Building Science

MASc / MBSc

ryerson.ca/graduate/buildingscience

Faculty of Engineering
and Architectural Science

RYERSON UNIVERSITY

Building Science

This unique interdisciplinary graduate program applies fundamental science principles to the components of a building, its users and the environment. Students explore the principles for creating sustainable buildings and learn about areas such as detail design, building performance, human interaction and construction processes. This high-quality, professionally relevant program prepares students for careers in the architecture, engineering and construction (AEC) industry.

Research Areas

- Architectural Acoustics and Noise Control
- Building Automation
- Daylighting and Energy-Efficient Lighting Design
- High-Performance Building Envelopes
- Intelligent Sensors and Instrumentation for Buildings
- Low-Energy Building Design
- Performance Assessment of Existing Buildings
- Recycling and Reuse of Construction Materials and Components
- Renewable Energy Systems
- Resilience in Urban Design
- Sustainability in Built Environment
- Zero-Carbon Buildings

Sample Courses

Core Courses:
- Building Science Theory
- Building Envelope Systems
- Ecological and Resource-Efficient Design
- Energy-Efficient Building Services and Renewable Energy Systems
- Building Design Seminar/Studio

Elective Courses:
- Building Performance Assessment
- Building Performance Simulation/Modelling
- Building Science and Architecture Research Methodology
- Detail Design Project
- Lighting Design in Buildings
- Renewable Energy System for Buildings
- Building Envelope Restoration

Admissions Information

MASc / MBSc	• Completion of a 4-year bachelor's degree from a recognized institution • Minimum grade point average (GPA) or equivalent of 3.00/4.33 (B) in the last two years of study

Applicants may be required to provide certification of English language proficiency. For more information, visit **ryerson.ca/graduate/futurestudents/admissions/english-language.html**.

Resources

- Building Science lab and equipment
- Computer-Aided Design Lab
- Lab for Building Automation
- Studio-based education that encourages collaboration and experiential learning

At a Glance

7:1
student-faculty ratio

21
average number of students per class

1:3
ratio of students enrolled in research (MASc) option

81
industry-partnership research projects, 2011- 2014

$900K
total research funds from internal and external grants, 2011- 2014

2
average number of papers MASc students present at domestic and international conferences

"Buildings require many systems that must function simultaneously. I enjoy the challenge of fitting these pieces together to maximize durability, performance and space quality."

– Matthew Tokarik, MASc student

Program Contact

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