

2. Course Overview

Course Description

Students will conduct research on a Biochemical/Biomedical/Bioenvironmental Engineering related project. Based on the project objective provided by their faculty supervisor, the students will work independently to develop an experimental and/or modeling methodology, conduct experiments or simulations and generate data. Students will submit interim oral and written progress reports and a final oral presentation and technical report. They will be expected to present and defend their results in a conference/seminar setting. Students enrolling for this course are advised to consult with the faculty member supervisor concerned late in the winter term of their 3rd year of study. (0/0/28/0/56)

Course Goals

- *Self-directed learning*: students identify what they need to know to accomplish the goal(s) of their project, and decide how and when they learn it.
- *Improve analytical skills, design skills and judgement*: students use their fundamental knowledge to design experiments and/or develop methodology to meet their objective(s) safely and efficiently.
- *Refine interpersonal skills with supervisor and colleagues*: students use technical memos and reports to communicate their intentions and findings, and have regular, formal meetings with their supervisor. They will also keep a lab book to record their activities.
- *Improve oral and written communication skills*: Innovative thinking, creative problem solving and data interpretation are strongly encouraged. Students will draw upon knowledge gained in previous courses and from the scientific/engineering literature. Although, your final report will be in the format of a journal publication and you will give two oral seminar presentations, each supervisor may have unique requirements. You are expected to clarify these expectations.

NOTE: Emphasis is placed upon minimal laboratory supervision, with stress on the importance of safety and successful teamwork. All students are required to read the [Departmental Safety Manual](#). Seeking help from within one's group and from fellow classmates is encouraged. Please consult your supervisor/s and/or graduate students in the research lab before making any significant changes to procedures.

Accommodation for Disabilities

Queen's University is committed to achieving full accessibility for people with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact the Queen's Student Accessibility Services (QSAS) and register as early as possible. For more information, including important deadlines, please visit the QSAS website at: <http://www.queensu.ca/studentwellness/accessibility-services/>

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