BIOC102
Biochemistry and Human Health
CRN 20303
Winter 2023

Class time/location: Tues., Wed., Fri., 8:30 – 9:20, Elliot 168
Instructor: Dr. Perry Howard
Office hours: Mondays and Thursdays 3-4 pm
Room: Petch 186
e-mail: phoward@uvic.ca

We acknowledge and respect the lək̓ʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

This classroom is one where everyone will be treated with respect, and we welcome individuals for all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability-and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the class.

Universal Washroom locations: Library 110d, 110e; Bob Wright Centre A121

Course material: Since the course material is compiled from a number of sources, including current stories in the news, there is no course textbook. Links to the source material (papers) will be provided on-line in Brightspace and will serve as an additional resource. You will need your UVic NetLink ID and password to access this information.

Lecture Notes: Notes will generally be made available on the Brightspace site prior to lectures. ***Lecture notes are not complete***, and students will be responsible for all materials covered in the lectures. **This course is being taught face to face and students are expected to come to class and participate.** While I will try to record my lectures there is no guarantee the lecture will be recorded nor are there any assurances on the quality of the recordings. Remote learning is not an option for this course.

BIOC102 course learning objectives:

This course will introduce students to the basic components and processes underlying human life. We will discuss how diseases arise when these processes are disturbed, and how drugs work to combat disease. Additionally, students will be introduced to scientific method, experimental design and critical examination of scientific results. By the end of the course, students will have sufficient knowledge to understand and analyze health science publications from the mainstream media, and basic understanding of some of the common illnesses that plague humanity, as well as how they are treated.

Important dates and evaluation:

EVALUATION	Date
Dr. Howard	
30% test 1	***Online asynchronous (24 hour availability)*** **Friday January 27**
30% test 2	***Online asynchronous (24 hour availability)*** ***Friday February 17***
30% test 3	***Online asynchronous (24 hour availability)*** ***March 17***
10% test 4	***Online asynchronous (24 hours availability)*** ***April 4***

There will be no lectures held on test days. Tests will open at 8:30am on test day and remain available until 8:30 am the next day. The tests in the course will all be online and designed to complete within 50 minutes. However, all students will have access to the exam for a 24-hour period and may complete the exam at any time over this period.

- Students are responsible for ensuring that they are properly registered in the course.
- Students are expected to have met all pre/co-requisites for the course

Grading:

A+	90 -100	**B+**	77 - 79	**C+**	65 - 69	**F**	< 50
A	85 - 89	**B**	73 - 76	**C**	60 - 64	**N ****	< 50
A-	80 - 84	**B-**	70 - 72	**D**	50 - 59		

** N grades
Students who have completed the following elements will be considered to have completed the course and will be assigned a final grade:

- ***Students must have written 3 of 4 tests to complete the course.***

Failure to complete this minimum requirement will result in a grade of “N” regardless of the cumulative percentage on the completed elements of the course. An N is a failing grade, and it factors into a student’s GPA as 0. The maximum percentage that can accompany an N on a student’s transcript is 49.

There will be no deferred exams offered in this course. If you fail to complete a test within the scheduled time offered, regardless of the reason (illness, family affliction etc…), the marks from this missed test will be redistributed between the remaining 3 tests. Failure to complete more than 1 test will result in a grade of N regardless of the cumulative percentage on the completed elements of the course.

Topics:

	topic	***comments***
	Dr. Perry Howard starting Jan. 10th 2023	
1	***Introduction***	What is biochemistry?
2	***Biomolecules***	Introduction to the major building blocks of cells
3	***Microbiology and Pathogenesis***	Introduction to bacteria. We will learn about both beneficial and harmful bacteria. Introduction to how bacteria causes disease.
4	***Viruses***	Influenza; HIV; SarsCoV2
5	***Immune system and Vaccines***	Protein; mRNA
6	***Monogenetic diseases***	Gene hunters: discovery of disease causing mutations. Gene therapy
7	***Polygenetic diseases***	Determining the causes of complex, multi-factor diseases. Diabetes
8	***Neuropathies***	Guest lecturer Dr. Scott Selleck
9	***Cancer***	Molecular basis of cancer
10	***Cancer Immunotherapy***	Using the immune system to combat cancer
11	***Personalized medicine***	How medicine is and will be tailored to the individual

DEPARTMENT INFORMATION AND POLICIES

1. The Department of Biochemistry and Microbiology upholds and enforces the University's policies on academic integrity. These policies are described in the current University Calendar. All students are advised to read this section.

2. Cell phones, computers, and other electronic devices must be turned off at all times during live class sessions unless being used for the purpose of connecting and engaging with the class.

3. No recordings of live lectures are permitted without permission of the instructor. However, many courses will be recorded by the instructor for accessibility for students unable to attend. If you do not wish to be recorded, contact your instructor to determine if alternative arrangements can be made. Attendance and engagement in the classroom are integral parts of the learning process and cannot be substituted with recordings. It is at the instructor's sole discretion whether they provide a recording or give permission to students to record a lecture. There is no obligation to do so nor is there any expectations about the quality of the recordings. Nor should students assume a lecture will be recorded as instructors may withdraw access to recordings or permission to record. It is the responsibility of students who miss lectures to catch up on the material through extra readings, and obtaining notes from fellow students. Students who miss several lectures due to illness should contact their instructors to discuss options.

4. Students and instructors are expected to assess their health daily and avoid campus if they are ill.

5. Course materials, such as notes, problem sheets, quizzes, examinations, example sheets, or review sheets, may not be redistributed without the explicit written permission of the instructor.

6. Students are expected to be available for all exams. Instructors may grant deferrals for midterm examinations for illness, accident, or family affliction. Although students do not require documentation, students must contact their instructor and BCMB office (biocmicr@uvic.ca) with the reason for their absence within 48 hours after the midterm exam. The Department will keep a record of the absences. It is the responsibility of the student to ensure all required components are complete.

7. The Department of Biochemistry and Microbiology considers it a breach of academic integrity for a students to discuss exams with classmates. Similarly, students who reveal the contents of an examination to students taking an examination are considered to be in violation of the University of Victoria policy on academic integrity (see current University Calendar). Students must abide by UVic academic regulations and observe standards of scholarly integrity (no plagiarism or cheating).

8. Online exams/tests must be taken individually and not with a friend, classmate, or group, nor can you access notes, course materials, the internet, or other resources without the permission of the instructor. You are prohibited from sharing any information about the exam with others. Use of unauthorized electronic devices and accessing the internet and class material during exams is prohibited unless permission is granted by the instructor. Instructors may use Browser Lockdown Software to block access during

classes and exams. Students must work alone, and may not discuss any of the questions on the exam with other students until 24 hours after the test closes.

9. Requests for review/remark of a midterm exam must be made within one week of the exam being returned.

10. The instructor reserves the right to use plagiarism detection software or other platforms to assess the integrity of student work.

11. Supplemental exams or assignments will not be offered to students wishing to upgrade their final mark.

12. Anonymous participation in online classes is not permitted without permission of the instructor.

Important note about COVID-related stress
The ongoing pandemic is placing added stressors- financial, mental, and physical- on everyone. Your wellbeing is of foremost importance. If you are experiencing difficulties coping, the University has resources to help. Please reach out to Counselling Services, the Centre for Academic Communication, or Learning Assistance Program for assistance.

Centre for Accessible Learning
Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, approach the Centre for Accessible Learning (CAL) as soon as possible in order to assess your specific needs.
https://www.uvic.ca/services/cal/index.php

Course Experience Survey (CES)
We value your feedback on this course. Towards the end of term you will have the opportunity to complete a confidential course experience survey (CES) regarding your learning experience. The survey is vital to providing feedback to us regarding the course and our teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey, you will receive an email inviting you to do so. If you do not receive an email invitation, you can go directly to your CES dashboard. You will need to use your UVic NetLink ID to access the survey, which can be done on your laptop, tablet or mobile device. We will remind you nearer the time but please be thinking about this important activity.

Resource Centre for Students with a Disability

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, approach the Resource Centre for Students with a Disability (RCSD) as soon as possible (http://rcsd.uvic.ca/.) in order to assess your specific needs

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Student Code of Conduct:

https://www.uvic.ca/services/advising/advice-support/academic-units/student-code-of-conduct/index.php

Biochemistry and Microbiology Student Society:

https://onlineacademiccommunity.uvic.ca/bmss/