



## COURSE OUTLINE

### 1. Instructor Information

Course Website:	<a href="http://online.camosun.ca/">http://online.camosun.ca/</a> (D2L)
Instructor:	(William) Don MacRae
Office Hours:	Wed (12:30-1:30 & 3:00-4:00); Thursday (12:30-2:30)
Location:	F346A
Phone:	250-370-3437
Email:	dmacrae@camosun.bc.ca

### 2. 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.

### 3. Required Materials

**e-Resources** – all course materials (notes, case studies, lab manual, etc) are available on the D2L course site. Course notes contain www links that require access to the internet to be fully functional.

#### 4. Course Content and Schedule

**Lectures:** Monday 4:30 – 5:50 PM, Fisher Room 200  
Tuesday 4:30 – 5:50 PM, Fisher, Room 338

**Lab:** Section A: Monday 6:30 PM – 9:20 PM, Fisher Rm. 226  
Section B: Tuesday 6:30 PM – 9:20 PM, Fisher Rm. 226

Biology 103 is a 1<sup>st</sup> year College non-majors course. Either you did not complete Biology 12 or you want to upgrade your understanding of Biology to that level. If you major in Biology, you will complete two first year majors courses in Biology after Biol 103. In majors courses, a broad coverage of topics is required to form a good foundation for proceeding on to upper level courses. Non-majors courses may approach topics in a way that is more broadly applicable to the life of the learner. This semester, 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.

#### 5. Basis of Student Assessment (Weighting)

Lab Assignments	10%
Lab evaluation 1	10%
Lab evaluation 2	10%
Lecture Assignments/Evaluations	40%
Final Evaluation	30%

#### 6. 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](http://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. <i>(For these courses a final grade will be assigned to either the 3<sup>rd</sup> course attempt or at the point of course completion.)</i>
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.

### Course Schedule

Wk	Date	Lecture Topics	Lab	Lab Topics
1	Jan 5-9	Cells	-	Meet / Greet/ Safety
2	Jan 12-16	Chemistry and Life	1	Metric measurements/
3	Jan 19-23	Chemistry and Life	2	Microscopic observations of cells
4	Jan 26-30	Metabolism and energy	3	Organic macromolecules
5	Feb 2-6	The gene and inheritance	4	Diffusion & Osmosis
6	Feb 9	<i>Family Day</i>		No Labs
	Feb 10-11	DNA replication and protein synthesis		
	Feb 12-13	<i>Reading break</i>		
7	Feb 16-20	Cancer/ Mutations/ Gene expression		<b>Lab evaluation 1</b>
8	Feb 23-27	Homeostasis	5	Enzyme Activity
9	Mar 2-6	Excretion	6	Mitosis and meiosis
10	Mar 9-13	Nutrition/Digestion	7	Inheritance of Human Traits
11	Mar 16-20	Circulation	8	Human Nutrition
12	Mar 23-27	Respiration	9	Human Anatomy
13	Mar 30-Apr 2	Immune system		<b>Lab evaluation 2</b>
	April 3	<i>Good Friday</i>		
14	Apr 6	<i>Easter Monday</i>		
	Apr 7-10	Immune system		
	April 13-21	<b>Final Evaluation (during Exam period)</b>		