Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
- Master's degree in Applied Science or Engineering.
- Exceptional BSc students may be admitted.

ADDITIONAL REQUIREMENTS
- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The School of Graduate Studies requires the following minimum scores: TOEFL (paper-based): 55; (internet-based): 88. Writing: 21/30; Speaking: 21/30; Reading: 21/30. Listening: 20/30, or a total of 88/120; or (3) IELTS: 7.0 (academic module overall band score), or (4) PTE Academic: 65.

KEY DATES & DEADLINES
- Application deadline: No hard deadline. It is encouraged that prospective students apply before March 1st to qualify for internal awards or to allow time to receive Visas.
- Notification of acceptance: End of March to July for September admissions.

Before you start your application, please review the Graduate studies application process.

What about FUNDING?

Minimum funding guarantee for PhD students: $18,000/year throughout years 1-4. Students are usually funded through a combination of research assistantships, teaching assistantships, and/or scholarships. Funding levels differ for international students.

We encourage all students to apply for external funding from OGS and other sources. Queen’s will automatically issue a $10,000 award to winners of federal government tri-council assistantships, and/or scholarships. Minimum funding guarantee for PhD students: $18,000/year throughout years 1-4.

Why GRADUATE STUDIES in MECHANICAL ENGINEERING?

As a PhD student in the field of Mechanical and Materials Engineering (MME), you can play a vital role in future developments in such areas as ergonomics, biomechanics and tissue engineering, fuel cells, fluid flow, gas turbines, design optimization, robotics, ceramics and polymers, and many other areas. Mechanical Engineering continues to play a vital role in modern life.

Graduate students and their work are an important part of an ongoing research process that provides the community with ways of understanding natural, cultural, imaginative, social and technological phenomena. Check our whygradstudies.ca for more reasons to choose graduate studies in engineering.

Why QUEEN’S?

As a PhD student in Mechanical and Materials Engineering at Queen’s you are part of one of the most research intensive universities in Canada. Our research program is internationally renowned with a wide variety of research activities in all of the major specialization areas of Mechanical and Materials Engineering.

The Mechanical and Materials graduate program has been recognized for the quality of its academic and research programs. It also focuses on multidisciplinary, collaborative research with faculty in other departments, other faculties and other universities.

DEPARTMENT OF MECHANICAL & MATERIALS ENGINEERING

Jane Davies, Graduate Assistant
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"My […] research project has involved collaboration with a surgeon in Sweden, researchers at the U of Queensland, Australia and NRC in Ottawa. This may sound extraordinary, but it is in fact closer to the norm for our Department."

Melanie Thompson, MSc

RESEARCH Areas
- Biomechanical
- Energy and Fluid Systems
- Manufacturing and Dynamic Systems
- Materials Engineering

We encourage you to identify an area of research interest and contact a potential supervisor before applying.

Visit the Mechanical and Materials Engineering website to read about research groups and faculty profiles. When you find a faculty member with similar research interests to yours, contact him/her and tell them about your interest in graduate work and related experience. This is also an opportunity for you to find out if the faculty member is accepting new graduate students to supervise. Meet with your potential supervisor at departmental events for prospective students.

Program STRUCTURE

PhD (4 years): course work, research thesis, comprehensive exams.

GRAD MAP FOR PhD STUDENTS
**ACHIEVE YOUR ACADEMIC GOALS**
- Meet early with your supervisor to set expectations and discuss roles, responsibilities, program requirements, resources, research occupational goals, timelines, and any required accommodation plans.
- Complete Part A of the PhD Comprehensive Examination Look to Student Academic Success Services for a variety of supports.
- Attend the Departmental Graduate Seminar Series (MECH 997).

**MAXIMIZE RESEARCH IMPACT**
- Think about audiences for your research.
- Apply to NSERC, CGS, and other funding.
- Attend conferences in your field.

**BUILD SKILLS AND EXPERIENCE**
- Serve on departmental, faculty or university committees.
- Consider positions in student services, the SGPS or media outlets like the Queen’s Journal, CFRC, and the SGSS Blog. Look in the AMS Clubs Directory.
- Use a Teaching Assistant or Research Assistant position to develop your skills and experience.

**ENGAGE WITH YOUR COMMUNITY**
- Consider volunteering with different community organizations, such as the Fuel Cell Research Centre, the Human Mobility Research Centre, the Centre for Advanced Materials & Manufacturing.
- Connect to broader communities of engineers by joining one of the Engineering Society Design Teams.

**LAUNCH YOUR CAREER**
- Finding career fit starts by knowing yourself. Take a Career Services career planning workshop or meet with a career counselor for help. Check out books like So What Are You Going to do With That? for advice on various career options.
- Start reading publications like Student Affairs and the Chronicle of Higher Education. Browse not-for-profit, academic labour market websites.
- Stay on the lookout for special events like Graduate Student Career Week to explore your career pathways.
- Start building your teaching portfolio including student evaluations, and seeking mentorship.
- Explore different careers of interest by reading alumni profiles on the SGS website, and using QueenConnects on LinkedIn to connect with Queen’s alumni or find alumni in various careers through. Look for an Alumni for more information check out Career Counseling.
- Investigate requirements for professional positions or other opportunities related to careers of interest.

**YEAR I**

**YEAR II**
- Write and defend your thesis proposal.
- Embark on your substantive research.
- Set up regular meetings with your supervisor to discuss progress and obstacles to timely completion.
- Find your way through the academic process with the help of Expanding Horizons workshops.
- Complete Part B of the PhD Comprehensive Examination within 16 months of registration into the program.

**YEAR III**
- Attend or present at a graduate conference through the Canadian Section of Combustion Institute (CSD, Society of Canada, etc. Talk to your supervisor.
- Expand your research audience through social media such as Twitter or a blog.
- Apply for the Graduate Student Travel Grant for Doctoral Field Research.

**YEAR IV & TRANSITIONING**
- Continue to meet regularly with your supervisor; review research progress, and write your dissertation. Check out the SGS Dissertation Boot Camp or Dissertation on the Lake.
- Consider publishing elements of your research. Learn from the Expanding Horizons Publishing workshop.
- Use conference presentations to create and refine dissertation material.

**WHAT WILL I LEARN?**
A graduate degree in Mechanical and Materials Engineering can equip you with valuable and versatile skills, such as:
- Knowledge and technical skills
- Effective communication skills to multiple forms for diverse audiences
- Information management: prioritize, organize and synthesize large amounts of information
- Time management: meet deadlines and manage responsibilities despite competing demands
- Project management: develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions
- Creativity and innovation
- Leadership: take initiative and vision leading people and discussion

**WHERE CAN I GO?**
A PhD in Mechanical Engineering can take your career in many directions. In Canada, less than 40% of all PhDs will work in post-secondary education — the majority will work in industry, government, or non-profits.
- Academia – Professors
- Research Science – Simulation Engineer
- Government
- Industry – Design Engineer
- Consulting
- Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.

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