

CIVIL ENGINEERING (NON-THESIS) (M.ENG.) (45 CREDITS)

Offered by: Civil Engineering (Faculty of Engineering)

Degree: Master of Engineering

Program credit weight: 45

Program Description

The MEng Non-Thesis program aims to provide a more professional orientation to graduate students. The main features of this degree program are:

- A minimum of 15 credits selected from a list of research oriented courses
- A maximum of 30 credits with emphasis on expertise (specialty area) for professional practice.

Note: For information about Fall 2025 and Winter 2026 course offerings, please check back on May 8, 2025. Until then, the "Terms offered" field will appear blank for most courses while the class schedule is being finalized.

Research Seminar (3 credits)

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Course	Title	Credits
CIVE 664	MEng (Non-thesis) Research Seminar.	3

List A: Research Courses (12-42) credits

A minimum of 12 credits from research courses, from one of the research streams: 1) Infrastructure, 2) Environmental/Hydraulics-Water Resources, and 3) Transportation.

Infrastructure Stream

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Course	Title	Credits
CIVE 512	Advanced Civil Engineering Materials.	3
CIVE 602	Finite Element Analysis.	4
CIVE 603	Structural Dynamics.	4
CIVE 609	Risk Engineering.	4
CIVE 623	Durability of Construction Materials .	4

Environmental/Hydraulics-Water Resources

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Course	Title	Credits
CIVE 555	Environmental Data Analysis.	3
CIVE 572	Computational Hydraulics.	3
CIVE 584	Mechanics of Groundwater Flow.	3
CIVE 651	Theory: Water / Wastewater Treatment.	4
CIVE 677	Water-Energy Sustainability.	4

Transportation

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Course	Title	Credits
CIVE 540	Urban Transportation Planning.	3
CIVE 542	Transportation Network Analysis.	3
CIVE 560	Transportation Safety and Design.	3
CIVE 609	Risk Engineering.	4

List B: Other Complementary Courses from the Department (0-30 credits)

Courses from List A that are not used to fulfill the 15 credits requirement of Research Courses can be used also as complementary courses.

Expand allContract all

Course	Title	Credits
CIVE 507	Wind Engineering.	3
CIVE 520	Groundwater Hydrology.	3
CIVE 521	Nanomaterials and the Aquatic Environment.	3
CIVE 527	Renovation and Preservation: Infrastructure.	3
CIVE 528	Design of Wood Structures.	3
CIVE 550	Water Resources Management.	3
CIVE 557	Microbiology for Environmental Engineering.	3
CIVE 561	Greenhouse Gas Emissions.	3
CIVE 570	Solar Driven Environmental Processes and Technologies	3
CIVE 573	Hydraulic Structures.	3
CIVE 574	Fluid Mechanics of Water Pollution.	3
CIVE 577	River Engineering.	3
CIVE 604	Theory of Plates and Shells.	4
CIVE 605	Stability of Structures.	4
CIVE 607	Advanced Design in Steel.	4
CIVE 612	Earthquake-Resistant Design.	4
CIVE 614	Composites for Construction.	4
CIVE 615	Environmental Engineering Seminar.	3
CIVE 616	Nonlinear Structural Analysis for Buildings.	4
CIVE 617	Bridge Engineering.	4
CIVE 622	Prestressed Concrete.	4
CIVE 625	Condition Assessment of Existing Structures.	4
CIVE 628	Advanced Design of Wood Buildings .	4
CIVE 652	Bioprocesses for Wastewater Resource Recovery.	4
CIVE 660	Chemical and Physical Treatment of Waters.	4
CIVE 661	Modelling of Transportation Emissions.	4
CIVE 663	Environmental Fate of Organic Chemicals.	4

CIVE 683	Advanced Foundation Design.	4
CIVE 686	Site Remediation.	4

Project Courses (0 or 5-15 credits)

Credits for a program may vary, depending on the amount of work involved. Project courses are chosen from the following:

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Course	Title	Credits
CIVE 691	Research Project 1.	1
CIVE 692	Research Project 2.	2
CIVE 693	Research Project 3.	3
CIVE 694	Research Project 4.	4
CIVE 695	Research Project 5.	5
CIVE 696	Research Project 6.	6
CIVE 697	Research Project 7.	7

Graduate courses from other McGill Engineering Departments are also allowed as complementary courses. A maximum of 1/3 of coursework credits can be taken outside McGill. Approval is required from the Department in both cases.