



CAMOSUN COLLEGE
School of Arts & Science
Department of Biology

BIOL-103-Sections 01A/B
Non-Majors General Biology
Winter 2020

COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/biol.html>

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

(a) Instructor	Charles Molnar
(b) Office hours	M 1:30 - 3:00, T 1:00 - 2:30, W 2:30 - 3:30, Th 9:00 - 9:30
(c) Location	F-340B
(d) Phone	250 370-3449 Alternative: _____
(e) E-mail	molnar@camosun.bc.ca Only this email please Not via D2L
(f) Website	_____

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 flagellae.
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 Material

- (a) **Textbook:** Molnar and Gair . **Concepts of Biology First Canadian edition 2015.**

This is an open source free textbook.

(b) **Lab Manual**

Biology 103 Lab Manual (Fall 2019), Camosun College.

4.Course Content and Schedule

Lectures Mondays and Thursdays 11:30-12:50 F266

LabsSection A: Tuesday 9:30-12:20 F226

Section B: Wednesday 12:00-2:50 F226

Please note: the following is a tentative schedule of course topics and events.

Any changes to this schedule will be announced in class and posted on D2L.

Week	DATE	LECTURE TOPICS	TEXT CH.	LAB TOPICS
1	Jan. 6 – 10	Introduction to Biology & Scientific Method Chemistry of Life	1 2	Introduction: Safety, Graph work and Microscopes
2	Jan. 13 – 17	Water & pH Organic Macromolecules	2 3	Lab 1: Measurements & Equipment
3	Jan. 20 – 24	Cell Biology Cell Membranes/ transport	4	Lab 2: Microscopes & Cells
4	Jan. 27 – 31	Energetics & Enzymes Cellular Respiration	6	Lab 3: Organic Macromolecules
5	Feb. 3 – 7	EXAM 1 Cell Division / Mitosis	6	Lab 4: Diffusion & Osmosis
6	Feb. 10 – 14	Meiosis Mendelian Genetics	7 8	Lab 5: Enzymes
7	Feb 17- 21	NO CLASSES/LABS FAMILY DAY AND READING WEEK		
8	Feb. 24 – 28	Non-Mendelian Genetics DNA Replication	8	LAB EXAM 1
9	Mar. 2 – 6	Protein Synthesis	9	Lab 6: Mitosis
10	Mar. 9 – 13	Mutations Gene Expression/Control	9 10	Lab 7/8: Genetics & CATLAB
11	Mar. 16 – 20	EXAM 2 Homeostasis/Excretion	16	Lab 10: Human Anatomy
12	Mar. 23 – 27	Nutrition & Digestion	16	Lab 9: Nutrition
13	Mar. 30 – Apr. 3	Circulation Respiration	16	TBA
14	Apr. 6 – 9	Immune System	18	LAB EXAM 2
15	Apr. 14 – 22	Exam Period EXAM 3 TBA		

5. Basis of Student Assessment (Weighting)

Lecture and Lab Assignments/quizzes: 15%

Exams:

Midterm 1	15%
Midterm 2	15%
Lab Exam 1	15%
Lab Exam 2	15%

Final Exam 25%

Midterms I and II, as well as the lab exams, will be unit exams.

The final lecture exam will be cumulative.

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

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

7. Recommended Materials to Assist Students to Succeed Throughout the Course

Links will be provide to students to access instructional videos and lectures

Student Safety

Consider the following laboratory safety practices:

Lab footwear	<ul style="list-style-type: none">For safety reasons WorkSafeBC mandates that students are required to wear closed shoes in all lab times. Flip flops, sandals or shoes with holes are not acceptable.
Eating & drinking	<ul style="list-style-type: none">Absolutely NOTHING may be ingested while in the lab. Chewing gum and applying makeup or lip balm are similarly prohibited. NO EXCEPTIONS will be made, even for medications.If something must be consumed, then it may be taken out of the lab.
Hair	<ul style="list-style-type: none">It is recommended that long hair be tied securely to prevent it from being exposed to lab equipment.
Hand washing	<ul style="list-style-type: none">Hands should be thoroughly washed BEFORE leaving the lab.

Study Habits

Good (and regular!!) study habits are required to do well in this course. You should plan on a minimum of 4 hours outside of scheduled class time for the completion of assignments and for general studying. Joining a study group can help make this more fun.

Lecture notes will be posted on D2L in PowerPoint form. These should be used as a study guide, not as your sole source of information. You will need to write down additional key words for examples and explanations given during lecture and read the chapters assigned to each week. It is also recommended practice to transcribe these notes into a study-friendly format after each lecture, incorporating additional information from your textbook. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Please take advantage of office hours if you need extra clarification and help, or simply would like to discuss a topic a little further.

Summary of Student Responsibilities

1. Regularly attending classes and actively engaging in lecture times.

2. It is the student's responsibility to catch up on anything that may have been missed (e.g. important announcement or assignments).
3. Students must hand in required assignments on time or be subject to penalty.
4. Students must work independently, except when a group effort is required (cheating and plagiarizing may result in a loss of credit for that assignment or exam, or potentially loss of credit for the course).
5. Students MUST be present for all lecture and lab exams and midterms.
6. Students must know and follow all Safety Rules and Procedures, with **NO EXCEPTIONS**.
7. The use of cell phones is prohibited in the lab and during any exams.
8. All labs and lectures start punctually.

8. College Supports, Services and Policies



Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

1. 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		1
0-49	F	Minimum level has not been achieved.	0

Plagiarism

Plagiarizing is appropriating the work of another or parts or passages of another's writing (including the ideas or language) and passing them off as the product of one's own mind or manual skill. **Plagiarism will not be tolerated.** Plagiarism, **including the copying of any part of assignments or lab assignments**, is a serious offence and is considered to be academic misconduct. In some cases, the lab instructor may prefer a lab assignment to be written as a group. In such cases, handing in one assignment for the group will be acceptable. Otherwise, lab assignments handed in by individuals are expected to be individually prepared.

Cheating

A student caught cheating on an exam will forfeit all credit for that exam and perhaps for the course. Cheating is a serious offence and is considered to be academic misconduct. **Cheating includes, but is not limited to, using unauthorized materials in a quiz/exam and providing information to another person regarding exam content.**

The consequences for cheating and plagiarism are outlined by Camosun College policies (see <http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.pdf> and <http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.1.pdf>) and may be severe. **No electronic devices are allowed in exams. Cell phones must be off and stored. For emergencies the phone must be left with me during an exam. All breaches of these policies will be reported to the Dean's office.**

Lab Safety

Under **NO** circumstances will students ingest food or drink in the lab. Taking oral medication or applying makeup or lip balm in the lab is also prohibited. You may leave the lab at a convenient time if you are thirsty, need a snack or require medication. For safety reasons students are **required** to wear closed shoes and pants in all lab times. Flip flops, sandals or shoes with holes are not acceptable. The spirit of this is safety, so make sure your 'closed-toed' shoes are actually safe!

Failure to adhere to the lab safety principles will result in the inability to enter the lab, or expulsion from the lab, and the subsequent **loss of credit** for that lab, including any pre-lab assessment credit.

Laboratory Attendance

A **1% final grade penalty** applies to any unexcused absence from lab. Frequent lates may count as an absence. Should you miss roll call at the beginning of lab, please identify yourself to the instructor as "late" or you may remain marked "absent." You need to attend labs and lab exams during your assigned section (A or B). Switching between sections on a permanent or temporary basis requires the instructor's permission. **Lab assignments can only be handed in for labs actually attended.**

It is *absolutely* necessary to read and mentally work through each exercise before coming to lab. Otherwise you may not be able to finish on time, annoy your lab partner, or flunk a pre-lab pop quiz. (See Student Contract on D2L and distributed week1)

Biology Missed Exams and Assessments

Quizzes and the exams must be written at the scheduled times. Under no circumstances will make-up exam be administered. However, it is understood that emergency circumstances occur (e.g. illness or emergency in the immediate family); for such circumstances accommodation may be offered at the discretion of the instructor, provided (a) the instructor is notified in **advance of the exam** (not after) and (b) the student provides documented evidence of the circumstance (i.e. medical certificate). The accommodation will be in the form of a make-up

exam or adjusting the weighting of the final lecture exam to make up the missing marks, at the discretion of the instructor. (See Student Contract on D2L and distributed week1)

***Please note: holidays or scheduled flights are not considered to be emergencies!
Individual bonus assignments will not be given.***

Late Penalties

Unless otherwise stated, all assignments are due at the **beginning** of the lab/class of the due date. There is a 10% /day late penalty (including weekend days). The format is expected to be professional, i.e. a neat, legible, clean copy. "Rough" drafts risk rejection and a subsequent late penalty. (See Student Contract on D2L and distributed week1)

If the assignment is more than one page, separate pages **must be stapled before** you come to class. 20% penalty for unstapled assignments.

Study Habits:

You will probably find Biology 103 not very difficult, but surprisingly labor-intensive. Good (and regular!!) study habits are required to do well in this course. You should plan on a *minimum* of 6 hours outside of scheduled class time for the completion of assignments and for general studying. Joining a study group can help this make more fun.

Lecture notes will be provided in point form. These should be used as a study guide, not as your sole source of information! You will need to write down additional key words for examples and explanations given during lecture. It is also recommended practice to transcribe these notes into a study-friendly format after each lecture, incorporating additional information from your textbook. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Due to time constraints, not all details can be covered in lecture, and you may be held responsible for textbook material not specifically discussed in class. Please keep up with your readings, and take advantage of office hours if you need extra clarification and help, or simply would like to discuss a topic a little further.

In the lab week 1, you will sign a safety contract and a course contract. By signing these you acknowledge that you have read and understood this course outline and the safety material in the first pages of your lab manual.

For written assignments follow these guidelines: (applies to bonus assignments occasionally given)

1. Use 8 ½ x 11" paper.
2. Make 1 inch margins on the top, bottom, and sides.
3. The first word in every paragraph should be indented one half inch.
4. Use Times New Roman font, size 12.
5. Double space the entire paper.

You will be given a separate copy of the contract during the first lab meeting for you to sign.

Contract for Biology Students:

In addition to your course outline and General Department Policies and Safety Agreements, the following are Biology Department Policy that requires your signed agreement. Without this document, you will not be allowed to continue in the course.

Please read and initial the following policies. Sign and date this at the bottom.

_____ I have read, understood and will follow the safety guidelines given in the manual/coursepack.

_____ I understand that I must pass the laboratory component of this course in order to receive a passing mark in the whole course.

_____ I understand that greater than **3 unexcused** absences from lab will result in a failing mark in the lab portion of this course.

_____ I understand that an unexcused lab absence can result in a 1% loss of total lab marks per missed lab and that I **cannot receive marks for lab assignments from such labs.**

_____ I understand that to be considered for writing a missed exam requires a medical excuse, covering the appropriate dates, signed by an M.D.

_____ I understand that I am to contact the instructor **as soon as possible AND BEFORE THE EXAM** when I am going to miss an exam.

_____ I understand that I am to contact the instructor **before** I return to class after missing an exam to arrange writing a make-up exam.

_____ I understand that no individual bonus work will be given. That all instances of cheating, plagiarism and use of electronic devices in exams will be documented and sent to the Dean.