Welcome to BCMB 301

We acknowledge and respect the lək^{w}əŋən 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.

We strive to create an environment where all students will be treated with respect, and we welcome individuals of 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 and invite you to share your pronouns. Please reach out to us if there are other ways in which we can improve your experience.

Expected Learning Outcomes

In BCMB 301B 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.

Course Prerequisites

In order to get the most out of BCMB301B, the following must be satisfied:

Prerequisites:
BCMB 301A

Pre- or Co-requisites:
Biochemistry 300A or Biochemistry 300B

Campus Resources

Centre for Accessible Learning (https://www.uvic.ca/services/cal/index.php)

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.

First Peoples House & Office of Indigenous Academic & Community Engagement
(https://www.uvic.ca/services/indigenous/index.php)

Located in the First Peoples House, the Office of Indigenous Academic and Community Engagement supports the success of UVic Indigenous students by connecting them with the educational, financial and cultural resources available on campus and in local communities. Lydia Toorenburgh (tfirc@uvic.ca) is the Tri-Faculty Indigenous Resurgence Coordinator, and is an additional resource for Indigenous students in the Faculty of Science.

International Centre for Students
(https://www.uvic.ca/international/home/contact/iss/index.php)

The International Centre for Students (ICS) is a centralized resource providing international services, information and programs for undergraduate and graduate students from pre-arrival to degree completion.

Counselling Services & The Centre for Academic Communication
(https://www.uvic.ca/student-wellness/)

Your wellbeing is of foremost importance. If you are experiencing difficulties coping, please reach out to Counselling Services, the Centre for Academic Communication, or Learning Assistance Program for assistance.

BCMB 301B Laboratory Schedule Spring 2023

Week	Date	Day 1	Day 2	Due Dates
1	Jan 9-13	Safety Orientation Lab 2: Invasion Assay & Trypsinization	Lab 2: Count Plates Lab 3: PCR (Part A)	Day 1: 301 Introductory Quiz Day 2: Lab 2 Journal by 11:59pm
2	Jan 16-20	Lab 1: Prepare SDS-PAGE & Streak Plates	Lab 1: Extract LPS & Exclusion of Bile Salts Lab 2 Discussion	Day 2: Lab 2 Summary
3	Jan 23 – 27	Lab 1: SDS-PAGE , Serum Killing	Lab 1: Silver Stain, Analysis of Serum Killing Plates	Day 2: Lab 1 Journal by 11:59pm Day 2: Lab 3 Prelab Assignment
4	Jan 30 – Feb 3	Lab 5: Plasmid Prep & RCA	Lab 5: Transformation Lab 1 Discussion **Day 3 - 48 hours after Day 2** Lab 5: Heat Cure	Day 2: Lab 1 Summary
5	Feb 6 – 10	Lab 3: PCR Analysis, Plasmid Preps, Digests, Prep Gel (Parts B – G) Lab 5: Isolate & Heat Cure	Lab 3: Agarose Gel Electrophoresis, Ligation	
6	Feb 13 – 17	Lab 3: Prepare Competent Cells, Transformation Lab 5: Selective & Differential media	Lab 3: Examine Transf. Plates & Controls, PCR Lab 5: Final plate results	Day 2: Lab 5 Journal by 11:59pm
		Exam #1: Lab 1 & 2 Wednesday, Feb 15 from 7-9pm in ECS 123		
7	Feb 20 - 24	Reading Break		
8	Feb 27 - Mar 3	Lab 5 Discussion Lab 3: Prepare Agarose Gel Lab 4: Phage Titring	Lab 3: Analysis of PCR by Agarose Gel Electrophoresis Lab 4: Analyze Phage Titre Plates	Day 1: Lab 5 Summary Day 2: Lab 4 Result Tables, 11:59pm Day 2: Lab 3 Journal by 11:59pm
9	Mar 6 – 10	Lab 3 Discussion Lab 4: Transposition	Lab 4: Analysis of Transposition Plates & Controls	Day 1: Lab 3 Summary Day 2: Lab 4 Result Tables, 11:59pm
10	Mar 13 – 17	Lab 4: Replica Plating Lab 6: Bioinformatics	Lab 4: Isolate Lac$^-$ Mutants	
		Exam #2: Labs 3 & 5 Monday, March 13 from 7-9pm in DTB A120		
11	Mar 20 – 24	Lab 4: Lac$^-$ Mutants onto Differential Media	Lab 4: Lac- Genotype	Day 2: Lab 4 Result Tables, 11:59pm Day 2: Lab 4 Journal by 11:59pm
12	Mar 27 -31	Lab 4 Discussion		Day 1: Lab 4 Class Data Table Day 2: Lab 6 summary (BrS quiz)
13	Apr 3 - 6	Exam #3: Labs 4 & 6		

Evaluation

The final mark will be based on:

Prelab Quizzes	5%
Discussion Quizzes	10%
Practical Assessments	15%
Lab Journals	5%
Lab Summaries	15%
Exam #1 (Labs 1 & 2)	15%
Exam #2 (Labs 3 & 5)	20%
Exam #3 (Labs 4 & 6)	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
A final grade will be assigned when you have written all examinations and completed the laboratories. Failure to complete 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

BCMB 301 is a practical course that progressively builds your expertise in lab techniques; your attendance and punctuality for each lab session is important. If you are not able to attend your regularly scheduled lab or discussion session, please contact the lab instructor responsible for that particular lab as soon as possible. Students unable to attend multiple lab/discussion sessions may be unable to complete the course requirements, which may result in the assigning of an N grade (see requirements for course completion).

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.
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, 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 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.
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.

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 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. We will remind you nearer the time but please be thinking about this important activity.