

Civil Engineering

Memorial University's civil engineering undergraduate program is broad, encompassing several distinct areas of specialization. The scope of civil engineering includes design, planning, managing and construction of highways, airports, harbours, dams, hydro developments, bridges, buildings, industrial plants, site remediation, pollution control, and other environmental and water resources management projects.

Civil engineers work in all levels of government and for a wide variety of industries, from engineering consulting firms to construction companies. There are many areas of specialization; traditional areas include hydrotechnical, environmental, municipal, geotechnical, construction, structural and transportation engineering. Emerging sub-disciplines include composite materials, environmental risk assessment and management, offshore structural safety and maintenance, infrastructure engineering, and real-time condition monitoring.

Co-operative Education Opportunities

Co-operative education experiences of students within the Department of Civil Engineering have included a wide range of industries and opportunities. Examples of what our students can provide to employers include:

Consulting – designing, technical consultation, project management and cost estimating;

Construction – supporting site engineers in construction administration, cost estimating and project management;

Environmental – consulting in water resource management, sustainability in design and safety risk and management;

Research and development – involved in laboratory and field testing, data collection, structural analysis, and assisting with ongoing research projects;

Offshore oil and gas – designing, structural and stress analysis, and environmental and safety issues;

Government – assisting in infrastructure and municipal plans, designs, inspection, project management and environmental matters;

Transportation and Infrastructure – planning, design, and analysis in infrastructure and transportation strategies considering environmental and safety requirements; and

Planning and Estimating – determining project costs, scheduling and planning, managing resources and interfacing with contractors and clients.

Civil Engineering Program Organizational Chart

Term	Fall	Winter	Spring
Year 1	Engineering One		
	Engineering Statics Introduction to Programming Engineering Graphics & Design Electric Circuits	Physics Chemistry Mathematics English Professional Development Seminars	Work Term 1* *If students complete engineering one requirements within first two terms.
Year 2	Academic Term 3 Engineering Professionalism I Mathematics for Civil Engineering I Earth Sciences for Civil Engineering Surveying & Geomatics Materials for Construction Dynamics	Work Term Work Term 1 Work Term 2	Academic Term 4 Mechanics of Solids I Probability & Statistics Mathematics for Civil Engineering II Applied Environmental Science & Engineering Geotechnical Engineering I
Year 3	Work Term Work Term 1 Work Term 2 Work Term 3	Academic Term 5 Mechanics of Solids II Applied Mathematical Analysis Design of Concrete Structures Fluid Mechanics Geotechnical Engineering II	Work Term Work Term 2 Work Term 3 Work Term 4
Year 4	Academic Term 6 Thermal Sciences Structural Analysis I Design of Concrete & Masonry Structures Hydraulics Project Planning and Construction Management	Work Term Work Term 3 Work Term 4 Work Term 5 (Optional)	Academic Term 7 Design of Steel Structures Hydrology & Water Resources Highway Engineering Two (2) technical electives
Year 5	Work Term Work Term 4 Work Term 5 (Optional) Work Term 6 (Optional)	Academic Term 8 Engineering Professionalism II Civil Engineering Project Engineering Law and Ethics Three (3) technical electives	

More information ...

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Departmental Office 709-864-2705
www.mun.ca/engineering/civil

Course specific information:

