



## COURSE OUTLINE

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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.

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Course Website:	<a href="http://online.camosun.ca/">http://online.camosun.ca/</a> (D2L)
Instructor:	Don MacRae
Office Hours:	Monday (11:30-1:30 & 3:00-4:00) & Thursday (12:30-1:30 & 3:00-4:00)
Location:	F346A
Phone:	250-370-3437
Email:	dmacrae@camosun.bc.ca

### 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

Biology 103 Coursepack (Sections 003 and 004) Fall 2017

- contains book and lab manual
- available from Camosun College Bookstore, Lansdowne campus

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

## Course Content and Schedule

**Lectures:** Mon & Wed (4:00 - 5:20 AM) 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 1<sup>st</sup> 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 1<sup>st</sup> 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%
Lab assignments	10%
Lecture assignments	10%
Lecture group assignments*	5%
Exam 1	20%
Exam 2 (Final Exam)	20%

\*Tests and some Lecture assignments will be based on work carried out in groups. If a student achieves a higher mark on Exam 1 and 2 (together) than on Tests and group assignments (together), then their Tests and Lecture group assignments categories will be eliminated and Exams 1 and 2 will count 30% each.

## Course content and schedule

Week	Week	Chapter	Lab Activity
1	Sept. 5-8	01 Introduction	Intro / Safety / Meet and Greet
2	Sept. 11-15	01 Introduction 02 Cells	1 Measurements and Equipment
3	Sept. 18-22	02 Cells 03 Molecules	2 Microscopes and Cells
4	Sept. 25-29	03 Molecules 04 Tissues	3 Organic Macromolecules
5	Oct. 2-6	05 Movement of molecules and chemical change	4 Diffusion and Osmosis
6	<i>Oct 9</i> Oct. 10-13	<i>Thanksgiving College Closed</i> 06 Cell Growth and Division	5 Enzymes
7	Oct. 16-20	07 Genetics	<b>Lab Exam 1</b>
8	Oct. 23-27 Oct 25	07 Genetics <b>Exam 1</b>	6 Electrocardiography
9	Oct. 30-Nov 3	08 Movement: neuromuscular actions	7 Genetics
10	Nov. 6-10	09 Diet, Digestion and Metabolism	8 Nutrition
11	<i>Nov 13</i> Nov. 14-17	<i>College Closed</i> 10 Circulation and respiration	9 Human Anatomy
12	Nov. 20-24	11 Excretion and fluid balance	10 Human Physiology
13	Nov. 27-Dec 1	12 Reproduction	Review
14	Dec. 4-8	13 Immune System	<b>Lab Exam 2</b>

**Exam 2** will be scheduled in the Final Exam period, Dec 11-19 (schedule posted Oct 20)

## 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
<b>I</b>	<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.
<b>IP</b>	<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 <sup>rd</sup> course attempt or at the point of course completion.)
<b>CW</b>	<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.