function (Ch 3)	
	Tues Sept 20		Cells/microscopes
	Thurs Sept 22	Cell Structure and Function (Ch 3)	
4	Mon Sept 26	How Cells Obtain Energy (Ch 4)	
	Tues Sept 27		Organic molecules
	Thurs Sept 29	How Cells Obtain Energy (Ch 4)	
5	Mon Oct 3	How Cells Obtain Energy (Ch 4)	
	Tues Oct 4		Diffusion/osmosis
	Thurs Oct 6	Reproduction at the Cellular Level (Ch 6)	
6	Tues Oct 11		Enzymes
	Thurs Oct 13	Test 1	
7	Mon Oct 17	Reproduction at the Cellular Level (Ch 6)	
	Tues Oct 18		Lab Exam 1
	Thurs Oct 20	The Cellular Basis of Inheritance (Ch 7)	
8	Mon Oct 24	The Cellular Basis of Inheritance (Ch 7)	
	Tues Oct 25		Mitosis
	Thurs Oct 27	Patterns of Inheritance (Ch 8)	
9	Mon Oct 31	Molecular Biology (Ch 9)	
	Tues Nov 1		Genetics
	Thurs Nov 3	The body's systems (Ch 16)	
10	Mon Nov 7	The body's systems (Ch 16)	
	Tues Nov 8		No Labs
	Thurs Nov 10	The body's systems (Ch 16)	
11	Mon Nov 14	The body's systems (Ch 16)	
	Tues Nov 15		Nutrition
	Thurs Nov 17	The body's systems (Ch 16)	
12	Mon Nov 21	The body's systems (Ch 16)	
	Tues Nov 22		Human Anatomy
	Thurs Nov 24	The body's systems (Ch 16)	
13	Mon Nov 28	The Immune System and Disease (Ch 17)	
	Tues Nov 29		Human Anatomy
	Thurs Dec 1	The Immune System and Disease (Ch 17)	
14	Mon Dec 5	The Immune System and Disease (Ch 17)	
	Tues Dec 6		Lab Exam 2
	Thurs Dec 8		

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 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 rd 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.

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 the College web site in the Policy Section.