

# COURSE SYLLABUS



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

CLASS SECTION: RH06

TERM: Fall 2022

COURSE CREDITS: 4

DELIVERY METHOD(S): In Person

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://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: Samantha Harvey & Ryan Suleman

EMAIL: [harveys@camosun.ca](mailto:harveys@camosun.ca) & [suleman@camosun.bc.ca](mailto:suleman@camosun.bc.ca)

OFFICE: Fisher 246 & Fisher 250D

HOURS: Wednesdays 4:00-5:30pm

*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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### REQUIRED FOR FIRST WEEK OF CLASSES:

- a) **Microsoft Word and Excel**
  - i. FREE version of Microsoft 365 is available: <https://webservices.camosun.ca/o365-opt-in/>
  - ii. Please contact IT support if you have issues: <http://camosun.ca/services/its/contact.html>
- b) Hard copy of **BIOL 103 Lab Manual 2022**
  - i. Available for purchase at Campus Bookstore, or
  - ii. Available for download and print on our D2L website
  - iii. Labs must be read and pre-lab questions must be completed prior to arrival for lab sessions
- c) **D2L Resources**
  - i. Lecture PowerPoint Slides and articles are available each week for download and printing, should be brought to each lecture

### OPTIONAL:

- a) **Open Stax Biology 2e** textbook
  - i. FREE online access to relevant chapters via <https://openstax.org/details/books/biology-2e>
  - 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.

<b>Lectures:</b>	RH06	Mondays	9:00am-10:22am	Royal Bay
	RH06	Wednesdays	9:00am-10:22am	Royal Bay
	RH06	Fridays	9:00am-10:08am	Royal Bay
<b>Labs:</b>	RH06	Thursday	6:30pm-9:30pm	F226

Tuesdays and Thursdays (F100)

Monday(02B)/Tuesday (02A)

Week	Dates	Lecture Topic/Activity	Textbook	Lab Topic/Activity
1	07-Sep	No Class		NO LABS
	09-Sep	1- Biology	1.1	
2	12-Sep	2- Science	1.2	Lab 1- Science*
	14-Sep	3- Chemistry	2.1	
	16-Sep	4- Water & pH	2.2	
3	21-Sep	5- Macromolecules	2.3	Lab 2- Water & pH
	23-Sep	6- Cell Biology	3.2 & 3.3	
4	26-Sep	7- Membranes & Transport	3.4 – 3.6	Lab 3- Microscopes & Cells
	28-Sep	8- Energy & Enzymes	4.1	
5	03-Oct	<b>Lecture Exam #1 (12.5%)</b>		Lab 4- Osmosis
	05-Oct	9- Cellular Respiration A	4.2-4.4	
	07-Oct	9- Cellular Respiration B	4.2-4.4	
6	12-Oct	10- Mitosis	6.1-6.3	NO LAB
	14-Oct	11- Meiosis	7.1-7.3	
7	17-Oct	12- DNA Replication	9.1 & 9.2	Lab 5- Enzymes
	19-Oct	13- Protein Synthesis	9.3 & 9.4	
8	24-Oct	14- Mutations		<b>LAB EXAM #1</b>
	26-Oct	Lab Exam Review		
	28-Oct	15- Genetics I	8.1 & 8.2	
9	31-Oct	15- Genetics II	8.3	Lab 6- Cell Cycle and Cancer
	02-Nov	Review		
	04-Nov	<b>Lecture Exam #2 (12.5%)</b>		
10	07-Nov	16- Gene Regulation	9.5	Lab 7- Genetics
	09-Nov	17- Histology		
11	14-Nov	18A- Homeostasis & Nutrition	11.1	Lab 8- Nutrition & Digestion
	16-Nov	18B- Digestive System	11.2	
	18-Nov			
12	21-Nov	19- Urinary System	11.1	Lab 9- Anatomy Pt 1

	23-Nov	20- Respiratory System	11.3	Lab 9- Anatomy Pt 1
13	28-Nov	21- Circulatory System	11.3	Lab 10- Anatomy Pt 2
	30-Nov	21- Circulatory System	11.3	
	02-Dec	22- Immune System	12.3-12.4	
14	05-Dec	Final Exam		<b>LAB EXAM #2</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 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 Activities	2.5%
Lecture Assignments	5%
Weekly Lab Assignments (10)	25%
Lecture Exam #1- Monday Oct 03	12.5%
Lecture Exam #2- Wednesday Nov 04	12.5%
Final Lecture Exam	20%
Lab Exam #1	10%
Lab Exam #2	12.5%
	<b>TOTAL</b>
	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:

#### **Pre-Lab Activities (2.5%)**

Pre-lab activities typically act to ensure that the laboratory manual has been read before attending the actual laboratory class. Students are expected to attend all lectures and labs, barring any illness or emergencies, so a missed lab will result in a missed grade for the pre-lab assignment as well as the post-lab assignment.

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

All assignments are typically done outside of class time, so students can fine tune and fully complete their work. Assignments must be submitted at the beginning of class (late work is not accepted). Submissions are expected to be neat and legible with all key course information (full name, course, section, date) at the top of the document, please!

#### **Exams (45%)**

Exams will take place during regular lecture hours and are all closed-book (no notes of any kind). Final exam will be cumulative and will cover all material presented in this course. DO NOT book travel before learning the exam schedule. More details on the format and content later in the course.

### **Lab Exams (22.5%)**

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

## **COURSE GUIDELINES & EXPECTATIONS**

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### **Weekly Habits**

This course is FUN but full of content and information. Missed lectures/labs and poor study habits can lead students struggling in the course. 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!

### **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, or 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.

### **Science Help Center**

If a student is ever confused or uncertain about a concept or assignment and would prefer a different approach, 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>

I look forward to engaging with you this term, however you see fit! Let's learn about the amazing world of biology!

## **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](http://camosun.ca/services/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.