



Mechanical & Industrial Engineering
UNIVERSITY OF TORONTO

MIE Graduate Students

Orientation Day

Department of Mechanical and Industrial Engineering (MIE)

Friday, September 11, 2020

Master of Engineering (MEng) in MIE

Markus Bussmann

Chair, Department of Mechanical &
Industrial Engineering



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Welcome!

Master of Engineering (MEng) in MIE

Murray Thomson

Associate Chair, Department of
Mechanical & Industrial Engineering



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MEng Academic Advisors



Industrial
Professor Chi-Guhn Lee
cglee@mie.utoronto.ca



Mechanical
Professor Kamran Behdinan
behdinan@mie.utoronto.ca

Graduate Office Support Staff | MC108

Celeste Francis Esteves, Graduate Program Administrator

- PhD/MASc student support
 - Funding related questions
 - Academic advising
- Processes graduation requirements for all Graduate Programs
- celeste@mie.utoronto.ca



Aisha Mirza, Graduate Program Assistant: MEng

- MEng admissions officer
- MEng student support
- aisha@mie.utoronto.ca



Graduate Office Support Staff | MC108

Kendra Hunter, Graduate Student Recruitment & Liaison

- Recruitment/marketing for all graduate programs at MIE
- Scholarships
- Web (graduate) content management
- Non-degree admissions
- hunter@mie.utoronto.ca



Jho Nazal, Graduate Program Assistant: PhD/MASc

- PhD/MASc admissions officer
- PhD/MASc student support
 - Course & program related questions
 - PhD annual milestones/meetings
- jho@mie.utoronto.ca





Graduate Office Services

- Academic Advice
- Course enrollment & course selection support
- Graduation & degree checks
- Funding information
- PhD Program Requirements & timeline



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Graduate Office Resources & Referrals

- Health & Wellness
- Learning Strategists
- Math Aid & Writing Centre
- International Transition Advisor

MIE MEng regulations

- 10 courses (500 & 1000 Level):
 - 6 must be either offered by MIE or from a list of approved courses (found on the MIE website)
 - up to 4 APS/ELITE, CS, RSM (Rotman)
 - no limit on the number of 500-level courses
 - Only one reading course
- or 7 courses (500 & 1000 Level) + MEng project:
 - at least 4 from MIE
 - MEng project
- any other courses?
 - ask the Graduate Program Assistant for MEng: Aisha Mirza

MEng projects

- equivalent to 1.5 FCE
- type of project depends on the professor
 - some are more “research-based”, some more applied
- project list posted at:
<https://www.mie.utoronto.ca/research/student-research-opportunities/>
but not a complete list

MEng projects

- supervisors from MIE, but also elsewhere in Engineering
 - and even beyond, with permission
- duration – usually 2 terms
 - but sometimes 1 or 3 or ... consecutive terms
- can begin any term
 - need to add a project via the Graduate Studies office

MEng projects ...

- might be a way into MASc or even PhD
- also available:
 - Multidisciplinary MEng projects
 - <http://imdi.mie.utoronto.ca/>
 - IMDI internships (not for credit)
 - <http://imdi.mie.utoronto.ca/>

important dates

- MIE courses available fall, winter and summer
 - APS/ELITE, and a few others, in the summer too
 - plan accordingly
- Fall 2020 deadlines:
 - **add** a course: September 21
 - **drop** a course: October 26
- **please ... decide quickly to drop**

<https://sgs.calendar.utoronto.ca/sessional-dates>

Advice on Deadlines

- don't try to drop after the deadline
 - doing poorly is no reason to request a drop
- if you're on a waitlist ...
 - perhaps let the prof know of your interest
 - hope that you get in

Faculty-wide Emphases



ADVANCED MANUFACTURING

Developed by the Toronto Institute for Advanced Manufacturing, this emphasis focuses on manufacturing management and manufacturing engineering.



ADVANCED WATER TECHNOLOGIES

Offered through the Institute for Water Innovation, this emphasis explores water treatment methods and design of treatment processes.



ANALYTICS (NEW FOR 2018)

Learn techniques and strategies to translate large data sets into useful insights for sectors such as transportation, banking and health care.



ENGINEERING & GLOBALIZATION

Sponsored by the Centre for Global Engineering, this emphasis examines how to leverage engineering to address complex global challenges, like clean water and basic health care.



ENTREPRENEURSHIP, LEADERSHIP, INNOVATION & TECHNOLOGY IN ENGINEERING (ELITE)

One of our most popular MEng emphases, ELITE develops the whole engineer through courses in leadership, business and more.



FORENSIC ENGINEERING

Gain specialized expertise applicable to enhanced engineering investigation, including those involving accidents and failures causing injury and financial loss.



IDENTITY, PRIVACY AND SECURITY

Created by the Identity, Privacy and Security Institute, this emphasis focuses on interdisciplinary education in security technologies.



ROBOTICS AND MECHATRONICS

Developed by the Institute for Robotics & Mechatronics, this emphasis explores the development of smart and high-performance systems, including Control Systems, Dynamics and Modelling.



SUSTAINABLE AVIATION

Created by the Centre for Sustainable Aviation, this emphasis focuses on the impact of aviation on the environment through engineering and technology.



SUSTAINABLE ENERGY

Offered through the Institute for Sustainable Energy, this emphasis provides exposure to a variety of energy issues, from energy production and consumption to environmental impact.

Engineering Graduate Studies

Emphasis in Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE)



Emphasis for Master of Engineering (MEng) Students

Engineering practice today demands a breadth of skills: not only technical, but also an understanding of leadership, finance and business, management, entrepreneurship and innovation. Engineers often appreciate the importance of such skills only after they join the workforce.

The Emphasis in ELITE offers University of Toronto MEng students a broad range of courses in these topics. The first of its kind in Canada, the ELITE Emphasis is targeted at engineers seeking to develop a more well-rounded skill set. To earn the Emphasis in ELITE, MEng students must complete at least four of the courses listed below. The Emphasis can be integrated into MEng programs offered by any of six departments in the Faculty (Aerospace, Chemical, Civil, Electrical & Computer, Mechanical & Industrial, and Materials Science).

As best we can, ELITE courses are scheduled with working professionals in mind. We offer a mix of daytime, evening and Saturday morning courses in each of the fall, winter, and summer sessions. The format of the courses varies: some are taught once a week for 12 weeks. A few are taught online. Others, especially in the summer, are taught on a 2-week intensive basis.

ELITE courses to consider

- APS1035H: Technology Sales for Entrepreneurs
 - Dr. Steve Treiber

- APS1036H: Formative Experiential Entrepreneurial Learning
 - Mr. Joseph Orozco

MEng Certificates

- Financial Engineering
 - Prof. Kwon, kwon@mie.utoronto.ca
 - Prof. Lee, cglee@mie.utoronto.ca
- Healthcare Engineering
 - Prof. Carter, carter@mie.utoronto.ca
- Information Engineering
 - Prof. Fox, msf@mie.utoronto.ca
- Computational Mechanics in Design
 - Prof. Meguid, meguid@mie.utoronto.ca

Computing facilities

- MEng students have access to:
 - ECF labs, GB144/150, WB255, SF1013/1012/1106
 - MIE labs, RS303, MB123, and MB67
 - Login using UTORid