

Mechanical Engineering

Queen's
UNIVERSITY

FACULTY OF
ENGINEERING AND
APPLIED SCIENCE

Get to know

MECHANICAL ENGINEERING

The domain of mechanical engineers is truly vast because they are needed wherever machines are, and at every stage of design, manufacturing, construction and research. In this program you will study basic engineering courses as well as practical courses in machine design, robotics and manufacturing methods. Hands-on design is integral to this program. You may be involved in designing artificial joints, or even a Formula race car, depending on your specialization. If you choose the Materials option, you'll study the exciting developments in materials and nanotechnology.



"Students are encouraged to participate in national design competitions in order to broaden their educational experience including the solar design team, the Formula racing car, the Mini Baja all terrain vehicle and the Aerodesign cargo aircraft, and others."

Degree **OPTIONS**

Bachelor of Science in Engineering

Bachelor of Science in Engineering with Professional Internship

Option in General / Materials / Biomechanical Engineering

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.

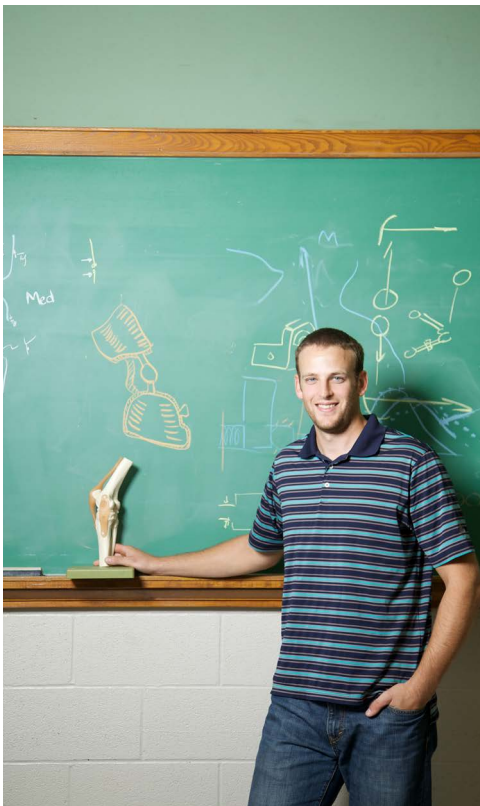
A Common **START**

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 J-Section, 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**

Mechanical 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:

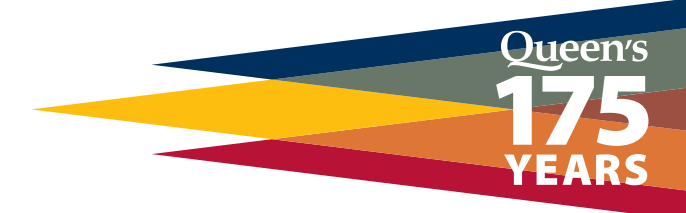
- Biomechanical Product Development
- Turbomachinery
- Mechatronics Engineering
- Airplane Aerodynamics
- Musculoskeletal Biomechanics
- Nano-Structured Materials



Acquire Skills. Gain Experience. Go Global.
That is a degree from Queen's. me.queensu.ca

Mechanical Engineering MAJOR MAP

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



CONSIDER A 12-16 MONTH QUIP INTERNSHIP

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

Mechanical Engineering

MAJOR MAP



How to use this map

Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. The map just offers suggestions – you don't have to do it all! To make your own custom map, use the My [Major Map](#) tool.

A balanced approach leads to long-term success. While you will learn a lot from your studies, taking time to get relevant experience outside of the classroom, build your network, and gain international experience, will position you to be more competitive in your job search or grad school applications.

Get started thinking about the future now – where do you want to go after your degree? Having tentative goals (like careers or grad school) while working through your degree can help with short-term decisions about courses and experiences, but also help you keep motivated for success.

Get the help you need

Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen's, you are never alone. We have many offices dedicated to helping you learn, think and do.

Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming living and learning environment offers the programs and services you need to be successful, both academically and personally, and Queen's wants you to succeed! Check out the [Student Affairs website](#) for available resources.

Succeed in the workplace

What employers want

The Canadian Council of Chief Executives list the top 6 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

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](#).

What can I learn studying MECHANICAL ENGINEERING?

Proficiency in mathematics and quantitative analysis

- **Become a balanced engineer by developing a set of innovation and implementation skills embodied in the CDIO paradigm: Conceive, Develop, Implement and Operate**
- **Time and resource management**
- **Excellent technical writing and communication skills**
- **Engineering design skills**
- **Ability to apply science fundamentals to practical problems of mechanical engineering**
- **Experience and capability in employing various information sources for solving engineering problems**
- **Ability to work independently and in a team on a project**



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DEPARTMENT OF
**MECHANICAL
ENGINEERING**

**Faculty of Engineering and
Applied Science**

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