



# Sustainable Infrastructure: Low-Impact Development & Climate Resilience

McMaster University Professional Certificate Course

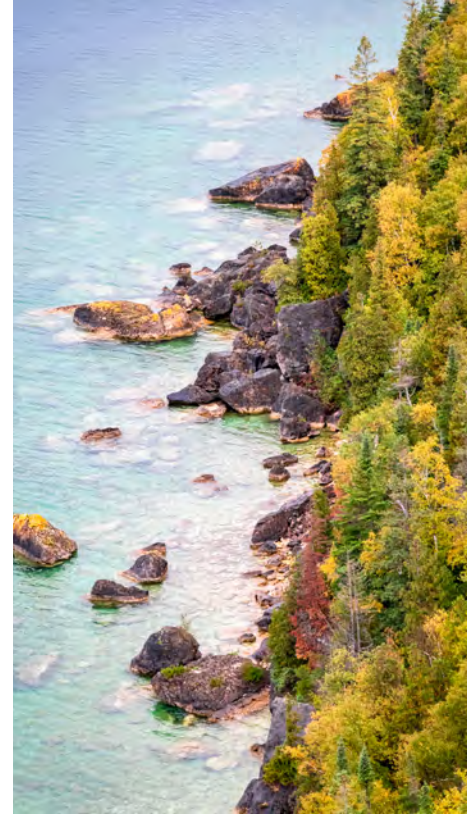


# COURSE OVERVIEW

🖥️ Online Live    📅 Next Session: September 2022

Adaptation to climate change requires the adoption of resilient, engineered green infrastructure to manage stormwater from a quantitative and qualitative perspective. This is of increasing importance for planners, designers, engineers, landscape architects, and construction professionals to ensure that the infrastructure designed today is adaptive to a changing climate.

This immersive, conference-style Sustainable Infrastructure Program: Low-Impact Development and Climate Resilience, teaches the emerging approaches to the design, construction, operation and maintenance of engineered green infrastructure. In addition, the course focuses on design assessment, lifecycle costing, comparison to traditional stormwater infrastructure, inspection practices, and performance verification.



## WHAT YOU'LL LEARN

- Understanding need to focus on engineered green infrastructure and the role of low-impact development in a changing climate
- How to apply best practices and practical techniques in designing, constructing, and effectively managing engineered green infrastructure
- Utilize industry-leading tools to evaluate the environmental and lifecycle cost performance of engineered green infrastructure
- Best practices, case studies, and emerging technologies for effective implementation of sustainable, climate resilient engineered green infrastructure

COURSE STRUCTURE

8

COURSES DELIVERED

1

DAY EACH

### Required Courses (4)

- Introduction to Low Impact Development (LID)
- Principles of Successful LID Construction
- LID Inspection, Maintenance and Operation
- Emerging Topics in Stormwater Management

### Electives (select 4)

- LID Design: Bioretention
- Assessing your conceptual design: Using the LID Treatment Train Tool for Design Analysis
- Assessing the costs of your conceptual design and tendered project: Using the LID Life Cycle Costing Tool for Cost Analysis
- Introduction to Erosion and Sediment Control and Best Practices for LID Implementation
- LID Performance Monitoring Verification
- Introduction to Municipal Stormwater Financing/Charges



# SUSTAINABLE INFRASTRUCTURE PROGRAM: LOW-IMPACT DEVELOPMENT AND CLIMATE RESILIENCE

<b>Introduction to Low Impact Development</b> September 22, 2022	<b>Required Course</b>
<b>Principles of Successful LID Construction</b> October 6, 2022	<b>Required Course</b>
<b>LID Inspection, Maintenance and Operations</b> October 20, 2022	<b>Required Course</b>
<b>LID Design: Bioretention</b> November 3, 2022	Elective
<b>Assessing your conceptual design: Using the LID Treatment Train Tool for Design Analysis</b> November 17, 2022	Elective
<b>Assessing the costs of your conceptual designs and tendered projects: Using the LID Life Cycle Costing Tool for Cost Analysis</b> December 1, 2022	Elective
<b>Introduction to Erosion and Sediment Control Best Practices for LID Implementation</b> January 12, 2023	Elective
<b>LID Performance Monitoring Verification</b> February 2, 2023	Elective
<b>Emerging Topics in Stormwater Management</b> February 16, 2023	<b>Required Course</b>
<b>Introduction to Municipal Stormwater Financing / Charges</b> March 9, 2023	Elective

## ADMISSION DETAILS

### & TUITION/FEES

#### Admission Requirement

Participants must hold a degree or diploma from a recognized university or college; or a relevant certificate in infrastructure or sustainability from a recognized university; participants may be accepted if they are in the final year of their post-secondary studies or have equivalent professional experience.



#### Tuition Fees

	CSCE Member	Non-Member
Ontario (Private Sector)	\$450 + HST	\$670 + HST
Ontario (Public Sector)	\$225 + HST	\$445 + HST
Outside Ontario	\$1500 + HST	\$2000 + HST

## CONTACT INFORMATION

Ready to get started?  
Our team is here to help.

- Determine if this course is right for you and your goals
- Learn more about McMaster's certificate programs

#### Program Lead

Greg Zilberbrant

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**Program Partner: Canadian Society of Civil Engineering — Ontario Region**



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