

## **BCMB 301A Expected Learning Outcomes**

In BCMB 301A, you will have the opportunity to employ fundamental biochemical, microbiological and molecular biological laboratory techniques to investigate experimental problems. Using data generated in a range of experiments, you will learn to apply relevant theoretical concepts to analyse the data and evaluate experimental outcomes. In addition to developing analytical and practical laboratory skills, you will develop problem solving and critical thinking skills by relating acquired knowledge to new problems or trouble-shooting questions. Time management skills will be developed through efficient organization of experimental components.

Upon successful completion of BCMB301 you will have an understanding of principles studied and be able to apply that understanding to new problems; you will be able to communicate scientific principles effectively; and keep accurate records of your experimental work. You will have also demonstrated a proficiency in the following laboratory techniques: setting up assays; pouring and running gels; protein purification; sterile technique in tissue culture experiments; and be able to perform calculations for solution preparation.

## **What to Expect in BCMB 301A Summer 2021**

BCMB 301 labs will be held in Petch 145. In the lab students will work independently, with the support of a lab instructor and a teaching assistant (TA), to complete the lab protocol. To accommodate the requirements for social distancing there is a maximum of 16 students in the summer lab session. The reduced number of students in the lab each week will ensure social distancing measures can be maintained but it will also increase the level of assistance that you can receive from the lab instructor and TA. Independent work stations will minimize the need to move around the lab to access communal equipment. Additional safety strategies that will be employed in lab include increased disinfection of work surfaces, communal equipment and high-touch surfaces, directional traffic flow in the lab and timed-entry. There will be a strict no illness policy for students and lab staff.

All assignments and assessments will be submitted electronically through UVic's learning management system, Brightspace. Lab instructors are dedicated to supporting the students and will continue to offer students support in and out of the lab. Office hours will be held over Zoom, and students will have the opportunity to book one-on-one sessions. Lab instructors will be also available to answer questions by email.

## Course Evaluation

The final mark will be based on:

Prelab Quizzes	5%
Discussion Quizzes	15%
Practical Assessments	15%
Lab Summaries	15%
Exam #1 (Labs 2 & 3)	10%
Exam #2 (Labs 4 & 6)	20%
Exam #3 (Labs 5 & 7)	20%

Final course percentages and assignment of letter grades\*:

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

\*All percentages will be rounded to the nearest whole number. For example, a calculated percentage of 79.49% will be recorded as 79% whereas 79.50% will be recorded as 80%.

\*\* N grades

When you have written all examinations and completed all in-class laboratories, you will be assigned a final grade. Failure to complete one or both of these elements may 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.

### Attendance

BCMB301 is a practical course that progressively builds your expertise in lab techniques; your attendance and punctuality for each lab (including Zoom sessions) is important. If you are not able to attend your regularly scheduled lab session, please contact the lab instructor responsible for that particular lab as soon as possible. Students unable to attend consecutive lab sessions may be unable to complete the course requirements, which may result in the assigning of an N grade (see requirements for course completion).

## BCMB 301A Laboratory Schedule Summer 2021

Week	Date	Day	Experiments Performed	Due Dates
1	May 10	Mon	Safety Orientation Lab 1: Standard Curve	
	May 11	Tues	Lab 1: Standard Curve	Introductory Quiz (Brightspace)
	May 12	Wed	Lab 2: Buffer and pH	Lab 1 Journal by 11:59pm
	May 13	Thurs	Literature Exercise (online)	Lab 2 Journal by 11:59pm Literature Ex. due May 14, 11:59 pm
2	May 17	Mon	Lab 3: Biuret, Lowry, Bradford, $A_{280}$	Calculation Exercise (Brightspace)
	May 18	Tues	Lab 2 Discussion	Lab 2 Summary Lab 3 Journal by 11:59pm
	May 19	Wed	Lab 4: AS precip, SEC, IEC	Lab 3 Practical by 1pm
	May 20	Thurs	Lab 5: Coat ELISA plate, Subculture hybridoma cells	
3	May 24	Mon	Victoria Day – no labs	
	May 25	Tues	Lab 3 Discussion	Lab 3 Summary
	May 26	Wed	Lab 4: Prepare & Run SDS-PAGE, $\beta$ -gal Assay	
	May 27	Thurs	Lab 4: Image gel & Bradford Assay	Lab 4 Practical (Enzyme Activity) by 1pm Lab 4 Journal by 11:59pm
4	May 31	Mon	Lab 5: Harvest Secreted Antibody, ELISA	
	June 1	Tues	Exam #1: Labs 2 & 3	

<b>Week</b>	<b>Date</b>	<b>Day</b>	<b>Experiments Performed</b>	<b>Due Dates</b>
4	June 2	Wed	Lab 5: SDS-PAGE & Transfer	Antibody Titre Curve by 1pm
	June 3	Thurs	Lab 5: Image gel & Develop blot	Lab 5 Journal by 11:59pm
5	June 7	Mon	Lab 6: Reversible Inhibition	
	June 8	Tues	Lab 4 Discussion	Lab 4 Summary
	June 9	Wed		Lab 6 Journal by 11:59pm
	June 10	Thurs	Lab 6 Discussion	Lab 6 Summary
6	June 14	Mon	Lab 7: Irreversible Inhibition	
	June 15	Tues	Exam #2: Lab 4 & 6	Lab 7 Journal by 11:59pm
	June 16	Wed	Lab 8: Bioinformatics (online)	
	June 17	Thurs	Lab 5 Discussion	Lab 5 Summary
7	June 21	Mon	Lab 7 Discussion	Lab 7 Summary
	June 22	Tues		
	June 23	Wed	Exam #3: Labs 5 & 7	
	June 24	Thurs		Lab 8 Summary by 3pm. No late assignments accepted.

## 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. Many online 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.
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. 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.
6. 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.
7. 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 or 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.

8. Requests for review/remark of a midterm exam must be made within one week of the exam being returned.
9. The instructor reserves the right to use plagiarism detection software or other platforms to assess the integrity of student work.
10. Supplemental exams or assignments will not be offered to students wishing to upgrade their final mark.
11. 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. 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.