**Get to know ENGINEERING CHEMISTRY**

As the only program of its kind in North America, Engineering Chemistry provides in-depth knowledge of chemistry in addition to the engineering core knowledge. Engineering Chemistry graduates are experts in the chemistry behind industrial processes and combine a strong background in both chemistry and chemical engineering to treat problems of industrial interest. In this program, you will study applied organic chemistry, inorganic chemistry, reactivity principles, methods of determining structure, and you will acquire knowledge of materials at a molecular level. You will be able to apply this core chemical knowledge to design and improve processes and materials, ranging from fuel cells to pharmaceuticals.

Areas of specialization through selection of electives and thesis project include biosciences, environmental, materials science, process chemistry.

**Degree OPTIONS**
- Bachelor of Applied Science
- Bachelor of Applied Science with Professional Internship

**Queen's ADMISSIONS**
Students apply to Queen's Engineering (QE) through the OUAC (Ontario University Application Centre) website. Secondary School prerequisites include five 4U and 4M courses, one of which must be English 4U. Calculus and Vectors 4U, Chemistry 4U, and Physics 4U are all required along with one of Advanced Functions 4U, Biology 4U, Data Management 4U, Computer Science 4U, Earth and Space Science 4U. A final grade of 70% must be obtained in English 4U. Applicants outside of Ontario may have additional requirements.

**A Common START**
Queen's is unique in offering a common First Year along with an open discipline choice. When you do choose your program, you don't have to worry about caps or quotas. Provided you pass all of your First Year courses, you are guaranteed a place in your engineering program of choice. Queen's also offers Section 390, a special extended program for students struggling with First Year courses. Take things at a slower pace and recover in time for Second Year.

** Course HIGHLIGHTS**
Engineering Chemistry students have the opportunity to take a wide range of technical courses to help prepare them for the many possible career destinations available. Such courses include:
- Electrochemical Engineering
- Applied Surface and colloid science
- Design of Manufacturing Processes
- Organic Process Development
- Industrial Catalysis
- Quantum Mechanics
- Environmental and Green Chemistry
- Polymer Chemistry

**Acquire Skills. Gain Experience. Go Global.**
That is a degree from Queen's.

**We're closer than you think**

DEPARTMENT OF ENGINEERING CHEMISTRY
Faculty of Engineering and Applied Science
Dupuis Hall, Room 201
19 Division Street
613.533.2265
chemeng.queensu.ca
Engineering Chemistry MAJOR MAP *

1ST YEAR

GET THE COURSES YOU NEED

Queen's Engineering first year is common - courses include: Physics, Chemistry, Calculus, Algebra, Graphics, Computing and Earth Systems Engineering. Also APSC100, the entry level course in our Engineering Design and Practice Sequence (EDPS), focusing on problem solving, experimentation principles and finishing off with a team based engineering project.

Discipline selection will take place in February!

GET RELEVANT EXPERIENCE

Join teams or clubs on campus such as the Solar Design Team (SSTD), Fuel Cell Team (QFCT), or the Queen's Engineering and Commodities Association (QECA).

Look for first year positions in ENGSOC such as First Year Project Coordinators (FYPCOs). See the Look for first year positions in ENGSOC such as First Year Project Coordinators (FYPCOs). See the AMS Clubs Directory or the Queen's Get Involved page for ideas.

Look into summer jobs related to electrical engineering by talking to the department or Career Services about work through SWEP or NSERC.

Get involved with the Engineering Society (ENGSOC). Attend conferences like the Conference on Industry and Resources Engineering (CIREC) or the Queen's Engineering Competition.

GET CONNECTED WITH THE COMMUNITY

Volunteer on or off campus with different community organizations, such as ENGSOC EngWeek Committee, the ENGSOC External Relations Committee or a local charity like Martha's Table.

Get some targeted networking with alumni working in careers of interest by joining the LinkedIn group Queen's Connects Career Network.

GET THINKING GLOBALLY

Speak to a QUIC advisor or get involved in their programs, events and training opportunities.

Prepare for work or studies in a multi-cultural environment by taking QUIC's Intercultural Competency Certificate, and research possible immigration regulations.

Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a 3rd year exchange through your faculty's International Office.

Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.

GET READY FOR LIFE AFTER GRADUATION

Grappling with program decisions? Go to the Orientation Evening held by different Engineering departments and attend the various Career Fairs during the year.

Get some help deciding by visiting Career Services.

Explore different careers of interest by reading books in the Career Services Career Advising and Resource Area, such as Nontraditional Careers for Chemists. For more information check out Career Cruising or by finding and connecting with alumni on LinkedIn.

Start focusing on areas of interest. Research education requirements for careers of interest. If needed, prepare to take any required tests (like the LSAT or GMAT) and get help thinking about grad school from Career Services.

2ND YEAR


You will take the second EDPS course – APSC200, plus 9 credits of Complementary Studies which can be taken in 2nd, 3rd, and/or 4th year.

3RD YEAR


You will also choose 6 units of Electives and must select one of the Engineering Economics courses.

4TH OR FINAL YEAR

Courses include: Applied Surface & Colloid Science, Design of Manufacturing Processes, and Electrochemical Engineering, plus you must select a course in Biochemical Engineering. Additionally, you will take your 4th year Research and Laboratory Project courses.

You will also choose at least 15 units of Electives, and you are set to graduate!

WHERE COULD I GO AFTER GRADUATION?

Agricultural sciences
Alternative energy technology
Biochemistry
Biomedical engineering
Biotechnology
Business administration and management
Chemical/process engineering
Consulting engineers
Diagnostic medical technology
Education
Environmental engineering
Finance
Food science and technology
Forensic science
Fuels and petrochemicals
Industrial chemicals
Manufacturing
Occupational health and safety
Oil and Gas
Patent law
Pharmaceuticals
Polymer/rubber/plastic technology
Public administration
Public and private research
Sustainable technologies
Waste management

Join groups on LinkedIn reflecting specific careers or topics of interest in Engineering Chemistry.

Investigate requirements for full-time jobs or other opportunities related to careers of interest.

Assess what experience you'll be lacking and fill in gaps with volunteering, clubs, or internships – check out Career Services workshops for help.

Consider joining professional associations like Canadian Society for Chemistry and the Canadian Society for Chemical Engineering.

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Join groups on LinkedIn reflecting specific careers or topics of interest in Engineering Chemistry.

International students interested in staying in Canada can speak with an International Student Advisor.

Apply to jobs or future education, or make plans for other adventures. Get help from Career Services with job searching, resumes, interviews, grad school applications, or other decisions.

*some careers may require additional training. Listed careers are only suggestions.

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Visit careers.queensu.ca/majormaps for the online version with links!