

# COURSE SYLLABUS



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

CLASS SECTION: 01AB

TERM: Winter 2023

COURSE CREDITS: 3

DELIVERY METHOD(S): In-person lecture and lab

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](#).

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*For COVID-19 information please visit <https://camosun.ca/about/covid-19-updates> (note - legacy page link works too: <https://legacy.camosun.ca/covid19/index.html>)*

*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 explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.*

## INSTRUCTOR DETAILS

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NAME: Brooke Cameron

EMAIL: [cameronb@camosun.ca](mailto:cameronb@camosun.ca)

OFFICE: F244

HOURS: Mondays, Tuesdays, and Thursdays from 3:00pm-4:20pm, 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

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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

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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. Apply this knowledge to immune dysfunction, particularly allergies and AIDS.

## REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

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- a) **Lecture PowerPoint slides** will be available on D2L, along with additional resources
  - i. Printing and bringing the slides to each lecture is highly recommended
  - ii. These slides will be the content tested on lecture exams
- b) **BIOL 103 Lab Manual 2023** is required for all lab sessions
  - i. Available for purchase at Campus Bookstore, or available for download & print on our D2L website
  - ii. Students are expected to pre-read the lab and complete pre-lab questions prior to each lab
  - iii. The lab manual and lab assignments will be the content tested on lab exams
- c) **Microsoft Word and Excel** must be downloaded **PRIOR to first lab together**
  - 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 1<sup>st</sup> Canadian Edition is a helpful textbook, but **will not be heavily used in the course**
  - i. The textbook is free to access and print: <https://opentextbc.ca/biology/>
  - ii. Printed copies of select chapters available for purchase at Campus Bookstore

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

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

**Lectures:** 001AB Mondays 1:30pm-2:50pm F268  
 001AB Thursdays 1:30pm-2:50pm F268

**Labs:** 001A Tuesday 9:30am-12:20pm F226  
 001B Thursday 9:30am-12:20pm F226

Week	Dates	Lecture Topic/Activity	Textbook	Lab Topic/Activity
1	09-Jan	1- Biology	1.1	Lab Introductions
	12-Jan	2- Science	1.2	
2	16-Jan	3- Chemistry	2.1	Lab 1- Science
	19-Jan	4- Water & pH	2.2	
3	23-Jan	5- Macromolecules	2.3	Lab 2- Water & pH
	26-Jan	6- Cell Biology	3.2 & 3.3	
4	30-Jan	7- Membranes & Transport	3.4 – 3.6	Lab 3- Microscopes & Cells
	02-Feb	8- Energy & Enzymes	4.1	
5	06-Feb	9- DNA Replication	9.1 & 9.2	Lab 4- Osmosis
	09-Feb	<b>Lecture Exam #1 (12.5%)</b>		
6	13-Feb	10- Protein Synthesis	9.3 & 9.4	Lab 5- Enzymes
	16-Feb	11- Mutations		
7	20-24 Feb	<i>No Lectures or Labs: Reading Week</i>		
8	27-Feb	12- Mitosis	6.1-6.3	<b>LAB EXAM #1</b>
	02-Mar	13- Meiosis	7.1-7.3	
9	06-Mar	14- Genetics	8.1-8.3	Lab 6- Cell Cycle and Cancer
	09-Mar			
10	13-Mar	15- Cellular Respiration	4.2-4.4	Lab 7- Genetics
	16-Mar	<b>Lecture Exam #2 (12.5%)</b>		
11	20-Mar	16- Homeostasis & Nutrition	11.1	Lab 8- Nutrition & Digestion
	23-Mar	17- Histology & Digestive System	11.2	
12	28-Mar	18- Urinary System	11.1	Labs 9 & 10- Anatomy
	31-Mar	19- Respiratory System	11.3	
13	03-Apr	20- Circulatory System	11.3	<i>No Labs; Good Friday</i>
	06-Apr	21- Immune System	12.3-12.4	
14	10-Apr	<i>Easter Monday (No Lecture)</i>		<b>LAB EXAM #2</b>
	13-Apr	22- Gene Regulation	9.5	
	April 17-25	<b>Final Exam (20%, Date TBA)</b>		

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 can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

ASSESSMENT ITEM	WEIGHTING (%)
Weekly Pre-Lab and Lab Work	5
Weekly Lab Assignments (10)	25
Lecture Assignments (approximately 3-5 throughout term)	5
Lecture Exam #1- Week 5: Thursday, February 9 <sup>th</sup>	10
Lab Exam #1- Week 8: In-lab	12.5
Lecture Exam #2- Week 10: Thursday, March 16 <sup>th</sup>	10
Lab Exam #2- Week 14: In-lab	12.5
Final Exam- During Exam Period (April 17-25)	20
<b>TOTAL</b>	<b>100</b>

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>

### **Pre-Lab and Lab Work (5%)**

Weekly lab sessions require students to arrive prepared, so students must pre-read the lab materials and complete the short pre-lab questions prior to arrival. Lab attendance is a requirement of the course, so a missed lab session will result in a missed grading and assignment opportunity.

### **Lab and Lecture Assignments (25% and 5%)**

All assignments provided to students are due within one week and are typically expected to be completed outside of class time. Submissions are expected to be completed individually, neat and legible with all key course information (full name, course, section, date) at the top right of the document. Assignments must be submitted on time for prompt grading and return (late work is not accepted).

### **Lecture Exams (10%, 10%, and 20%)**

Lecture exams will take place during regular lecture hours and are all closed-book (no notes of any kind allowed). Exams are based on PowerPoint slide material and include multiple choice and short answer questions. The use of phones, smart watches, or other electronic devices during exams is NOT permitted and will result in a zero on the exam. Lecture exams 1 and 2 are NON-cumulative, while the final exam will take place during exam period and will be cumulative. DO NOT book travel before learning the exam schedule.

### **Lab Exams (12.5% and 12.5%)**

Lab Exams take place during regular lab hours and are strictly on lab manual and lab assignments. Lab Exams are non-cumulative and are hands-on in nature. More details on the format and content later in the course.

### Science Help Center

If a student is ever confused or uncertain about a concept or assignment, the science help center offers free tutoring and support to all Camosun students. View their hours via <https://camosun.ca/services/academic-supports/help-centres/science-help-centre>

### Weekly Habits

This course covers a high volume of material, so attending each lecture and lab is imperative for success. To do well, time management is key. Come to each lecture and lab prepared, having pre-read the material and reviewed any relevant videos or chapters. Regularly check D2L for updates and communications. Before anything else, mark your calendars with important dates and deadlines listed in this outline and look ahead to what is due as you progress. These habits will help you throughout your academic career.

### Common Challenges

In this science-based course, many students struggle with the amount of content covered. When completing assignments, cheating and plagiarism are often more likely to occur as students lack the confidence to complete their work on their own and seek outside support. 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. I'm here to ensure you understand the rules and regulations of the college.

### Office Hours

Students are *highly* encouraged and invited to visit office hours throughout the term. Office hours are a great chance to check in, review assignment details, tests, and content, get time management strategies and study tips, or share interesting new articles and pictures. Students who check-in typically gain accountability with the course and their grade demonstrates this. Don't be shy, take advantage of your resources and come say hi.

## STUDENT RESPONSIBILITY

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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

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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	<a href="http://camosun.ca/advising">http://camosun.ca/advising</a>
Accessible Learning	<a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a>
Counselling	<a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>
Career Services	<a href="http://camosun.ca/coop">http://camosun.ca/coop</a>
Financial Aid and Awards	<a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>
Help Centres (Math/English/Science)	<a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>
Indigenous Student Support	<a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>
International Student Support	<a href="http://camosun.ca/international/">http://camosun.ca/international/</a>
Learning Skills	<a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>
Library	<a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a>
Office of Student Support	<a href="http://camosun.ca/oss">http://camosun.ca/oss</a>
Ombudsperson	<a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>

Registration	<a href="http://camosun.ca/registration">http://camosun.ca/registration</a>
Technology Support	<a href="http://camosun.ca/its">http://camosun.ca/its</a>
Writing Centre	<a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a>

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

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### 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](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto: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.