

BCMB 301A

Fall 2019

Instructors & Contact Information

Labs	Instructor	Office	Email	Phone
1, 3, 5	Adrienne White	Petch 179c	adrwhite@uvic.ca	250-472-4251
2, 4, 6	Janice Keliher	Petch 188	jkeliher@uvic.ca	250-721-6505

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.

Office Hours

Generally, you can find the instructors either in their offices or in the lab from Monday to Friday between 9:00 and 4:00. However, if you want to be sure to connect with either instructor, feel free to email them and set up an appointment.

Course Prerequisites

In order to get the most out of BCMB301A, the following must be satisfied:

Prerequisites:

- Micro 200A and 200B, and
- Declared Honours or Major in Biochemistry or Microbiology, or Permission of the Department

Pre- or Co-requisites:

- Biochemistry 300A or Biochemistry 300B

BCMB 301A Laboratory Schedule Fall 2019

Week	Date	Day 1	Day 2	Due Dates
1	Sept. 9 – 13	Introduction & Safety Lab 1: Bioinformatics (meet in BEC 180)	Literature Exercise; meet in Library Classroom 130	Day 2: Lab 2 Calculations (p. 2-9)
		Academic Integrity Quiz - complete on Course Spaces by Sept. 15		
2	Sept. 16 – 20	Lab 2: pH & Buffers	Lab 1 Discussion	Day 1: Literature Exercise Day 2: Lab 1 Summary
		Calculation Exercise - complete on Course Spaces by Sept. 22		
3	Sept. 23 – 27	Lab 3: Biuret, Lowry, Bradford, A ₂₈₀	Lab 2 Discussion	Day 2: Lab 2 Summary Day 2: Lab 3 Practical (p.3-8)
4	Sept. 30 – Oct. 4	Lab 4: AS precip, SEC, IEC	Exam #1: Labs 1 & 2	
5	Oct. 7 – 11	Lab 4: Prepare & Run SDS-PAGE & β-gal assay	Lab 4: Dry gel, Bradford	Day 2: Lab 4 Practical
6	Oct. 14 – 18	Oct. 8 – Thanksgiving	Lab 3 Discussion	Day 2: Lab 3 Summary
7	Oct. 21 – 25	Lab 5: Coat ELISA plate, Subculture hybridomas	Lab 4 Discussion	Day 2: Lab 4 Summary
8	Oct. 28 – Nov. 1	Lab 5: Harvest secreted antibody, ELISA	Exam #2: Labs 3 & 4	
9	Nov. 4 – 8	Lab 5: SDS-PAGE & Transfer	Lab 5: Dry gel & Develop blot	Day 1: Antibody Titre Graph Day 2: Lab 6 Group Work Contract
10	Nov. 11 – 15	Reading Break: November 11-13		
11	Nov. 18 – 22	Lab 5 Discussion Lab 6: Reversible Inhibition	Lab 6: Reversible Inhibition	Day 1: Lab 5 Summary
12	Nov. 25 – 29	Lab 6 Discussion		Day 1: Lab 6 Summary
13	Dec. 2 – 6	Exam #3: Labs 5 & 6, Tuesday Dec. 3rd from 7-9pm in BWC B150		

Evaluation

The final mark will be based on:

Lab Summaries	13%
Lab Journal	10%
Practical Assessment	15%
Discussion Quizzes	12%
Exam #1	15%
Exam #2	20%
Exam #3	15%

Final course percentages and assignment of letter grades*:

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		

*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

To get the most out of the BCMB301A experience, your attendance and punctuality for each lab is important. If you know that you must miss a lab (e.g. for a medical appointment), please arrange a change of lab section with the lab instructor **prior** to the lab period. Missing a lab or arriving late without prior arrangement or a written medical excuse may result in a loss of marks associated with the lab.

If you miss a lab, you are responsible for maintaining your lab journal and for obtaining the data in order to write up the lab summary. This may involve performing the lab once you have recovered.

Course Experience Survey (CES)

We value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). 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 <http://ces.uvic.ca>. You will need to use your UVic NetLink ID to access the survey, which can be done on your laptop, tablet or mobile device.

Course Accessibility

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 as soon as possible (<https://www.uvic.ca/services/cal/>) in order to assess your specific needs.

Campus Resources

Centre for Accessible Learning (Campus Service Building)

Students with a learning disability, ADHD, mental health issue or long-term recurring physical or sensory disability, chronic health issues which may require accommodations.

International Student Services (University Centre)

International Student Services (ISS) provides support for international students studying at UVic, and coordinates programs for all UVic students interested in studying abroad.

Counselling Services (University Centre)

Free professional, confidential, inclusive support to currently registered UVic students.

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 unless being used for a purpose relevant to the class. Students having a cell phone, tablet, or computer on their person during an exam will be assumed to have it for the purpose of cheating.
3. Any recordings of lectures 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 present for the midterm and final 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. Multiple choice scan sheets for machine scoring (bubble sheets) are considered the authentic exam answer paper and will be retained by the department for 1 year.
7. Professors may refuse to review/remark exams not written in indelible ink. In addition, requests for review/remark of a midterm exam must be made within one week of the exam being returned. Students are expected to promptly pick up midterm exams after marking has been completed, either in class or from the instructor.
8. Examination papers that have pages removed, or are mutilated will not be marked.
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.