

Experiential Learning Syllabus

Department of Biochemistry & Molecular Biology

BIOC 3620, Fall 2026

Dalhousie University operates in the unceded territories of the Mi'kmaw, Wolastoqey, and Peskotomuhkati Peoples. These sovereign nations hold inherent rights as the original peoples of these lands, and we each carry collective obligations under the Peace and Friendship Treaties. Section 35 of the Constitution Act, 1982, recognizes and affirms Aboriginal and Treaty rights in Canada.

We recognize that African Nova Scotians are a distinct people whose histories, legacies, and contributions have enriched the part of Mi'kma'ki known as Nova Scotia for over 400 years.

Course Instructor

Name	Email	Office Hours
Kathryn Vanya Ewart (Instructor/Coordinator)	vewart@dal.ca	<u>Book meeting</u>

Course Description

This course is an outside-the-classroom learning experience in which the student works in a research laboratory an average of one day per week acquiring biochemistry or molecular biology knowledge and skills.

Course Prerequisites

BIOC 2300.03, BIOC 2610.03, BIOL 2020.03, BIOL 2030.03, CHEM 2401.03 and CHEM 2402.03 (all with a grade of B- or higher) or instructor's permission

Course Exclusion

The following may not be used towards BIOC 3620: lab work that is part of another scheduled class at a learning institution, study that would qualify for Special Topics classes, co-op work terms, and paid work. The class is only open to students registered in Biochemistry & Molecular Biology degree programs, either major or Honours, combined or concentrated. Students may not take BIOC 3620 concurrently with BIOC 4604 or BIOC 4605.

Registration: To register in this course, students must first find a faculty member willing to supervise the work experience. The supervisor can be a Biochemistry & Molecular Biology department faculty member or hold a cross-appointment in the department. Alternatively, the supervisor can be a faculty member or cross-appointee in other Faculty of Medicine departments or in the Faculty of Science. However, their research must fall within the scope of biochemistry & molecular biology. A learning agreement must be signed and submitted to the coordinator for approval. Instructions and forms are available at [BIOC_3620_Instructions](#).

Student Resources/Course Material

- Study materials, including PDF files and recorded lectures, are available in Brightspace.
- Peer-reviewed literature and more general background reading materials for the research and writing in this course are available through the library.
- There is no assigned textbook.
- Research materials, reagents, instruments, and personal protective equipment are provided to the student by the host lab.
- Meetings with the coordinator for assistance or advice can be scheduled using the following link: [Book Meeting](#). Students who wish to meet but who cannot meet in the interval indicated are welcome to contact me by email to schedule different meeting times.

Course Structure

The course involves several components.

1. **Online safety training:** Students are required to complete “WHMIS”, “Laboratory Safety Training”, and “Chemical Spill Response Training”, which are all available to Dalhousie students at [EHS Safety Training](#). (If certificates for any of these courses have been earned in the past three years, they can be uploaded without retaking the courses.) Certificates must be uploaded to Brightspace where indicated in the Assignments dropbox. These must be completed **before beginning research** in the lab (and normally in the first week of classes).
2. **Online preparation for research:** Students are required to learn the material presented in a set of four brief online videos and complete an online open-book quiz in Brightspace on this material **within the first week of research** in the lab.
3. **Laboratory research:** Students are required to work* in the host lab* for a minimum of 70 hours and a maximum of 90 hours per semester.
 - * This includes attendance at lab meetings.
 - ** This may also include dry-lab (i.e., computer) work at the discretion of the supervisor.
4. **Reporting:** Students are required to record the hours spent in the lab in an online time sheet (to be provided by the coordinator) and to record their lab work in a format consistent with that used in the host lab (normally a lab notebook). Students are also required to complete a final report over the course of the semester, as indicated below.

Learning Objectives and Outcomes

The purpose of this course is to provide credit for a learning experience that is relevant to the program but outside the scheduled curriculum. It is distinguished from special topics and laboratory research project classes in being focused on the application of accumulated skills in a practical context, or learning skills not provided in the regular curriculum, rather than on addressing particular experimental hypotheses. The specific learning outcomes for each lab placement will be provided in the individual Learning Agreement documents.

Course Policies related to Academic Integrity and Safety

- Throughout the semester, students are expected to work with appropriate attention to their safety and to the safety of others in the lab. They are also expected to work with clear consideration of research ethics and responsibilities, as outlined in the course videos provided in the first week of classes.
- The **safety of students in the host labs is of utmost importance**. Any safety concerns that cannot be resolved within the host lab must be brought to the attention of the course coordinator.

Course Policies on Missed or Late Academic Requirements

- Items due for submission to research supervisor or to course coordinator will be docked 20% per day if submitted late (-20% if up to 24 hours past due, - 40% if 24 - 48 hours past due, etc.).
- If a student is unable to complete an assigned item at the scheduled time due to illness or another valid reason, the student must submit a **Student Declaration of Absence** form (available on Brightspace) either electronically or in printed form within 3 days of the due date. A maximum of 2 declarations of absence will be accepted per student. When a declaration of absence is submitted for an assignment, students then have **three** extra days to complete the assignment before marks are docked as described above.

Course Accessibility

- In accordance with the Student Accommodation Policy, the aim is to provide an accessible educational environment.
- Students are eligible for accommodations based on protected characteristics such as religion. If you have religious, cultural, or community-significant observances that conflict with course requirements, please reach out to discuss alternatives for completing the course requirements.
- To begin the process of requesting a formal academic accommodation, please contact the Student Accessibility Centre.

Assessment

Evaluation in BIOC 3620 will include the following components:

Component	Weight (% of final mark)	Exam date or item due date
Submission of the three safety training certificates	3% 1% for each certificate	Due on Monday, September 14 th , 2026 at 11:59 p.m.
Quiz on preparatory lectures (open-book)	4%	Due on Monday, September 21 st , 2026 at 11:59 p.m.
Early research evaluation (Evaluation by research supervisor)	15% 8% Research performance 2% Time sheet progress 5% Notebook evaluation	Due on Monday, October 26 th , 2026 at 11:59 p.m. (Evaluation on or before this date)
Report Introduction and 1 Methods item (Evaluation by research supervisor)	15%	Due (to supervisor) on Monday, November 16 th , 2026 at 11:59 p.m.
Final research evaluation (Evaluation by research supervisor)	20% 15% Research performance 5% Notebook evaluation	Due on Wednesday, December 9 th , 2026 at 11:59 p.m. (Evaluation on or before this date)
Final time sheet (Evaluation by course coordinator)	3%	Due on Wednesday, December 9 th , 2026 at 11:59 p.m.
Final report (Evaluation by course coordinator)	40%	Due (to coordinator) on Wednesday, December 16 th , 2026 at 11:59 p.m.

Conversion of numerical grades to final letter grades follows the **undergraduate***

[Dalhousie Grade Scale](#)

A+ (90-100)

B+ (77-79)

C+ (65-69)

D (50-54)

A (85-89)

B (73-76)

C (60-64)

F (0-49)

A- (80-84)

B- (70-72)

C- (55-59)

Syllabus Appendix

Student supports, university policies, and guidelines are available at the following website:

[Syllabus Appendix: Student Supports & University Statements, Policies, and Guidelines](#)