# CELL 398 489 499 General Guidelines

# Steps to enroll and complete a CELL 398/498/499 research project

- 1. Find a supervisor willing to participate in undergraduate research and has an appropriate cell biology project. Students should make contact with potential supervisors 3 6 months in advance since lab spots fill up quickly. The deadline to have a supervisor and project in place is within the first 3 days of the term.
- 2. Self-enroll in the appropriate course on Beartracks (enrolment opens in March)
- 3. In the first week of the term, you and your supervisor must complete a project registration form and submit it to the Cell Biology program administrator <a href="mailto:cellbio@ualberta.ca">cellbio@ualberta.ca</a>. This task is due no later than 7 days after the term starts (1 day for spring/summer sessions).
- 4. Projects will be assessed for suitability by course coordinators. Projects must use approaches and techniques that address a cell biology relevant research question. Feedback will be provided to those deemed unsuitable. Projects can be modified or risk being withdrawn from the course by the Add/Drop deadline if deemed not suitable.
- 5. Work in the lab and report to a direct supervisor (can be the PI, technician or another student). It is expected that students spend a minimum of 9 hours a week on planning and carrying out experiments, processing and presenting data.
- 6. As you near the end of term, complete final experiments, compile your data and write a research report which will be in the form of a research paper. Deadlines will be set by the course coordinator (typically near the end of final exams).
- 7. Marks will be assigned according to the marking schemes provided by course coordinators.

### **General Information**

The goal of the Cell biology research projects courses is to provide students with hands-on training using cell biology techniques, data analysis and presentation. Students wishing to register in CELL 398/498/499 must make arrangements with a faculty member in the Department of Cell Biology who is willing to supervise their project. Projects can be undertaken outside the Department of Cell Biology but require co-supervision by the Cell Biology course coordinator. CELL 398/498/499 projects vary in the same way that research varies across a department as diverse as ours. Therefore, we allow for some flexibility and we must rely on experts in the various research areas to maintain standards appropriate to those areas. Only projects using techniques and experimental approaches relevant cell biology will be approved.

To proceed with your registration, you and your supervisor will complete a project registration form. Emailed it to <a href="cellbio@ualberta.ca">cellbio@ualberta.ca</a>; the deadline is one week after the start of term to allow time to review the project, and approve or modify it prior to the Add/Drop deadline. This form must include the project title, a brief description of the project describing the goal and experimental approach used, and supervisor/co-supervisor signature(s). This will be reviewed by the course coordinator to determine suitability. Projects deemed unsuitable by the course coordinator will be returned and advised on modifications. If the project cannot be suitably modified the student will be withdrawn from the course.

CELL 398/498/499 students must hand in a final written report to their supervisor and a second copy of the report to the course coordinator by the end of the term. Depending on the supervisor, other opportunities to measure your progress may be provided, such as a mid-term presentation, a trial oral presentation, or a review of your written draft. Be sure to ask your supervisor which of these, or other opportunities are available. Deadlines for these will be set by the supervisor. Sample reports and advice on writing will be provided by the course coordinator.

In addition, Cell 499 research project students will prepare a public oral presentation of their work, done in logical peer groups. Peer groups will have a coordinator who should let the project supervisor know the composition of his/her group some weeks in advance of the event. Once all students have arranged an oral presentation group, the Course Coordinator will provide a list of groups, coordinators, students, topics, times and locations. Oral presentations normally occur during the final exam period, the actual dates being set by the project Supervisor and the Course Coordinator.

You cannot be granted credit twice for the same project. If you continue with a project in the same lab you will have to change the focus and write a completely distinct report. With respect to work achieved and skills gained during summer employment, our current model emphasizes the quality of the research done more than the time period in which it is done. Basic guidelines are as follows: (1) work done and skills gained during the summer may be used in the project, (2) significant work, beyond writing up, must be carried out during the two terms in which the student is officially enrolled in CELL 499. Be sure to acknowledge work completed outside the two terms in which CELL 499 is taken in both your final oral and written presentations.

#### **Procedures**

## By early September:

Students must have their Supervisor selected (for all CELL 499 projects and CELL 398/498 Fall term projects), and these names and the project title should be emailed to the Cell Biology undergraduate program administrator <a href="mailto:cellbio@ualberta.ca">cellbio@ualberta.ca</a> using the CELL 398\_498\_499 project registration form.

By mid-December: CELL 398/498 Fall term only

Students must submit the final written report to their Supervisor and Co-supervisor. A copy of the final report is also required by the course coordinator.

Grades for laboratory work must be submitted to the course coordinator by Supervisors using the provided marking scheme. The course coordinator will grade research reports and provide a final grade for CELL 398/498 according to the marking schemes. Entry of grades and transmission to the Registrar all must be accomplished by no more than five days after the last regularly scheduled exam.

## By early January:

CELL 499 students must arrange a project progress meeting with the course coordinator.

Students must have their Supervisor selected (CELL 398/498 Winter term projects), and these names and the project title should be emailed to the Cell Biology undergraduate program administrator <a href="mailto:cellbio@ualberta.ca">cellbio@ualberta.ca</a> using the CELL 398\_498\_499 project registration form.

### By mid-April:

Students must submit the final written report to their Supervisor and Co-supervisor. A copy of the final report is also required by the course coordinator.

CELL 499 only; within two days of the end of the term exam period: Oral presentations must be completed, which (co-)Supervisors must attend. NOTE: Oral presentations should not be longer than 25 minutes.

#### By early May

Grades for laboratory work must be submitted to the course coordinator by Supervisors using the provided marking scheme. The course coordinator will grade research reports and provide a final grade for CELL 398/498/499 according to the marking schemes. Entry of grades and transmission to the Registrar all must be accomplished by no more than five days after the last regularly scheduled exam.