Succeed in the workplace

What employers want
The Canadian Council of Chief Executives list the top 5 skills sought by employers as:
1. People skills
2. Communication skills
3. Problem-solving skills
4. Analytical abilities
5. Leadership skills
6. Industry-specific knowledge

What can I learn studying GEOLOGICAL ENGINEERING?
- Knowledge of principles and techniques of the earth sciences
- Practical applications of geological science techniques to engineering design
- Understanding of the variability of earth materials and their changes with time
- Ability to think spatially and analyze in 4 dimensions
- Fieldwork skills - design and carry out site investigations to solve problems
- Technical skills - use up-to-date geological analysis tools, equipment and software
- Research skills - conduct scientific research and analyze quantitative information, develop multiple working hypotheses
- Management and leadership skills - confidence and independence in new situations, group work strategies, time and resource management
- Oral and written communication

Take the time to think about the unique skills you have developed at Queen’s, starting with the skills list here for ideas. Explaining your strengths with compelling examples will be important for applications to employers and further education. For help, check out the Career Services skills workshop.

Get to know GEOLOGICAL ENGINEERING

This program applies principles and techniques of the earth sciences to solve engineering challenges such as extracting mineral and energy resources, preventing soil and water contamination, managing natural hazards, and building infrastructure with, or within, earth materials. You will study physics, chemistry, applied mathematics and natural processes such as earthquakes, volcanoes, continental drift and mountain formation. You will also acquire field skills and training in state-of-the-art geological investigation and engineering analysis tools.

Degree OPTIONS
Bachelor of Science in Engineering
Bachelor of Science in Engineering with Professional Internship
Specializations in Geotechnical, Geoenvironmental, Resource Engineering, and Applied Geophysics

“Geological Engineering is the practical application of principles, concepts and techniques of the geological sciences to provide sustainable engineered solutions to human needs. The Earth is our classroom.”

Queen’s ADMISSIONS
Students apply to Queen’s Engineering (QE) through the OUAC (Ontario University Application Centre) website. Secondary School prerequisites include six 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.

Course HIGHLIGHTS
Geological Engineering 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:
- Engineering Geology
- Geological Engineering Field School
- History of Life and Earth Dynamics
- Resource Geoscience and Engineering
- Geotechnical (Rock & Soil) Engineering
- Hydrogeology and Groundwater
- Pure and Applied Geophysics
- Exploration and Environmental Geochemistry

That is a degree from Queen’s.

queensu.ca/geol
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 THE COURSES YOU NEED

1ST YEAR

Queen's Engineering

BACHELOR OF APPLIED SCIENCE | BACHELOR OF APPLIED SCIENCE WITH PROFESSIONAL INTERNSHIP

2016 - 2017

FOR LIFE AFTER

GET READY FOR LIFE AFTER GRADUATION

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

Get some help deciding by visiting Career Services.

GET THINKING GLOBALLY

The Queen's University International Centre is your first step to learn how to internationalize your degree or to leverage your existing cross-cultural experience.

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

GET CONNECTED WITH THE COMMUNITY

Get involved with the Engineering Society (ENGSOC).

Volunteer on or off campus with different community organizations, such as the EngTech Committee or the ENGSOC Committee on Inclusivity.

GET RELEVANT EXPERIENCE

Join teams or clubs on campus such as the Environmental Sustainability Team (QUEST) and the Queen's Project on International Development.

Apply to first year positions such as First Year Project Coordinators (FYPCOs).

See the AMS Clubs Directory or the Queen's Get involved page for more ideas.

COURSES YOU NEED

1ST YEAR


You will also take the second EDPS course – APSC200.

Following 2nd year in the spring, you will take a Geological Engineering Field School course.

2ND YEAR

COURSES YOU NEED

2ND YEAR


In addition to 3 Complementary Studies courses, you will also take 5 Technical Electives in 3rd and 4th year to specialize or diversify in Geological Engineering.

3RD YEAR

COURSES YOU NEED

3RD YEAR

Courses include: History of Life, Geomechanics & Rock Engineering, as well as your 4th year Design Project courses. You will also take a Geological Engineering Field School course prior to the Fall term.

Choose any remaining Technical Electives and Complementary Studies courses, and you are set to graduate!

4TH OR FINAL YEAR

COURSES YOU NEED

4TH OR FINAL YEAR

Courses include: History of Life, Geomechanics & Rock Engineering, as well as your 4th year Design Project courses. You will also take a Geological Engineering Field School course prior to the Fall term.

Choose any remaining Technical Electives and Complementary Studies courses, and you are set to graduate!

VISIT CAREERS.QUEENSU.CA/MAJORMAPS 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.

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