

ENGINEERING MANAGEMENT

The Master of Engineering Management program provides engineering graduates enriching, professionally relevant and flexible academic experiences. Students have the opportunity to advance their competencies and skills to ethically and responsibly manage highly diverse and multi-disciplinary groups of individuals in organizations faced with the complex challenges associated with digitalization of industry, research and design. Coursework combines academic rigour of evidence-based management with real world applications to provide specialized engineering management training that supports managerial decision making.

Administrative Staff

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Daniela Senkl

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Admissions Requirements

Applicants must be graduates of an honours engineering program with at least a 70% average in the past four full semesters or the last two complete undergraduate years or the equivalent. Applicants who have completed their degrees outside of Canada will be required to secure a credential evaluation by an accredited international service such as the World Education Services.

Applicant qualifications will be reviewed and may be assessed via an entrance interview/oral examination conducted by the Graduate Program Coordinator and a selection committee composed of at least one member of the School of Engineering and at least one member of the Lang School of Business and Economics.

Successful applicants must also meet the University of Guelph's English Proficiency requirements for admission. If an applicant's first language is not English, an English Language Proficiency test will be required during the application phase. If the applicant's first language is not English but they have completed prior post-secondary studies in which English was the language of instruction, they may request to have their English Language Proficiency requirement removed. These decisions are made on a case-by-case basis.

All applications will be received and reviewed by the Master of Engineering Management Program Committee. The program especially encourages applications from qualified members of under-represented groups, particularly from those who self-identify as women, visible minorities and Indigenous peoples.

Meeting minimum criteria for admission does not guarantee acceptance into the program. Limitations of resources, space, facilities or personnel may make it necessary for the University, at its discretion, to refuse admission to an otherwise qualified applicant.

Learning Outcomes

Upon successful completion of the Master of Engineering Management program, graduates will be able to:

1. Demonstrate specialized and in-depth knowledge of engineering management concepts, information and techniques.
2. Apply quantitative and qualitative evidence-based decision-making to resolve engineering management issues.
3. Critically evaluate and apply engineering methods and principles of management to the design, planning and operation of systems of people, materials, information, and technology.
4. Connect the application of a technology, product, or service to its economic, environmental, societal and ethical outcomes.
5. Develop strong analytical and theoretical tools and apply them in their respective field of business.
6. Find, summarize, analyze and synthesize information from primary literature, reviews, textbooks and other sources.
7. Demonstrate a critical awareness of current research and important problems in Engineering Management.
8. Recognize and understand the global dimensions of engineering management.
9. Formulate culturally appropriate solutions and operate within the relevant cultural contexts.
10. Effectively communicate ideas, issues, and conclusions in written, visual, and oral forms appropriate to the engineering management profession.
11. Demonstrate the application of corporate social responsibility using ethical, legal, and professional principles.
12. Identify and articulate global, economic, environmental, societal, and organizational impacts of management decisions.
13. Demonstrate academic integrity in generating written and oral communications.
14. Develop the knowledge skills and attitudes for effective leadership in multiple contexts.

Program Requirements

The Master of Engineering Management (MEM) program requires that students complete nine courses (minimum 4.5 credits) including a final capstone course. Students take two core courses during their first semester, two core and one elective in the second semester, one core and one elective in their third semester, and the core capstone and one elective in their final semester. The first two semesters provide common foundational engineering management knowledge from both the engineering and management perspectives. The third and fourth semesters have been designed to allow students to customize their degree to support their career goals. Students are required to complete a capstone course in their final semester. The program as designed

should take a minimum of four semesters to complete. Students are also required to attend an Engineering Management Orientation prior to beginning their first semester.

Code	Title	Credits
Core Courses		3.0
ENGG*6410	Professionalism and Ethics	0.50
ENGG*6460	Engineering Leadership	0.50
BUS*6200	Financial Management	0.50
BUS*6440	Business Analytics	0.50
MGMT*6400	Project Management	0.50
ENGG*6940	Engineering Management Capstone	0.50
Restricted Electives ¹		1.50
ENGG*6140	Optimization Techniques for Engineering	0.50
ENGG*6280	Production Planning and Control	0.50
ENGG*6291	Supply Chain Management	0.50
ENGG*6292	Quality Control	0.50
MGMT*6170	Equity, Diversity and Inclusion in the Workplace: Advancing Theory, Research And Practice	0.50
MGMT*6200	Leadership Assessment and Development	0.50

¹ Must take one Management and two Engineering courses.

Students may choose to take additional technical or MEM restricted elective courses to suit their focus.