Civil Engineering

MAJOR MAP

START DATES
in May, September, or January

POSITIONS
are paid and full-time

WORK TERMS
are 12-16 months long

PROGRAM OVERVIEW

- Graduate with “Professional Internship” on your degree.
- Learn about current advances, practices and technologies in business and industry.
- Test drive a career, earn a competitive salary, and get real world experience.

ELIGIBILITY

- 2nd or 3rd Year Students
- Minimum GPA of 1.9
- Gain a year of career-related work experience.
- Build network connections.
- Receive support from Queen’s staff in job search and during internship.

WHY QUIP?

For more information, contact quip@queensu.ca or visit the Program Website.

Why study in Kingston?

For 175 years, our community has been more than a collection of bright minds – Queen’s has attracted students with an ambitious spirit. Queen’s has the highest retention rates, the highest graduation rates, and one of the highest employment rates among recent graduates. We are a research intensive university focused on the undergraduate experience. The BBC has identified us as one of the GREATEST UNIVERSITY TOWNS in the world – and is often awarded the safest city in Canada. We are a university city at the heart of a region buzzing with activity. We are an international city, with more restaurants per capita than any other city in North America – you will have the experience of a lifetime at Queen’s – and graduate with a degree that is globally recognized among the best.

Get to know CIVIL ENGINEERING

We go about our lives within a physical environment created by civil engineers: homes, schools, office buildings, highways, bridges, subway systems, airports, river and coastal systems and green landscapes. As a civil engineering student, you will study how to plan, design and build these structures and systems with an environmentally respectful approach. As part of its real-world preparation, this innovative program emphasizes soft learning, teamwork, communication, leadership and problem solving. Courses and electives are grouped into structural, environmental, hydrotechnical, and geotechnical streams.

Degree OPTIONS

Bachelor of Applied Science in Engineering
Bachelor of Applied Science in Engineering with Professional Internship

Specialization in Structural Design, Geotechnical Engineering, Hydraulics, and Environmental Engineering

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. Provides you pass all of your First Year courses, you are guaranteed a place in your engineering program of choice. Queen’s also offers Section 990, 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

Civil 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:

- Geotechnical Engineering
- Infrastructure Rehabilitation
- Civil Week
- Reinforced Concrete Design
- Geoenvironmental Design
- River Engineering

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

civil.queensu.ca
2ND 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 Concrete Canoe Team.

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

GET CONNECTED WITH THE COMMUNITY

Volunteer on and off campus with different community organizations, such as Let's Talk Science (LTS), Science Quest, and Engineers without Borders (EWB).

Consider joining an intramural sport or an athletics team. Check out the Athletics & Recreation site.

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 the QUIC and Four Directions Aboriginal Student Centre's Training Certificate, and research possible immigration regulations.

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 wondering about career options from Career Services.

Students will start their second year by participating in the first of three Civil Weeks.

Courses include: Chemistry, Mechanics, Applied Mathematics, Materials, Numerical Methods, Hydraulics and Engineering Economics.

You will also take the second EDPS course - APSC200. Finally, you will take one List A (Humanities and Social Science) Complementary Studies course.

Look into summer jobs by talking to the dept. or Career Services about work through SWEP or NSERC.

Take more responsibility within different clubs or extracurriculars as: Civil Club, Concrete Toboggan Team, Concrete Canoe Team, and the Bridge Building Club.

Get involved with the Engineering Society (ENGSC).

Start or continue volunteering with organizations such as the Commerce & Engineering Environmental Conference (CEEC).

Consider joining professional associations like Canadian Society for Civil Engineering (CICE).

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 competencies by getting involved with other cultures or by practicing or improving your language skills.

Explore different careers of interest by reading books in the Career Services Career Advising and Resource Area, such as Civil Engineering Careers. 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.

Students will start their third year by participating in their second Civil Week.

Courses include: Structural Analysis, Geotechnical Engineering, Hydraulics, Groundwater Engineering, Structural Steel Design, Water & Wastewater Engineering and Design & Practice.

You will also take one List A Complementary Studies course, plus one Management Elective.

Stay during the summer as an assistant to a faculty member or apply for an external summer research opportunity. If interested, apply to do a 12-16 month QUIP internship between your third and fourth year.

Civil also offers a Job Network and Industry Open House which students are encouraged to attend.

Consider registering with Professional Engineers Ontario (PEO).

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

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.

Students will start their fourth year by participating in their third Civil Week.

All Civil students take a core course in Civil Engineering Design and Practice. You will also need to take 8 Technical Electives, which provide the opportunity to specialize or do a research thesis (CIVL 500) as one of the electives.

Finally, you will need to choose one List A, R, C, or D Complementary Studies course, and you are set to graduate!

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

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

Identify companies or careers that interest you and start networking.

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

Employability skills

Your time at Queen's will give you valuable skills to boost your employability, including:

- Knowledge of civil engineering methods and theory
- Apply principles of physics and mathematics to the design of physical environments such as bridges, buildings, and dams
- Knowledge of the interactions among land use, water use, and environment quality
- Work independently and in teams
- Team work - work with other students on a project
- Oral and written communication - engineering report writing skills and presentation skills
- Leadership
- Time management and organization – manage several ongoing projects

Where could I go after graduation?

- Archaeology
- Architecture
- Environmental engineering
- Design engineer
- Geographic information systems
- Geometrics
- Industrial engineering
- International development
- Landscape architecture
- Mapping, surveying & cartography
- Materials engineering
- Mining engineering
- Occupational health and safety
- Public administration
- Real estate
- Robotics
- Strategic planning
- Structural engineer
- Water resources engineering
- Urban and regional planning

Taking time to explore career options, build experience, and network can help you have a smoother transition to the world of work after graduation.

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

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