

## BCH374Y1 – Research Project in Biochemistry APPLICATION FORM

Student name: \_\_\_\_\_ Student Number: \_\_\_\_\_

Email address: \_\_\_\_\_

Supervisor name: \_\_\_\_\_ Email address: \_\_\_\_\_

Proposed project title: \_\_\_\_\_

\_\_\_\_\_

### INSTRUCTIONS:

1. Read and complete the form.
2. Sign the form.
3. Have your supervisor read and sign the form.
4. Return the form by email to the course coordinator with a copy of your CV and transcript.

### APPLICATION DEADLINES: Early deadline: July 31<sup>st</sup>; Final deadline: 1<sup>st</sup> day of the Fall term

BCH374Y1 spans the Fall and Winter terms, and provides real-world individual research opportunities in biochemistry, under the direct supervision of a Department of Biochemistry or Molecular Genetics faculty member. The expectation of the course is that the student, aided and advised by the supervisor, will read relevant literature, and plan, execute, analyze and report on experimental investigations on an appropriate topic. The project must be original experimental or computational work.

### STUDENT RESPONSIBILITIES

#### Before the course begins:

1. Read the course syllabus.
2. Identify your supervisor. Each student is responsible for finding a faculty member to supervise their project – a list of potential supervisors is available on the BCH and MGY Program website.
3. Complete this application form and submit it, **AND** a copy of your CV and transcript to the BCH374Y1 course coordinator for approval.
4. Note that your enrolment will be processed through the Biochemistry Undergraduate Office after this form has been submitted and **approved** by the course coordinator.

#### During the academic year:

5. Students are strongly urged to refrain from taking more than a total of 5 FCEs while enrolled in BCH374Y1
6. Students are strongly urged not to engage in any other formal or informal research in another lab while enrolled in BCH374Y1.
7. Students are expected to spend a minimum of 8 hours per week on their research project.
8. Students are expected to meet with their faculty supervisor at least every other week.
9. Students will submit a 3-page research project proposal to the course coordinator during the first month of the Fall term
10. Students will submit a 5-page midyear research report by the last day of the Fall term.
11. Students will make an oral midyear progress presentation during the Fall evaluation period.
12. Whenever possible, students are expected to attend the lab meetings of their research group.

#### At the end of the course:

13. Each student will submit a 10-page final research report by the last day of the Winter term.
14. Each student will have a final oral exam during the Winter evaluation period, consisting of a 15-minute presentation to their supervisor and two BCH or MGY faculty members, followed by 10 minutes of questions from each examiner.

I agree to follow the course expectations and requirements.

Student signature

(e-signature is accepted) \_\_\_\_\_

## **BCH374Y1 – Research Project in Biochemistry APPLICATION FORM**

### **SUPERVISOR RESPONSIBILITIES**

1. Supervisors are expected to coordinate the daily research activities of their project student, or to delegate project coordination to a graduate student, postdoctoral fellow, or research associate.
2. Supervisors are expected to meet with their project student one-on-one at least every other week during the academic year.
3. Supervisors are expected to be available for two 30-minute exams (per student supervised) during the Fall evaluation period, December 9 - 20. To facilitate scheduling, some of these exams may run in parallel. Supervisors are expected to moderate these exams in the absence of the course coordinator.
4. Supervisors are expected to be available for three 45-minute exams (most likely arranged in a 3-hour block) per student supervised during the Winter evaluation period, April 10 - 30. To facilitate scheduling, some of these exams may run in parallel. Supervisors are expected to moderate these exams in the absence of the course coordinator.
5. Supervisors are expected to grade one proposal (per student supervised) during the month of October.
6. Supervisors are expected to grade one written midyear report (per student supervised) during the Fall evaluation period.
7. Supervisors are expected to grade two written final reports (per student supervised) during the Winter evaluation period.
8. Supervisors are expected to evaluate the lab work of their project student, according to the rubric provided, at the end of each term.

I agree to follow the course expectations and requirements.

Supervisor signature

(e-signature is accepted) \_\_\_\_\_

## BCH374Y1 – Research Project in Biochemistry APPLICATION FORM

### Evaluation rubric for LABORATORY PERFORMANCE--30% of final mark (15% per semester)

- 9 – 10: Outstanding ability demonstrated in all components, exceeding expectations for a 3<sup>rd</sup> year undergraduate student.  
 8 – 8.9: Excellent ability demonstrated; meets expectations in all components and exceeds expectations in some.  
 7 – 7.9: Very good ability demonstrated; meets expectations.  
 6 – 6.9: Good ability demonstrated; meets expectations in some but not all components.  
 0 – 5.9: Absence of ability; does not meet expectations in most or all components.

Work ethic and Research Progress (Efficient use of lab time; appropriate time commitment; progress toward research goals) / 10

Understanding of System (Completes assigned background reading; understands project goals and rationale; puts results in context) / 10

Lab skill (Technical skill; reproducibility; use of appropriate controls; ability to learn new techniques) / 10

Independence (Seeks guidance when appropriate; works independently on familiar tasks) / 10

Lab notebook (Organization, accuracy, completeness, timeliness) / 10

Contributions to lab meetings and meetings with supervisor (Attendance at lab meetings; minimum bi-weekly meetings with supervisor; participation during lab meetings; presentation of research results) / 10

### Evaluation rubric for the FINAL RESEARCH PRESENTATION--20% of final mark

#### PRESENTATION:

Organization and clarity (including staying within time limit) / 10

Delivery (demeanour, pace and speaking voice, audience engagement) / 10

Effective communication of concepts and data / 10

Knowledge of material (including background, techniques, and experiments) / 10

Design and clarity of slides / 10

#### QUESTION & ANSWER SESSION:

Ability to answer questions about research data, techniques, tools, and controls / 10

Ability to answer questions about project background, rationale, significance, and future directions / 10