

## 2. Course Overview

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### Course Description

CHEE 315 is the second of three laboratory project courses offered in the Department of Chemical Engineering. It is primarily offered to 3<sup>rd</sup> year CHEE students, and builds upon the knowledge base gained from the first laboratory project course (CHEE 218).

The main objectives are to develop skill in using process and analytical equipment, to examine the strengths, weaknesses, and limitations of current theory, to improve the student's ability to obtain and interpret data, to demonstrate the value of planning experiments, to develop engineering judgement, and to provide experience in oral and written reporting. (0/0/16/32/0)

PREREQUISITES: CHEE 222 and CHEE 223

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### Course Goals

*This course aims to:*

- Develop skills in using process and analytical equipment to examine the strengths, weaknesses, and limitation of theory.
- Promote strong data analysis skills.
- Demonstrate the value of planning experiments to obtain the data necessary for analysis.
- Strengthen engineering judgment and awareness for the nature and magnitude of physical/chemical effects.
- Foster the development of initiative, originality, and creativeness in students.
- Improve oral and written communication skills.
- Strengthen both leadership and team-oriented skills

*Note: Students are expected to carry out their own experimental work with minimal supervision. They also need to rely on their own preparation, planning and execution for success.*

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### Course Structure

#### Lab Teams

Each Lab Team will consist of three or four students. Teams are assigned by the Course Instructor and will be posted on the CHEE 315 onQ website under "Lab Teams" in the "CHEE

315 Course Manual” module. For questions or concerns about student teams, please contact the Course Instructor.

### **Term Schedule and Project Work Weeks**

CHEE 315 begins with Orientation & Safety Lectures scheduled during the 1<sup>st</sup> week of term (view the CHEE 315 onQ course homepage “*Announcements*” widget for details). During these lectures, the course structure, deliverables and safety requirements will be covered. Student attendance is mandatory. An attendance sheet will be circulated.

The composition of Lab Teams and the 1<sup>st</sup> round of projects will be assigned before the end of the first week of classes (no lab work occurs in the 1<sup>st</sup> week of term).

Each Lab Team will complete a total of 4 laboratory projects during the term. The 1<sup>st</sup> round of projects will be assigned by the Course Instructor. The 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> projects will be assigned after processing project preference surveys. Project preference surveys should be submitted by the Team Leaders of the 1<sup>st</sup> project round via the course onQ website before the deadline in the 2<sup>nd</sup> week of term.

Lab Teams will follow a well-defined laboratory schedule for each laboratory project. Schedules for the term and each of the 4 project-periods can be seen by following the appropriate links on the CHEE 315 onQ website.

Each laboratory project will involve completion of the following:

- Laboratory preparation and an informal oral presentation of project objectives to the Laboratory Supervisor
- Experimental Work
- Formal Report - Preparation & Submission
- Technical Memorandum & Final Oral Presentation (Oral Presentations for Project Rounds 2 & 3 only)

Teams must perform lab work and presentations on the assigned date and time.

See the “Project/Course Requirements” section in the “*CHEE 315 Course Manual*” module on the course onQ website for details related to pre-lab, lab work and report writing requirements.

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### **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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