

# Biochemistry 3R06 course outline



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## GENERAL COURSE DESCRIPTION

The Department of Biochemistry and Biomedical Sciences considers research to be a vital component of an undergraduate education in Biochemistry. This course offer students the opportunity to gain valuable experience with cutting-edge research.

This course encompasses a full year research project conducted over two academic terms (fall or spring term start), which can be undertaken in a laboratory under the supervision of a researcher at McMaster University in the Department of Biochemistry and Biomedical Sciences (BBS). Students can also conduct this course in laboratories outside the BBS department, provided that these faculty researchers:

- are currently working at McMaster University
- conduct research in the area of biomedical sciences

Students choosing to take this option must first discuss this with the course coordinator prior to submitting the required course permission form.

Students will embark on a research project designed by the lab supervisor. It is the responsibility of each student to discuss their research project with their lab supervisor.

## COURSE OUTCOMES

Student initiative, hard work, strong communication and curiosity are some of the driving factors for the thesis course experience. As such, students will gain invaluable insight into both advanced technical skills and transferable skills. The latter refers to time management skills, scientific communication, resilience, perseverance, motivation, initiative, optimism, grit, curiosity, creativity, etc.

## COURSE MECHANICS

**Course coordinator** – Dr. Felicia Vulcu

Email: [vulcu@mcmaster.ca](mailto:vulcu@mcmaster.ca)

Office: 4H43 (please enter through 4H45: as you get off the 4<sup>th</sup> floor purple area elevators, turn left and head for the glass door in front of you).

My door is always open should you have questions or you just want to pop by and talk. If I'm not in my office, no worries, you can email me and we'll set up a meeting time☺

**Course assistant** – Taylor Gauthier

Email: [biochemistryadvisor@mcmaster.ca](mailto:biochemistryadvisor@mcmaster.ca)

Office: HSC-4H45 (as you get off the 4<sup>th</sup> floor purple area elevators, turn right and head for the glass door in front of you).

**Session dates (fall start date)** - This is a full year course, running from early September to early April.

Term 1 recess: Monday, October 14 - Sunday, October 20, 2019

Term 2 recess: Monday, February 17 - Sunday, February 23, 2020

## COURSE ASSESSMENT

**Lab work** - students are expected to spend an average of **8 hours per week**, over two terms, in the lab.

The course assessment mark is divided into the following:

**Lab Performance and Progress (70 %)** - Lab performance will be assessed three times throughout the course by the lab supervisor(s) and will include a discussion of this assessment with the student. The lab supervisor will fill out the lab performance 1-3 evaluation marking schemes provided. It is recommended that students meet regularly with their supervisor/lab mentor and communicate their progress and ensure course expectations are being met.

Students will be evaluated on the following criteria throughout the course:

Lab performance-1 evaluation	Lab performance-2 evaluation	Lab performance-3 evaluation
<ul style="list-style-type: none"><li>❖ Background knowledge</li><li>❖ Laboratory work</li><li>❖ Progress/ incorporation of feedback</li><li>❖ Time management and commitment</li></ul>	<ul style="list-style-type: none"><li>❖ Data analysis</li><li>❖ Criterion 2: Laboratory work</li><li>❖ Criterion 3: Progress/ incorporation of feedback</li><li>❖ Criterion 4: Time management and commitment to research project</li></ul>	<ul style="list-style-type: none"><li>❖ Data analysis</li><li>❖ Criterion 2: Laboratory work</li><li>❖ Criterion 3: Progress and self-reliance/ independence</li><li>❖ Criterion 4: Time management and commitment to research project</li></ul>

### Written report (30%)

Each student will prepare a written report that makes clear the relevant background, the problem that you are trying to solve, the progress made and analysis of results in the context of the research field.

Maximum 20-pages, double-spaced, Times New Roman 12-point font, 2 cm margins. Figures, tables and references do not count in the page limit and can be added at the end of the document.

### Initial Meeting Form, Safety Form(s) and Acknowledgement of Confidentiality Form (required)

**Each student must properly complete and submit these forms by the specified due date or they will not be allowed to perform laboratory work.**

Students will meet with their supervisor to complete the “Initial Meeting Form”. Students will also complete mandatory safety form(s) and an acknowledgement of confidentiality. These forms are to be submitted to the A2L assignment folder by the specified due date. Forms will be provided on A2L.

## Course Assessment (total, Term 1 + Term 2)

Assessment type	Total Weight (%)
Lab performance evaluation this mark is divided into 3 lab performance checkpoints:	
Lab performance 1 – 10 %	70
Lab performance 2 – 20 %	
Lab performance 3 – 40 %	
Final thesis report	30
TOTAL (Terms 1 and 2)	100

*"The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes."*

### Missed/Late Work

**Late work will be subject to a grade reduction of 10% per day and will not be accepted after four days.** Late work is to be e-mailed directly to the supervisor and Taylor Gauthier, as the A2L assignment folder will be closed. (NOTE: the 10% reduction takes effect immediately following the deadline.) Inquires related to deadlines should be directed to the course coordinator. It is the student's responsibility to ensure that they have properly submitted their work to the A2L assignment folder by checking their A2L e-mail for a submission receipt.

If you are absent from the university for a minor medical reason, lasting fewer than 3 days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form (MSAF: <https://www.mcmaster.ca/msaf/>) if the work is less than 25% of the course grade. Absences for a longer duration or for other reasons must be reported to the Faculty of Science Associate Dean's Office (<https://www.science.mcmaster.ca/associatedean/>) and the course coordinator. Once proper documentation is provided, the course coordinator will determine the appropriate accommodation.

### Use of Avenue2Learn (<http://avenue.mcmaster.ca>)

This course uses A2L to post the course outline, lab results and other notices. You should be aware that when you access the electronic components of this course private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other

students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure.

### **Academic Integrity**

The Academic Integrity Policy (<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>) states that students are responsible for being aware of and demonstrating behaviour that is honest and ethical in their academic work. Breaching of academic ethics is ultimately destructive to the values of the University; it is, furthermore, unfair and discouraging to those students who pursue their studies with integrity. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. It can result in serious consequences such as a grade of zero, loss of credit or even expulsion from the university.

### **Student Accessibility**

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail [sas@mcmaster.ca](mailto:sas@mcmaster.ca). For further information, consult McMaster University's Policy for [Academic Accommodation of Students with Disabilities](#).

### **Academic Accommodation for Religious, Indigenous or Spiritual Observances (RISO)**

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students requiring a RISO accommodation should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

### **Extreme Circumstances**

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.

## DUE DATE SCHEDULE

### Fall start date (2019-2020)

Assessment type	When and where?	Weighting
Initial meeting form Safety Training Form Confidentiality form	Wednesday <b>September 18, 2019</b> Submitted by student to designated A2L assignment folder	Full completion and on-time submission of these forms is a course requirement
Lab performance - 1 evaluation	Friday <b>November 1, 2019</b> Form submitted to Taylor by the supervisor	10 %
Lab performance -2 evaluation	Friday <b>January 31, 2020</b> Form submitted to Taylor by the supervisor	20 %
Lab performance -3 evaluation	Friday <b>March 27, 2020</b> Form submitted to Taylor by the supervisor	40 %
Final report	Monday <b>April 6, 2020</b> Form submitted to Taylor by the supervisor	30 %