

COURSE SYLLABUS



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

CLASS SECTION: B03A & B03B

TERM: 2024F

COURSE CREDITS: 3

DELIVERY METHOD(S): Blended: Online asynchronous lectures and in-person labs

Camosun College respectfully acknowledges that our campuses are situated on the territories of the Ləkʷəŋən (Songhees and Kosapsum) and WSÁNEĆ peoples. We honour their knowledge and welcome to all students who seek education here.

INSTRUCTOR DETAILS

NAME: Laura Biggs

EMAIL: BiggsL@camosun.ca

OFFICE: Fisher Building, Room 352, Lansdowne Campus

HOURS: Mondays 10:00-11:30am, Tuesdays 4:00-5:30pm, Wednesdays 12:30-1:30pm, or by appointment

(Other meeting times can be arranged on campus or online if these times don't fit with your schedule.)

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):

One of: C in English 12; C in Camosun Alternative

EQUIVALENCIES: BIOL 100

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

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

(a) Recommended Textbook

Concepts of Biology, 1st Canadian Edition is a free online textbook: <https://opentextbc.ca/biology/>
(Printed copies of select chapters are available for purchase at Lansdowne Campus Bookstore)

(b) Lab Resources

i) *Biology 103 Lab Manual* is **REQUIRED** and available for purchase at Lansdowne Campus Bookstore.
(Labs must be read and pre-lab questions must be completed prior to arrival at each lab session.)

ii) Microsoft Word and Excel are **REQUIRED** for completing lab assignments. A FREE version of Microsoft365 is available to all Camosun students, go to <https://camosun.ca/services/its/software-other-services>. Contact IT support if you have issues: <http://camosun.ca/services/its/contact.html>.

(c) Lecture Resources

Lectures are asynchronous; there is no scheduled meeting day/time but there are specific activities that must be completed each week. Lecture notes will be posted on the course D2L website as PowerPoint files, along with additional resources and activities.

(d) Technology Requirements:

i) A reliable device (e.g. laptop, tablet) with reliable internet access is required to access online course materials and complete/submit lecture assignments, quizzes, and exams. Your device must be able to download and save files, upload and attach files, view videos, and send/receive email.

ii) Camosun has created a guide to help you prepare to study online: <https://camosun.ca/services/student-orientation/online-learning>

iii) The Camosun Library has a limited number of laptops available for short-term borrowing.

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:	B03AB Asynchronous	No set day/time	Online
Labs:	B03A Thursdays	9:30am-12:20pm	Fisher 226, Lansdowne
	B03B Thursdays	1:30pm-4:20pm	Fisher 226, Lansdowne

WEEK #	DATES	LECTURE TOPICS	LAB TOPICS
1	Sept. 2-6	Module 1: Biology & Science	Course and Lab Introduction
2	Sept. 9-13	Module 2: Chemistry of Life	Lab 1: Science & Data
3	Sept. 16-20	Module 3: Cell Structure and Function	Lab 2: Water and pH
4	Sept. 23-27	Module 4: Cellular Respiration	Lab 3: Microscopes and Cells
5	Sept. 30-Oct. 4	LECTURE MIDTERM #1 (Sep30-Oct7)	NO LABS
6	Oct. 7-11	Module 5: DNA Replication & Protein Synthesis	Lab 4: Osmosis
7	Oct. 14-18	Module 6: Mitosis & Meiosis	NO LABS
8	Oct. 21-25	Module 7: Genetic Inheritance	Lab 5: Enzymes
9	Oct. 28-Nov. 1	Module 8: Gene Regulation	LAB EXAM #1 (Oct 31)
10	Nov. 4-8	LECTURE MIDTERM #2 (Nov 4-11)	Lab 6: Cell Cycle and Cancer
11	Nov. 11-15	Module 9: Tissues, Homeostasis, & Urinary System	Lab 7: Genetics
12	Nov. 18-22	Module 10: Digestion & Nutrition	Lab 8: Nutrition & Digestion
13	Nov. 25-29	Module 11: Circulation & Respiration	Lab 9: Anatomy
14	Dec. 2-6	Module 12: Immune System	LAB EXAM #2 (Dec 5)
	Dec. 9-17	LECTURE FINAL EXAM (Date and time scheduled by College Registrar)	

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 notice is required. Deadlines can be reviewed on the [CAL exams page](https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams). <https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams>

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
Lecture Quizzes (x 12)	10%
Lecture Assignments (x 12)	10%
PreLab Questions (x 9)	2.5%
Lab Assignments (x 9)	22.5%
Lecture Midterm Exam #1 (Week of Sept 30)	10%
Lecture Midterm Exam #2 (Week of Nov 4)	10%
Lab Exam #1 (Thursday October 31)	10%
Lab Exam #2 (Thursday December 5)	10%
Lecture Final Exam (Date TBA)	15%
TOTAL	100%

Notes about evaluation methods:

<p>Lecture Quizzes on D2L are open-book and use of the PowerPoint slides is encouraged. There will be one quiz for each of the 12 course modules. Quizzes will be available by the beginning of each week and due the following Monday at 11:59pm (no late submissions accepted). Each quiz allows for two attempts, with your highest grade of the two being kept. A missed submission will result in a grade of zero for that quiz.</p>
<p>Lecture Assignments will be posted online, with one assignment per course module. These assignments must be completed individually. Assignments will be available by the beginning of each week and due the following Monday at 11:59pm. Like the quizzes, these assignments are intended to keep you on track with the course material. Therefore, late submissions are not accepted and will result in a zero grade.</p>
<p>PreLab Questions: Each lab will have questions to complete in the lab manual PRIOR to arrival to the lab session. The instructor will check for completion at the beginning of each lab. Late submissions are not accepted. Students who arrive late to the lab may forfeit their mark for that week's PreLab Questions.</p>
<p>Lab Assignments are due <u>at the beginning</u> of the next lab period, unless otherwise specified by the instructor. Late assignments will be graded but marks equivalent to 10% of the total value of the assignment will be deducted for each day past the deadline, including weekends. Late assignments will NOT be accepted once marked assignments have been returned to the class.</p>
<p>Lecture Midterm Exams take place online during Weeks 5 and 10 and are NOT cumulative, whereas the Lecture Final Exam takes place online during the final exam period (as scheduled by the College Registrar) and IS cumulative. These exams are strictly based on lecture content and are timed open-book exams. The instructor will provide more information regarding allowable exam materials.</p>
<p>Lab Exams take place in person during regular lab hours. These are closed-book exams strictly based on lab content and are NOT cumulative. The use of phones, smart watches, or other electronic devices during lab exams is NOT permitted and will result in a zero on the exam.</p>

Lecture Component

The lecture component of this course is **asynchronous**, meaning there are no scheduled lecture classes to attend. The lecture content is divided into 12 modules that you will work through independently on a weekly basis. Each module has a set of learning objectives, a set of PowerPoint notes, suggested textbook readings, and additional resources/activities to be completed by Monday of the following week. Although you may work through the lecture material and activities on your own time throughout the week, it is important to stay on track to meet assignment/quiz deadlines - this is NOT a self-paced course. Please refer to the schedule on Page 3 of this syllabus to see which module to study each week.

Laboratory Component

In order to pass the course, students are required to meet the minimum lab attendance, participation, and completion requirements:

- Laboratory activities involve practical application of your knowledge as well as development of lab techniques and manual skills. Development of these skills is a requirement to meet the Course Learning Outcomes. Meeting Course Learning Outcomes is a requirement for completing the course, as well as ensuring pre-requisite and transferability standards are met.
- Laboratory activities are in-person activities; attendance and participation is **mandatory**. Online alternatives are NOT available.
- Laboratory attendance will be monitored by a sign-in sheet in the lab. It is the student's responsibility to record their attendance using this sheet. Attendance from the sign-in sheet will be transferred to D2L by your instructor. It is the student's responsibility to monitor their attendance progress.
- Arriving late to the lab may result in a missed opportunity to sign in.

Guidelines for missed labs:

- Students who miss a laboratory session have an obligation to seek out concessions directly from their instructor in a timely manner, BEFORE the lab period begins. If notification is provided AFTER the lab period begins, concessions may not be available.
- If a student misses up to three (3) laboratory sessions, they are still eligible to meet the Learning Outcomes for the course. Concessions offered for the first three (3) missed laboratory sessions will depend on the reason for the laboratory absence and is at the instructor's discretion. Concessions may include writing up the laboratory report with provided data or omitting the lab.
- **If a student misses a total of four (4) or more laboratory sessions for ANY reason** (including but not limited to: life circumstances, significant illness or family/pet emergency, planned vacations, family events, work commitments, childcare or eldercare commitments, competitive athletic events), they will be unable to meet the Course Learning Outcomes and will receive a **failing grade (F) in the course**, regardless of marks received on graded lecture and lab components. Exceptions will only be considered through an academic concession granted by the instructor or Dean/Associate Dean.
- This guideline applies to laboratory activities only; for missed Lab Exams please see the "Missed Exams" section on the following page.
- Please note that if you are suffering from a serious medical illness that prevents you from fully participating in the course, Camosun College has a Compassionate Medical Withdrawal Policy (<https://camosun.ca/services/forms#medical>).

Assignments

All assignments must be submitted according to the instructor's criteria. A **professional format** is expected, i.e. a neat, legible, clean copy. Incorrectly formatted assignments risk rejection and a subsequent late penalty or reduced marks. If the assignment is more than one page, separate pages **must be stapled**.

All assignments are due at the specified due date and time; in general, lecture assignments are due Mondays at 11:59pm and lab assignments are due at the start of the following lab. As described earlier, late lecture assignments will not be accepted, and late lab assignments will be accepted with a penalty of **10% per day**, including weekends. Late assignments will not be accepted once marked assignments have been returned to the class.

Plagiarism

You are encouraged to discuss assignments with your classmates, however, **individual assignments must be your own individual work – beware of plagiarism**. Plagiarizing is appropriating the work 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.

Except where work is assigned to a group, all written work must be done individually. Plagiarism is a serious offence that is considered to be academic misconduct and **will not be tolerated**. A student caught plagiarizing will forfeit all credit for the assignment and documentation will be sent to the Chair and Dean for their records. Please visit the link to the Academic Integrity Policy later in this syllabus for more information.

Missed Exams

All exams must be written at the scheduled times. However, it is understood that emergency circumstances occur (e.g. severe illness or emergency in the immediate family); for such circumstances accommodation may be offered at the discretion of the instructor, provided the student notifies the instructor **in advance** of the exam (not after).

In the event of emergency circumstances, it is at the instructor's discretion whether to administer a make-up exam or adjust exam grade weighting accordingly.

*** HOLIDAYS, SCHEDULED FLIGHTS, EVENTS, AND WORK ARE NOT CONSIDERED TO BE EMERGENCIES ***

Be sure not to make travel, work, or other personal plans for the end of semester until the final exam schedule is finalized and posted. Please ask any family members who might make travel plans on your behalf to consult with you before booking tickets.

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:

- (a) using unauthorized materials or resources in a quiz/exam, and
- (b) providing information to another person regarding exam content.

The consequences for cheating and plagiarism are outlined by Camosun College's Academic Integrity policy.

Student Safety

The following laboratory safety practices are required to participate in all laboratory activities. Students must sign a safety contract in the first lab and follow all safety rules and procedures.

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.If something must be consumed, then it may be taken out of the lab.
Hair	<ul style="list-style-type: none">Long hair must be tied back.
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. Regularly check D2L for updates and other communication. Mark your calendar with the important dates and deadlines from this syllabus to help you stay on track, and frequently look ahead so you can plan for upcoming exams or due dates. You should plan on a minimum of 6 hours per week for the completion of lecture activities (e.g. readings, videos), assignments and quizzes, and for general studying. It is recommended to set aside specific study times in your weekly schedule to help with time management. These habits will help you throughout your academic career.

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 information from the other lecture resources and readings assigned each week. It is also recommended practice to transcribe these notes into a study-friendly format after each week, incorporating additional information from your textbook. Study these notes before the next week to prepare yourself for new material, which will often build on previously covered material.

Please take advantage of office hours if you need assistance with course material or assignments.

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 camosun.ca/services.

Support Service	Website
Academic Advising	camosun.ca/services/academic-supports/academic-advising
Accessible Learning	camosun.ca/services/academic-supports/accessible-learning
Counselling	camosun.ca/services/health-and-wellness/counselling-centre
Career Services	camosun.ca/services/co-operative-education-and-career-services
Financial Aid and Awards	camosun.ca/registration-records/financial-aid-awards
Help Centres (Math/English/Science)	camosun.ca/services/academic-supports/help-centres
Indigenous Student Support	camosun.ca/programs-courses/iecc/indigenous-student-services
International Student Support	camosun.ca/international
Learning Skills	camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills
Library	camosun.ca/services/library
Office of Student Support	camosun.ca/services/office-student-support
Ombudsperson	camosun.ca/services/ombudsperson
Registration	camosun.ca/registration-records/registration
Technology Support	camosun.ca/services/its
Writing Centre	camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills

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.

Academic Integrity

Students are expected to comply with all College policy regarding academic integrity; which is about honest and ethical behaviour in your education journey. The following guide is designed to help you understand your responsibilities: <https://camosun.libguides.com/academicintegrity/welcome>
Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.13.pdf> for Camosun's Academic Integrity policy and details for addressing and resolving matters of academic misconduct.

Academic Accommodations for Students with Disabilities

Camosun College is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging appropriate academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a documented disability and think you may need accommodations, you are strongly encouraged to contact the Centre for Accessible Learning (CAL) and register as early as possible. Please visit the CAL website for more information about the process of registering with CAL, including important deadlines: <https://camosun.ca/cal>

Academic Progress

Please visit <https://camosun.ca/sites/default/files/2023-02/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 <https://camosun.ca/sites/default/files/2021-05/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <https://camosun.ca/registration-records/tuition-fees#deadlines>.

Grading Policy

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

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 (see [Medical/Compassionate Withdrawals policy](#)). Please visit <https://camosun.ca/services/forms#medical> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence

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 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 Policy:

<https://camosun.ca/sites/default/files/2021-05/e-2.9.pdf> and camosun.ca/services/sexual-violence-support-and-education.

To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-370-3841

Student Misconduct (Non-Academic)

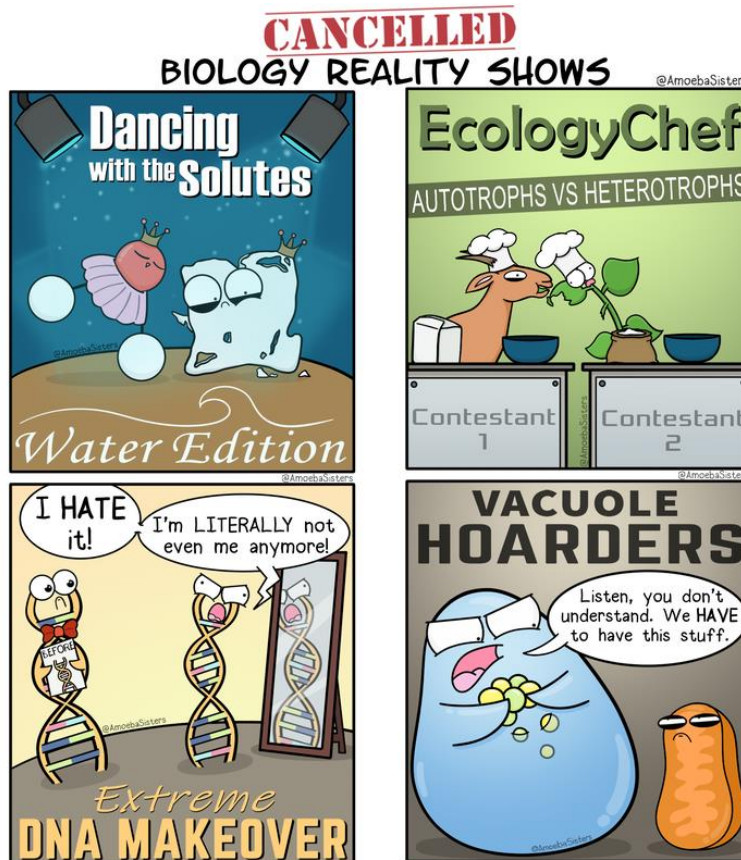
Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at

<https://camosun.ca/sites/default/files/2021-05/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

Looking for other policies?

The full suite of College policies and directives can be found here: <https://camosun.ca/about/camosun-college-policies-and-directives>

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.



(<https://www.amoebasisters.com/parameciumparlorcomics/cancelled-biology-reality-shows>)