

## **Course Description: Biology/Environmental Biology Research Practicum**

BIO/ENVB 1601, 1602, 1603, 2601, 2602, 2603, 3601, 3602, 3603, 4601, 4602, 4603

**Calendar Description:** This course offers the student research experience as part of a Biology research team. The student must make arrangements with a faculty member before enrolling in this course. [There are no pre- or co-requisites.]

**Expanded course description:** Students who wish to gain practical research experience, in a lab or in the field, can make arrangements with a faculty member to participate in his/her research. During this course, the student will learn current research techniques and will use these techniques to make a meaningful contribution to the supervisor's research program. Students are expected to commit to 60-120 hours in total for one term, which may be distributed through the term as agreed by the student and supervisor (equivalent to 5-10 hours per week on average). The student and faculty member must sign a form in which they agree on the type and amount of work to be done, and the form must be approved by the Course Director before the student will be allowed to enrol. Students may enrol in this course during any term, and there is no limit to the number of terms in which they are allowed to enrol. Students will not be allowed to enrol in a Research Practicum with their Honours Thesis supervisor (BIOL/BCHM 4000) during the same terms that they are enrolled in BIOL/BCHM 4000 8.0. The course evaluation will be pass/fail only. Students will be required to obtain safety training, such as WHMIS, if appropriate to the type of research undertaken. The course is intended only for majors in Biology (all streams), Biochemistry, Biophysics, Environmental Biology or Environmental Science - Life Science Stream.

**Course numbers:** Offered every year, every term, at all four levels of study.

1601, 1602 & 1603 = first year, fall, winter & summer terms;

2601, 2602 & 2603 = second year, fall, winter & summer terms;

3601, 3602 & 3603 = third year, fall, winter & summer terms;

4601, 4602 & 4603 = fourth year, fall, winter & summer terms.

**Credit:** This is a zero-credit course. It will appear on the transcript, but it will not affect the student's GPA, and no tuition will be charged.

**Grading:** The course is pass/fail only. The research supervisor will base the practical evaluation on whether the student has adequately fulfilled the terms of the agreement signed by both student and faculty member at the time the student enrolls. This evaluation will take into consideration both the number of hours worked by the student and the quality of the work. Students will also be required to submit, at the end of term (due on the first day of final exams), a 1-2 page (single spaced) reflective essay describing the practical skills they have acquired and explaining how those skills will contribute to their career goals. Copies will be submitted to both the research supervisor and the course director. No readings will be required unless requested by the supervisor to support the acquisition of practical lab skills. To achieve a passing grade, the student must be judged to have passed both the practical evaluation and the paper. The supervisor will provide a letter of reference if requested by the student, to use in applications for research positions, professional schools, etc.

Please direct any questions to the Course Director, Dr. Pat Lakin-Thomas, [clocklab@yorku.ca](mailto:clocklab@yorku.ca)

## Responsibilities

## Biology Research Practicum

### Student:

1. to work responsibly and follow all safety guidelines
2. to work the hours and schedule agreed on with the supervisor  
(It is recommended that the student fill out a daily timesheet to keep a record of hours worked.)
3. to notify the supervisor (in advance if possible) if the student cannot work due to illness, exams, etc.
4. to write a reflective essay (1-2 pages, as described in the Course Description) and submit it to the supervisor and course director by the due date (the first day of final exams)

### Supervisor:

1. to ensure that the student is engaged in meaningful research-related work, is not primarily carrying out menial labour such as dishwashing, and is not working more than 10 hours per week on average
2. to ensure that the student has appropriate training and supervision for the work and has the appropriate safety training when required
3. to involve the student in the research culture of the lab, for example by inviting the student to attend lab meetings
4. to evaluate the student's practical lab work
5. to read and evaluate the student's written report
6. to write a confidential evaluation of the student's work to be used as a letter of reference, if requested by the student

### Course director:

1. to approve the agreement between student and supervisor before the student enrolls
2. to ensure that the agreement is being honoured on both sides
3. to read and evaluate the student's written report

## How to Enrol

- 1. Find a supervisor.** Start by reading the descriptions of faculty research at: <http://science.yorku.ca/biology/faculty-research/> and <http://biology.gradstudies.yorku.ca/faculty/>. Biology practicum students may work with any professor at York who is carrying out biological research, so extend your search beyond the Biology Department. Contact supervisors whose research you are interested in (by email or in person). Be prepared to give your potential supervisor a printout of your courses and grades (not an official transcript) and a one-page resumé including your contact information, your degree program and stream, a brief statement of your career goals and how this research experience would further those goals, and any relevant work experience (paid or volunteer).
- 2. Fill out the form.** When you find a supervisor, fill out and sign the enrolment form, found at: <http://science.yorku.ca/biology/undergraduate-program/courses/> and get your supervisor and the course director to sign it as well.
- 3. Enrol in the course online.** Upload the form to the Research Practicum tab on the Biology Undergraduate Courses website. An enrolment window will then be opened for you and you will receive an email from the Undergraduate Office with instructions to enrol.
- 4. Be aware of deadlines.** Just like any other course, this course has deadlines for enrolment ("Last date to add a course with permission of instructor") and for dropping the course ("Last date to drop a course without receiving a grade"). See the deadlines online at: <http://registrar.yorku.ca/enrol/dates/>

# Biology Research Practicum Student Timesheet

Name:

Term:

Date	Hours worked today	Total hours this term*		Date	Hours worked today	Total hours this term*

\*Add the hours you work each day to keep a running total of the number of hours worked for the entire term. You need to work at least 60 hours and should work no more than 120 hours in the entire term to get a passing grade in the practicum.

## Biology/Environmental Biology Research Practicum Enrolment Form

**Student name:** \_\_\_\_\_ **Student number:** \_\_\_\_\_

**email address:** \_\_\_\_\_ **phone:** \_\_\_\_\_

**Major (e.g. Biology, Biochemistry)** \_\_\_\_\_

**Academic Year (e.g. 15/16):** \_\_\_\_\_ **Term (F, W, S):** \_\_\_\_\_ **Course number:** \_\_\_\_\_

Choose appropriate course number:

BIOL  or ENVB

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3601, 3602 & 3603 = third year: fall, winter & summer terms

4601, 4602 & 4603 = fourth year: fall, winter & summer terms

**Supervisor name:** \_\_\_\_\_

**email:** \_\_\_\_\_ **phone:** \_\_\_\_\_

**Location of work (building & room number and/or field location):** \_\_\_\_\_

**Approx. number of hours of work per week on average (max. 10):** \_\_\_\_\_

**Brief description of project and student's role, and details of the type of work to be done (research techniques the student will use):**

I agree to the conditions above, I have read the course description and I understand my responsibilities.

Signature

Date

Student: \_\_\_\_\_

Supervisor: \_\_\_\_\_

Course director: \_\_\_\_\_

When the above portion has been completed, please upload this form to the Research Practicum tab on the Biology Undergraduate Courses website. An enrolment window will then be opened for you and you will receive an email from the Undergraduate Office with instructions to enrol.