

COURSE SYLLABUS



COURSE TITLE: BIOL-103: Non-Majors General Biology

CLASS SECTION: B03A

TERM: Winter 2024

COURSE CREDITS: 3

DELIVERY METHOD(S): Online Lectures, In Person Labs

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.

Learn more about Camosun's [Territorial Acknowledgement](#).

INSTRUCTOR DETAILS

NAME: Charles Molnar

EMAIL: Email through D2L

OFFICE: Fisher 340 B

HOURS: 10-11am Tuesdays (online), and 15 minutes prior to weekly lectures, 15 minutes before & after labs, or by appointment

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

CALENDAR DESCRIPTION

This course is for the student interested in learning about the basics of the structure and function of living beings. Topics include cell biology, human anatomy and physiology, basic principles of biochemistry, genetics and nutrition.

PREREQUISITE(S):

One of:

- C in English 12
- C in Camosun Alternative

CO-REQUISITE(S):

Not Applicable

EXCLUSION(S):

Not Applicable

COURSE LEARNING OUTCOMES / OBJECTIVES

Upon completion of this course a 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, and apply this knowledge to immune dysfunction, particularly allergies and AIDS.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

- a) **Lecture PowerPoint slides** (content for lecture exams)
 - i. Available on D2L, along with additional resources
 - ii. Printing and bringing the slides to each lecture is highly recommended
- b) **BIOL 103 Lab Manual 2023** (content for lab exams)
 - i. Available for purchase at Campus Bookstore, or available for download & print on D2L
 - ii. Students are expected to pre-read the lab and complete pre-lab questions prior to each lab
- c) **Microsoft Word and Excel** (required for lab assignments)
 - i. A FREE version of Microsoft 365 is available to Camosun students: <https://webservices.camosun.ca/o365-opt-in/>
 - ii. Contact IT support if you have issues: <http://camosun.ca/services/its/contact.html>
- d) **Open Stax Biology 1st Canadian Edition** (required)
 - i. Free to access and print: <https://opentextbc.ca/biology/>
 - ii. Printed copies of select chapters available for purchase at Campus Bookstore
 - iii.

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice.

Lectures:	B03A	Tuesdays	8:30am-9:50am	Online
	B03A	Thursdays	8:30am-9:50am	Online
Labs:	B03A	Wednesdays	9:30am-12:20pm	F226

Week	Dates	Lecture Topic/Activity	Textbook	Wednesday Labs
1	09-Jan	Biology	1.1	Lab and Course Introduction
	11-Jan	Science	1.2	
2	16-Jan	Chemistry	2.1	Lab 1- Science & Data
	18-Jan	Chemistry	2.1	
3	23-Jan	Water & pH	2.2	Lab 2- Water & pH
	25-Jan	Macromolecules	2.3	
4	30-Jan	Cell Biology	3.2 & 3.3	Lab 3- Microscopes & Cells
	1-Feb	Membranes & Transport	3.4 – 3.6	
5	6-Feb	Cellular Respiration; Enzymes	4.1	Lab 4- Osmosis
	8-Feb	Lecture Exam #1		
6	13-Feb	Mitosis	6.1-6.3	Lab 5- Enzymes
	15-Feb	Meiosis	7.1-7.3	
7	20-Feb	<i>No Lecture - Reading Week</i>		<i>No Labs – Reading Week</i>
	22-Feb			
8	27-Feb	Genetics I	8.1 & 8.2	LAB EXAM #1 (12.5%)
	29-Feb	Genetics II	8.3	
9	5-Mar	DNA Replication	9.1 & 9.2	Lab 6 - Cell Cycle and Cancer
	7-Mar	Protein Synthesis	9.3 & 9.4	
10	12-Mar	Mutations		Lab 7 - Genetics
	14-Mar	Lecture Exam #2		
11	19-Mar	Homeostasis & Nutrition	11.1	Lab 8 - Nutrition & Digestion
	21-Mar	Homeostasis & Nutrition		
12	26-Mar	Histology & Digestive System	11.2	Labs 9 and 10 - Anatomy
	28-Mar	Urinary System	11.1	
13	3-Apr	Respiratory System	11.3	<i>No Labs this week</i>
	5-Apr	Circulatory System	11.3	
14	10-Apr	Immune System	12.3-12.4	LAB EXAM #2 (12.5%)
	12-Apr	Review		
		Final Exam (TBA)		

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced noticed is required. Deadlines scan be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
Weekly Pre-Lab Questions	5%
Weekly Lab and Text Assignments	25%
Lecture Exam #1 online	10%
Lecture Exam #2 online	15%
Final Lecture Exam - Date TBA in person exam	20%
Lab Exam #1 in lab	12.5%
Lab Exam #2 in lab	12.5%
	TOTAL
	100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the [Grade Review and Appeals](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information.
<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

Details of Assessment:

(a) Weekly Pre-Lab Questions (5%)

- (i) Each lab will have questions to complete in the lab manual **PRIOR** to arrival to the lab session
- (ii) If the questions are not completed by the beginning of the lab session, a zero will be given (**no late submissions**)

(b) Weekly Text assignments (10%)

Text assignments are found in D2L, they are submitted online by 5PM on Monday. Text assignment 1 is due Mon. Jan 15th at 5:00. Text assignments may be handed in one day late with a 20% penalty. No latter submissions accepted.

(c) Weekly Lab Assignments (15%)

- (i) Lab assignments are due one week after the lab session, as a hand-written or typed report, and/or demonstration of in-lab data. Several labs have a D2L quiz, Quizzes are due by the following Monday at 5PM.
- (ii) Written assignments are allowed to be submitted **ONE** day late with a **10% penalty** but will not be accepted after that

(d) Lecture Exams (10%, 15%, and 20%)

- (i) Lecture exams #1 and #2 take place during regular **lecture hours** and are NOT cumulative, nor open-book. Phones/smart watches are NOT permitted and will result in a zero on the exam.
- (ii) Lecture exam #3 is cumulative and takes **place in person, on campus** during final exam week

(e) Lab Exams (12.5% and 12.5%)

- (i) Lab exams take place during regular lab hours and are NOT cumulative nor open-book. They are strictly based on lab material/content

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the [Grade Review and Appeals](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information.
<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

Laboratory Work

Laboratory attendance for this course is mandatory. It is expected that students will read and prepare for each lab BEFORE arrival. Lateness in arriving, failure to attend the lab or leaving the lab before its scheduled finish time will result in forfeiting credit for that lab, including any written assignments.

If you miss attending a **total of four (4) or more labs for any reason** (including, but not limited to: life circumstances, legitimate illness or family/pet emergency, planned vacations, milestone family events, work commitments, childcare or eldercare commitments, competitive athletic events), you will be unable to meet the learning outcomes for the class and will receive a **failing grade (F) in the entire course**, regardless of marks received on graded lab and lecture components. Exceptions will only be considered through an academic concession granted by the instructor or Dean/Associate Dean.

Written Assignments

All assignments must have the following information in the top right corner of the page: full name, course and section, and date. Failure to have this information on the first page may result in loss of marks. 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**.

Unless otherwise stated, all assignments are due at the beginning of the lab/class of the due date. Late assignments will **not** be accepted after a one-day grace period (10% penalty).

Missed Lecture Exams

All lecture exams must be written at the scheduled times. 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 the student:

- a) notifies the instructor **in advance** of the exam (not after), and
- b) provides documented evidence of the circumstance (i.e. medical documentation).

In the event of emergency circumstances, it is at the instructor's discretion whether to administer an online or in person written make-up exam.

**** HOLIDAYS OR SCHEDULED FLIGHTS ARE NOT CONSIDERED TO BE EMERGENCIES ****

Be sure not to make travel plans for the end of semester until the final exam schedules are finalized and posted. Please ask any family members who might make travel plans on your behalf to consult you before booking tickets.

Missed Lab Exams

Without exception, all lab exams must be written at the scheduled times. Lab exams differ from lecture exams in their formatting and the fact that they cover lab content in a non-cumulative manner. Due to the nature of our shared lab space with other courses, lab exams cannot be made up outside of our regularly scheduled lab time.

Cheating and Plagiarism

In this science-based course, many students struggle with the amount of content covered. When completing assignments, cheating and plagiarism are more likely to occur as students lack the confidence to complete their work on their own. The consequences for cheating and plagiarism are outlined by Camosun College policies (see <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf>). Please reach out if you need support BEFORE it becomes an academic integrity issue!

Science Help Center

If a student is ever confused or uncertain about a concept or assignment and wanted outside help, the science help center offers *free tutoring* in biology, chemistry, and physics! A great place to confirm your assignments and graphs, study, and get to find study groups. View their hours via <https://camosun.ca/services/academic-supports/help-centres/science-help-centre>

STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit <http://camosun.ca/students/>.

Academic Advising	http://camosun.ca/advising
Accessible Learning	http://camosun.ca/accessible-learning
Counselling	http://camosun.ca/counselling
Career Services	http://camosun.ca/coop
Financial Aid and Awards	http://camosun.ca/financialaid
Help Centres (Math/English/Science)	http://camosun.ca/help-centres
Indigenous Student Support	http://camosun.ca/indigenous
International Student Support	http://camosun.ca/international/
Learning Skills	http://camosun.ca/learningskills
Library	http://camosun.ca/services/library/
Office of Student Support	http://camosun.ca/oss
Ombudsperson	http://camosun.ca/ombuds
Registration	http://camosun.ca/registration
Technology Support	http://camosun.ca/its
Writing Centre	http://camosun.ca/writing-centre

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](#) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

<http://camosun.ca/services/accessible-learning/>

Academic Integrity

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

Course Withdrawals Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures"

(<http://camosun.ca/learn/calendar/current/procedures.html>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of

when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence and Misconduct Policy: <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf> and camosun.ca/sexual-violence. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

Changes to this syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.