# Engineering Complementary Courses (ECMP)

## Engineering Complementary Courses (ECMP) Courses

**ECMP 5000 [0.5 credit]**
**Engineering Communications**
Designed to advance the student's ability to communicate technical ideas and conclusions effectively to peers and stakeholders. The course is divided into three sections involving the principles and practice of written, verbal, and graphical communication modes.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5001 [0.5 credit]**
**Project Management**
Introduction to project management tools, techniques, templates, and methodologies. This course examines the eight knowledge areas of the Project Management Institute (PMI) which provide an integrated approach to managing engineering projects.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5002 [0.5 credit]**
**Research Methods for Engineering Practitioners**
The course focuses on equipping students with the skills to carry out R&D projects while integrating advanced tools like AI in an ethical way in this rapidly changing landscape. The course remains flexible to accommodate evolving technologies and industry needs.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5003 [0.5 credit]**
**Entrepreneurship**
Introduction to the conceptual and practical considerations in developing new products. The theory and practice of project management, innovation and entrepreneurship, business planning, marketing, and mobilizing human and financial resources applied to the creation of new business activities and ventures will be discussed.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5004 [0.5 credit]**
**Engineering Economics**
The application of engineering economics, financial analysis and market assessment to engineering alternatives in the planning, development and ongoing management of industrial enterprises.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5005 [0.5 credit]**
**Data Analytics**
Introduction to data analytics, including visualization and knowledge discovery in massive datasets; unsupervised learning: clustering algorithms; dimension reduction; supervised learning: pattern recognition, smoothing techniques, classification. Computer software will be used.

Prerequisite(s): enrolment in the M.Eng. - Engineering Practice program.

**ECMP 5006 [0.5 credit]**
**Governance, Policy Development and Decision-making**
Provide a foundational knowledge level of key governance structures and political institutions at the Canadian federal, provincial, and municipal levels, as well as Indigenous structures. Scholarship on policy development, strategic thinking and decision making is introduced, along with the role of information.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5007 [0.5 credit]**
**Climate Change and Sustainability**
The complex and multifaceted elements of climate change and sustainable living are introduced in terms of the humanities, sciences, engineering, business and public policy perspectives, as well as root causes and potential adaptive responses.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5008 [0.5 credit]**
**Risk Analysis**
The challenge of living and operating responsibly within a finite level of risk is a ubiquitous aspect of engineered systems. A framework for the identification and evaluation of risk is provided through examples, and discussions include means to manage ongoing risk.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5009 [0.0 credit]**
**Research Seminar**
A series of invited lectures to present the motivation, methodologies, results, and societal implications of ongoing engineering research projects occurring within the Faculty. Graded SAT/UNS.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.

**ECMP 5010 [0.5 credit]**
**Professional and Ethical Practice for Engineers**
This course adapts to current industry challenges and emerging ethical issues, providing students with a broad understanding of professional responsibility in areas such as public safety, AI, sustainability, and technological ethics.
Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program.