Co-op Program

ENGINEERING MANAGEMENT

Master

This master's program in engineering management is designed as a dual degree program for students completing degrees at international engineering schools and as an intensive program for recent engineering graduates wishing to develop their management, communication, leadership and legal knowledge and skills.

In this program, students will gain both general and specific knowledge and skills that will make them effective employees and team members. They will also intern at a Quebec business or organization selected based on their engineering background or current studies.

WHAT OUR STUDENTS CAN DO FOR YOU

As our students are completing or have completed degrees at engineering schools, they are equipped to hold positions in many different engineering fields. Their undergraduate studies have given our engineering management students solid technical knowledge in electronic, computer, industrial, energy, mechanical and construction engineering.

By the start of their internship, as well, students will possess knowledge and skills in project management processes, continual improvement, financial analysis, leadership and team management.

This means that our students are quite capable of fulfilling your technical needs and many of your engineering management needs, such as:

- Identifying client needs
- Organizing project phase planning
- Using project management software
- Planning and overseeing project finances
- Managing professional teams optimally in technology-driven workplaces
- Applying analysis and intervention tools to teamwork and supervision
- Enacting change management and continual improvement
- Performing post-mortem analyses

KNOWLEDGE AND SKILLS

Term	Description
S-1	**Introductory engineering management knowledge and skills** Identifying client needs; organizing project phase planning; using project management software to its fullest; conducting financial planning and oversight of a project; managing professional teams optimally in a technology-driven workplace; applying analysis and intervention tools to teamwork and supervision; identifying what changes are needed and planning continual improvement; performing post-mortem analyses. At the end of the first study session, the student will also have his or her Lean and 6-Sigma green belt.
S-2	**Advanced engineering management knowledge and skills** Supporting creativity in businesses; contributing to carrying out and managing product design and development; managing legal obligations in engineering; proper information management; implementing effective monitoring and oversight measures; successful conflict negotiation in businesses and workplaces; creative problem solving.
S-3	**Capstone project in engineering management** In the third session, students must complete a capstone project in which they apply the knowledge and skills gained from their master's in engineering management coursework to real-world engineering problems. Ideally, students will return to the same business or organization where they interned to complete the project. There are three main types of capstone projects: 1) urgent compliance projects that allow work to continue (setting environmental or workplace health and safety standards, etc.); 2) operations projects that support ongoing activities (increasing production, decreasing production costs, etc.); and 3) strategic projects that support a long-term mission (developing new products, changing existing processes, etc.).

ORGANIZATION OF STUDY (S) AND WORK TERM (W)

1st year			2nd year
FALL	WIN	SUM	FALL
S-1	T-1	S-2	S-3