

**Department of Biological Sciences:  
Directed Research Permission Form (BIOD98Y and BIOD99Y)  
2019-2020 academic year**

Students wishing to enroll in an independent directed research course (BIOD98Y or BIOD99Y) must read and follow these instructions carefully. In addition, please note the prerequisites and/or exclusions associated with each of these courses.

- 1) Read the General Information Sheet (attached).
- 2) Meet with your potential faculty supervisor and discuss the research that you might do and the method of assessment of your performance.
- 3) If your supervisor is a member of the UTSC faculty, fill out this form and bring it to the Departmental Assistant Fahda Kulmiye in SW421E.

If your proposed supervisor is not a member of the UTSC faculty you must also find a co-supervisor in that discipline at UTSC. Also, approval for doing research with an off-campus supervisor and the co-supervisor must be given by Course Coordinator (Dr. Aarthi Ashok). When you have arranged for co-supervision and have obtained the necessary approval, bring the completed form to Fahda Kulmiye in SW421E.

4) If your completed form is in order, Fahda Kulmiye in SW421E will provide you with an endorsed SUPERVISED STUDY form, which you may then submit to the Registrar's Office, on the Main floor of Highland Hall by the deadline date given in your Registration Guide. Unless the SUPERVISED STUDY form you present at the Registrar's Office carries the proper endorsement, your enrolment in the course on ACORN will not be valid.

Student Name: \_\_\_\_\_ Student #: \_\_\_\_\_

Course # & Session: \_\_\_\_\_ Telephone #: \_\_\_\_\_

E-mail: \_\_\_\_\_

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\*Please append a student copy of your transcript (from Acorn). Each page of your transcript must be signed by your supervisor (and co-supervisor in the case of an off-campus project).

Supervisor Name: \_\_\_\_\_ Supervisor Email: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Co-Supervisor Name: \_\_\_\_\_  
(if applicable, see above)

Co-Supervisor Signature \_\_\_\_\_ Date: \_\_\_\_\_  
(if applicable, see above)

Signature of Course Coordinator \_\_\_\_\_ Date: \_\_\_\_\_  
(if applicable, see above)

## Directed Research Courses in Biological Sciences (BIOD98Y and BIOD99Y): 2019-2020 academic year General Information Sheet

If you wish to become involved in our independent research courses in Biology, you must first have completed 13.5 credits of which at least 4 must be Biology B or C level courses. You should then consult directly with the faculty member whose research seems most relevant to your interests. Keep in mind that any given faculty member can usually only accommodate only one or two research students. You should acquaint yourself with the general format and requirements of these courses. That is the purpose of this information sheet. Please read it carefully.

### **Requirements and Deadlines**

- 1) Students working in a lab, or doing field research must complete WHMIS (online) & Lab Safety Training. Students working with animals must undergo animal care training. Students working with biohazards must undergo biosafety training (mandatory 2-day workshop). Contact Human Resources for this training or your supervisors should be able to alert you about the dates that these training sessions will run and the registration process.
- 2) Important announcements about these courses will be posted on the blackboard site. You should check these sites regularly for announcements.
- 3) BIOD98 and BIOD99 are Y courses worth 1 full credit.
- 4) You will be required to submit a full written report on your research. **The due date for your written paper** is the last day of the winter semester, **Friday, April 3, 2020**. This is a fixed university deadline and is not subject to change by you or by your faculty supervisor. A penalty of 20% (of your final grade) per day will apply if your assignment is late. [Note: In an extraordinary case, an extension can only be approved by the Chair of the Biological Sciences Department, if a request is made via the course coordinator prior to the due date.] You must submit **one copy** of your report to Fahda Kulmiye SW421E by **4 PM** on the date listed above and a **second copy (preferably electronic copy)** to your research supervisor.
- 5) Students working with off-campus instructors require a co-supervisor from this campus. Approval for doing research with an off-campus supervisor and permission for an on-campus co-supervisor must be obtained from the Course Coordinator (Dr. Aarthi Ashok) prior to registration.

### **Procedure**

Ordinarily, you will begin the research at the start of the semester, meeting with your faculty supervisor to determine the project you will be working on. Once under way, you will work on carrying out the project, meeting periodically with your faculty supervisor. Please note that you will be *required* to attend tutorial sessions in both the Fall and Winter semesters (Fall 2019 and Winter 2020) – the list of tutorials, timings and dates will be posted on blackboard. Toward the last two to three weeks of the semester, you should be presenting drafts of your research paper to your faculty supervisor for feedback and revision, so that everything can be finalized by the deadline specified above. Your final paper should be in the form of a standard scientific paper. Please note that students may be asked to submit copies of their final paper to Turnitin.com – please watch for blackboard announcements and instructions. You will also be required to present your research in an oral presentation to the department at the end of the Winter term (D98/99 presentation day). The exact date, session times and location will be announced later, but will most likely be held on Tuesday, April 7, 2020 (Note: date is subject to change; please consult blackboard in Winter 2020).

### **Evaluation**

Evaluation will be based in part on the research paper and in part on the appraisal by your faculty supervisor of your performance in the research course. You should ascertain the breakdown of your evaluation in this course before signing into the course and your mentor should indicate their grade breakdown on the form submitted to Registrar's Office and on the **template provided on the next page**. The second reader contributes 15% to the final mark, based on the research paper, your participation in tutorial sessions will account for 10% of your final mark and your final oral presentation to the department will contribute to 5% of your final mark. The primary supervisor contributes the remaining 70% based on his/her evaluation of your performance during the summer semester and your research paper. **Note:** Whether the research works out as anticipated does not affect your grade, assuming that the work has been well done and the paper is a well-written description of the work. You will in no way be penalised because the data were not ideal. You and your supervisor may agree on an arrangement for the work to be undertaken and for scheduling along the way, but the rules you have just read above apply to *ALL* BIOD98/99 research students and cannot be contravened in individual cases.

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

**Breakdown of evaluation of BIOD98/99 students:**

The supervisors are requested to use this template as a guide and can choose from specific categories listed below. Mentors can also include additional project-specific criteria for assessment. Note that the value of the written paper is valued at 40% of the student's final grade.

1. Intellectual contribution to project =
2. Participation & attendance at lab meetings/other group meetings =
3. Effort and time spent on research project =
4. Meetings with supervisor (assessing self-directed learning, punctuality in meeting deadlines etc.) =
5. Lab citizenship / working with others =
6. Oral presentations (final presentation to department, practice or other group related presentations) =
7. Lab notebooks/ electronic records of experiments =
8. Other: \_\_\_\_\_ =
9. Other: \_\_\_\_\_ =
10. Other: \_\_\_\_\_ =

**SUBTOTAL (Sum of items 1-10 above) = 30%**

Written paper (final submitted, drafts of final paper or other group related reports) **as evaluated by the primary supervisor = 40%**

**TOTAL GRADE contributed by primary supervisor = 70%**

Final oral presentation to department = 5%

Participation in tutorial sessions = 10%

Second reader grade (paper only) = 15%

**TOTAL =100%**