

**BIOCHEMISTRY 300A A01 – GENERAL BIOCHEMISTRY I**  
**COURSE OUTLINE – Summer 2021**  
**CRN 32640**

**Content:** BIOC 300A provides detailed coverage of foundation topics for students majoring in biochemistry or microbiology. Topics include protein structure and function, enzymes and enzyme kinetics, carbohydrates, lipids, biological membranes, and bioenergetics.

**Time and Place:** TWF 10:30 am – 12:20 pm  
Wednesdays – Online weekly tutorial 10:30 am – 12:20 pm  
Attendance is strongly encouraged.

This course will be delivered as a combination of live online tutorials held on Wednesdays and prepared video lectures.

**Student assessments will be delivered online according to the schedule below through Brightspace.** Quizzes and exams are timed will be open from 8:30 am to 8:30 pm on the designated day. Students will have the indicated duration to write the assessment once begun on Brightspace.

Students must sign in with their UVic accounts (yourname@uvic.ca) to access online sessions, course materials, and test materials.

**Textbook:** Biochemistry by Berg, Tymoczko, Gatto, and Stryer, 9<sup>th</sup> edition

**Instructors:**

Dr. Caren Helbing (course coordinator)  
*she/they*

**email:** [chelbing@uvic.ca](mailto:chelbing@uvic.ca)

**Office hours:** Wednesdays 1 – 3 pm

Dr. John Burke  
*he/him*

**email:** [jeburke@uvic.ca](mailto:jeburke@uvic.ca)

**Office hours:** Thursdays 10 am - noon

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We consider the learning environment a place where you will be treated with respect and we welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, sexual orientations, origins, religious affiliations, and other differences.

All members of this class are expected to contribute to a respectful, welcoming, and inclusive environment for every person in the class.

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**Course Material:**

**J. Burke Material (May 12– June 2)**

Introduction to Biochemistry 300A  
Bonds and buffers, Chapter 1  
Protein composition and structure, Chapter 2  
Protein characterization, Chapter 3  
Hemoglobin - a model protein, Chapter 7

Enzymes - basic concepts and kinetics, Chapter 8

Drug development, Chapter 28

**C. Helbing Material (June 9 – 25)**

Enzyme catalytic strategies, Chapter 9

Enzyme regulatory strategies, Chapter 10

Carbohydrates, Chapter 11

Lipids and cell membranes, Chapter 12

Membrane channels and pumps, Chapter 13

**Schedule of Video Lectures, Tutorials, Quizzes, and Exams:**

Date	Event	Day of the Week	Video Lectures (Topics)	Chapters
<b>J. Burke</b>				
May 12	Tutorial	W	Introduction, 1-3	
<b>May 18</b>	<b>Quiz (10%)</b>	<b>T</b>		
May 19	Tutorial	W	4-10 +Richardson's diagrams videos	
<b>May 25</b>	<b>Quiz (10%)</b>	<b>T</b>		
May 26	Tutorial	W	11-14	
<b>June 2</b>	<b>Exam 1 (30%)</b>	<b>W</b>	<b>First half of course</b>	<b>1-3, 7, 8, 28</b>
<b>C. Helbing</b>				
June 9	Tutorial	W	Introduction, 7a-d	9
<b>June 15</b>	<b>Quiz (10%)</b>	<b>T</b>	<b>7a-d</b>	<b>9</b>
June 16	Tutorial	W	8a-d, 9a-b	10, 11
<b>June 22</b>	<b>Quiz (10%)</b>	<b>T</b>	<b>8a-d</b>	<b>10</b>
June 23	Tutorial	W	10a-b, 11a-b	12,13
<b>June 25</b>	<b>Exam 2 (30%)</b>	<b>F</b>	<b>Second half of course</b>	<b>9-13</b>

**Assessments and Grading Scheme:**

Tues, May 18 Quiz 1, 50 min (10%)

Tues, May 25 Quiz 2, 50 min (10%)

Wed, June 2 Exam 1, 2 hours (30%) *This exam will cover all material from J. Burke's section*

Tues, June 15 Quiz 3, 50 min (10%)

Tues, June 22 Quiz 4, 50 min (10%)

Friday, June 25 Exam 2, 2 hours (30%) *This exam will cover all material from C. Helbing's section*

**Quizzes and exams are "open book". Students can use course notes and the textbook. Students are not allowed to work in groups or use materials external to the course including internet resources. Students doing so will be in breach of the university's academic integrity policy.**

**Techniques to be used in assessing performance in the course:**

Grading of multiple choice and short answer written quiz and exam questions.

**UVic Grading Scheme**

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

- *Exams 1 & 2*

Failure to complete one or more of these elements will result in a grade of “N” regardless of the cumulative percentage on other 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.

**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 a purpose relevant to the class.
3. Any recordings of live class sessions may only be performed with written permission of the instructor and are for personal use only. The instructor retains copyright to such recordings and all lecture materials provided for the class (electronic and otherwise); these materials must not be shared or reposted on the Internet.
4. 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.
5. Students are expected to be available for all exams. Instructors may grant deferrals for midterm examinations for illness, accident, or family affliction, and students must provide appropriate documentation 48 hours after the midterm exam. The Department of Biochemistry and Microbiology considers it a breach of academic integrity for a student taking a deferred examination to discuss the exam with classmates. Similarly, students who reveal the contents of an examination to students taking a deferred examination are considered to be in violation of the University of Victoria policy on academic integrity (see current University Calendar). Deferral of a final exam must be requested with an Academic Concession form and submitted directly to Undergraduate Records. Deferred final exams for fall term courses will be arranged by the instructor. Deferred final exams for spring term courses will be arranged through Undergraduate Records and must be written before the end of the summer term as stipulated in the University Calendar.

6. Requests for review/remark of a midterm exam must be made within one week of the exam being returned.
7. The instructor reserves the right to use plagiarism detection software or other platforms to assess the integrity of student work.
8. Supplemental exams or assignments will not be offered to students wishing to upgrade their final mark.
9. Anonymous participation in online classes is not permitted without written permission of the instructor.

## **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)**

*I 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 me regarding the course and my 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. I will remind you nearer the time but please be thinking about this important activity.*