

**BIOCHEMISTRY 300B**  
**CRN 31270**  
**General Biochemistry II**  
**Course Outline: Summer 2023**

**Place:** Cornett B143  
**Time:** Mondays: 8:30 am – 10:20 am  
Tuesdays, Fridays: 10:30 am - 12:20 pm  
**Textbook:** Biochemistry by Berg, Tymoczko, and Stryer, 9<sup>th</sup> edition  
**Web site:** UVic BrightSpace

**Instructors:** **Dr. J. Lum (Jul 7 – Jul 18).**  
Office hours: By appointment (please email)  
email: JLum@bccancer.bc.ca

**Dr. J Ausió (Jul 24 – Aug 21)**  
Office hours: Office hours: 9:00 am-5:00 pm \*  
email: jausio@uvic.ca

\* No office hours will be offered the day before an exam.

- Drs. Lum's & Ausió's lectures will be delivered exclusively face to face. Instances where a student might fall unexpectedly ill during the delivery of the course, will be dealt with on an individual basis.

**Course Description:** BIOC 300B in conjunction with BIOC300A provides detailed coverage of foundation topics for students majoring in biochemistry or microbiology. In this course, the structures and functions of DNA, RNA and genes are discussed along with the regulation of gene expression in prokaryotes and eukaryotes. Also discussed are metabolic processes and their control. Students need to have a good understanding of the principles of cell biology and organic chemistry before taking this course.

*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.*

*We consider this classroom to be a place where you will be treated with respect, and we welcome individuals for all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expression, 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.*

*We will gladly honour your request to address you by an alternate name or gender pronoun. Please advise us of this desire early in the semester so that we may make appropriate changes to our records.*

Please see the link below for the students' code of conduct:

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

## Biochemistry 300B 2021. Lecture Schedule and Topics

Week	Instructor	Date	Topic	Chapter
1	Lum	Jul. 7	Bioenergetics/Glycolysis	15
2	Lum	10	Gluconeogenesis/Citric acid cycle	16
2	Lum	11	Citric acid cycle/Oxidative phosphorylation	17/18
2	Lum	14	Lipid catabolism	22
2		14	<b>EXAM I</b>	
3	Lum	17	Amino acid catabolism	23
3	Lum	18	Amino acid biosynthesis	24
3		21	<b>EXAM II</b>	
4	Ausió	24	DNA structure	4 (pages 113-127)
4	Ausió	25	Recognition of DNA by proteins/topological properties of DNA	handout
4	Ausió	28	Topological properties of DNA (cont.)/DNA replication	29 (pages 956-961)
5	Ausió	31	DNA replication in vivo (cont.)/ Fidelity of DNA replication	29
5	Ausió	Aug 1	Fidelity of DNA replication (cont.)	29
5	Ausió	4	RNA synthesis	30
		4	<b>EXAM III</b>	
6	Ausió	8	RNA processing	30
6	Ausió	11	Protein synthesis	31
7	Ausió	14	Protein synthesis	31
7	Ausió	15	Regulation of gene expression	32
7	Ausió	18	Regulation of gene expression in eukaryotes	32
8		21	<b>EXAM IV</b>	

**Lecture Content:** Each lecture will conform approximately to the organization used in the text. Additional material and examples may be added by the lecturer and will be posted on Brightspace. **There is no final exam in this course.**

### **Course Evaluation:**

#### **Evaluation and marking policy**

Four on line quizzes will take place during the course. Each quiz will be written on line in BrightSpace, and will be open for 24 hours.

**The final grade will be obtained from the average of the grades obtained**

### **Marking Policy:**

Date	Evaluation type	Percentage final mark
Jul 14	1 <sup>st</sup> midterm (BrightSpace)	20%
Jul 21	2 <sup>nd</sup> midterm (BrightSpace)	20%

Aug 4	3 <sup>rd</sup> midterm (BrightSpace)	30%
Aug 21	4 <sup>th</sup> midterm (BrightSpace)	30%

## 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

Only students who have completed three of the four quizzes will be considered to have completed the course and will be assigned a final grade.

## Deferral Policy

Please note that this course will have NO deferred exams. Students who fail to complete a quiz will have their grade averaged over the remaining three quizzes. Students who fail to complete more than one quiz will be assigned 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 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](mailto: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, and to arrange deferred exams/assignments with the instructor, which normally should

occur within one week of the original exam date.

7. 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 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). Online exams 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.
8. **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.
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 current 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.