

McMaster Certificates of Completion



ENGINEERING

W Booth School of
Engineering Practice
and Technology

www.mccmcmaster.ca

McMaster Certificates of Completion

Connect with a different kind of professional development program.



The McMaster Certificates of Completion is a unique and innovative training and upskilling program for professionals, which delivers comprehensive, relevant, subject-focused courses in a 3-day, conference-style format. Directly developed from industry feedback, and with the exclusive participation of global industry experts, trainees learn and practice skills based on industry insights, case studies, and proven tools. Three training streams are offered, which address the main challenges faced by organizations in today's competitive economy - Circular Economy & Climate Change, Industry Operations Leadership & Management, and Advanced Manufacturing & Industry 4.0. We work with businesses, organizations, consultants, and industry professionals, depending on the size and interests of organizations, the programs are suitable for professionals and managers/leaders from supervisors up to C-level.

“ The guest speakers have a great balance between academical and practical experience, providing useful and practical tools and techniques to transfer the acquired knowledge into immediate action. ”



Leonardo Guerrero
Plant Manager **Tesla**

Our Team



Florent Lefevre-Schlick

McMaster Certificates of Completion Program Manager



Greg Zilberbrant

Circular Economy & Climate Change Program Lead



Andy Simoneau

Advanced Manufacturing & Industry 4.0 Program Lead



Ashan Corea

Industry Operations Leadership & Management Program Lead



Flexible Training

Online, blended and face to face. Team based problem solving.



Skilled Instructors & Industry Experts

Learn from professionals with relevant experience; interact with peers from other organizations.



Relevant

Learn key skills which will support your development and the growth of your organization.



Duration

20hrs over 3 days in session of 60-90 minutes per topic.

Circular Economy & Climate Change

Learn how to implement strategies and practices to support your organization's transition to a low-carbon, circular economy.



Our Circular Economy & Climate Change Program focuses on enabling leaders to implement climate change strategies, reduce your organization's carbon footprint, increase resource circularity through clear action grounded in business practices and emerging policies while eliminating wasted resources through an effective carbon and resource footprint mitigation plan.

Who Should Attend?

Our Circular Economy & Climate Change program brings together a dynamic and diverse group of people with varying backgrounds.

Common career backgrounds: Environment Professionals, Sustainability Professionals, Engineers/Technologists, Technical Managers, Operations Managers, Product Designers



Amy Sandhu
Head of Sustainability & Government Relations
BASF Canada

McMaster's Circular Economy Certificate Course was well designed, well executed and a course that I would highly recommend to sustainability practitioners across all industries.

The instructor, as well as the presenters, included both theoretical and practical content. The interactive exercises were also a highlight.

“



Daniel Carrocci
President
Determination Drilling

After completing all three courses in the Circular Economy & Carbon Mitigation program my eyes were opened to a number of new ideas. I gained knowledge and perspective to leverage UN Sustainable Development Goals in my corporate sustainability strategy. The courses also equipped me with tools and understanding to not only measure and evaluate the success of our corporate sustainability strategies, but to pass this learning on to my colleagues. Thanks to the team at McMaster for producing such a high-quality professional program.

”



Program Lead
Greg Zilberbrant



zilberg@mcmaster.ca

Circular Economy & Climate Change

Courses



Circular Economy

Canada's first university-level professional training program in circular economy.

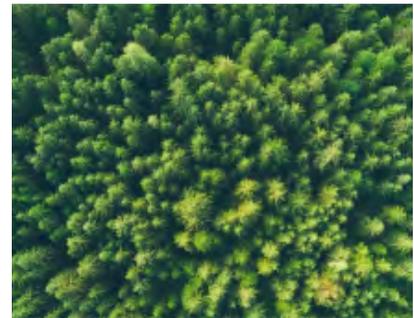
- Foundational circular economy principles and application.
- How to identify or create opportunities within an organization for circular economy implementation.
- Successful transitions to different circular economy models through case study investigation.
- Practical circular economy tools that you can apply at different levels of organizational complexity and maturity.



Carbon Mitigation

Developing strategies to achieve measurable carbon reduction.

- Understanding current and future carbon policy and the legislation landscape.
- Successful transitions and technological examples through case studies.
- How to identify carbon mitigation practices that would fit your organization.
- Practical carbon mitigation prioritization tools that you can apply at different levels of organizational complexity and maturity.



Leading Transition

Developing leaders for transition to a low-carbon, circular economy.

- Apply both organizational development and personal leadership lens to explore the drivers of transition.
- Opportunities to innovate and build competitiveness.
- Through functional assessment, map your leadership and organizational needs against established leadership models to strategize, plan, and communicate an effective transitional strategy.



Sustainable Infrastructure: Design & Engineering

Learn the concepts, applications, and best engineering practices to create sustainable, climate resilient infrastructure solutions.

- Understanding the conditions for sustainability and the role of infrastructure to create positive environmental, social, and economic conditions.
- Analyzing the role of infrastructure decisions on climate mitigation and adaptation.
- Applying lifecycle assessment and circularity principles to quantify the impact of infrastructure design.
- Practical tools to measure and monitor the sustainability and climate resilience of infrastructure.



Sustainable Infrastructure: Low-Impact Development & Climate Resilience

Develop an understanding of the emerging approaches to the design, construction, operation and maintenance of engineered green infrastructure.

- Understanding need for engineered green infrastructure and role of low-impact development in climate change.
- Best practices and techniques in designing, constructing, and managing engineered green infrastructure.
- Utilize industry-leading tools to evaluate environmental and lifecycle cost of engineered green infrastructure.
- Best practices, case studies, and emerging technologies for effective implementation of sustainable, climate resilient engineered green infrastructure.

Learn more at www.mccmcmaster.ca or download the individual course brochure.



Industry Operations & Leadership Management Program

Develop the integral leadership and operational skills needed to lead, transition and scale with in an industry 4.0 environment

McMaster's Industry Operations Leadership and Management program is a hands-on, applied learning experience. Each course in the program is designed to enable industry business leaders to develop, deploy and execute high-performance industry teams capable of utilizing innovation, flexibility, and bottom-up intent-based execution to sustainably scale industry operations.



Who Should Attend?

Our Industry Operations & Leadership Management program brings together a dynamic and diverse group of people with varying backgrounds.

- Business Owners
- Senior Managers
- Directors
- Supervisors
- Managers
- Team Leaders
- Lead Hands
- Trade Specialists
- Officers
- Senior NCO's

Is the IOLM Program a good fit for you or your organization?

Contact our Program Lead.

Enrollment Options

Option 1: Earn a McMaster Certificate of Completion

Enroll for each course separately in the IOLM Program to receive a McMaster Certificate of Completion for each course completed.

Option 2: IOLM Program Participant

Enroll in all five courses and benefit from the Industry Mentorship Program, an additional 6th certificate in Industry Operations Leadership & Management, and receive a Letter of Recognition outlining the skills covered and assessed leadership performance to complement a professional portfolio. There is no additional cost to enroll as an IOLM Program Participant.

Post Course Currency



All IOLM Program Participants are granted view access on future cohorts to allow them to stay current on relevant industry trends, and connect with new participants and business leaders.

Additional 6th Certificate



Obtain a sixth certificate in Industry Operations Leadership & Management in addition to the five awarded for each course.

Industry Mentorship Program



Join a diverse group of business leader participants and be directly connected to and mentored by an industry leader. (See next page for more details)

Letter of Recognition



Receive a Letter of Recognition outlining the skills and capabilities taught. As well any mentee with a 10% or higher performance improvement are noted as demonstrating potential as a high talent member.



Program Lead
Ashan Corea



coreaa@mcmaster.ca

Industry Operations & Leadership Management Program



Industry Mentorship Program



Participants who enroll in all five courses are placed in the Group Mentorship Program. Paired with an Industry Leader Mentor, participants conduct a tailored Leadership Development Plan over ten months to derive a measurable performance improvement, which is quantified through three stakeholder 360 Leadership Assessments.

The aim of the mentorship program is to develop a measurable improvement in your leadership skills - as assessed by your superiors and team members. This program specifically focuses on developing leaders capable of excelling within an industry 4.0 environment.

- Obtain a measurable performance improvement as assessed by your superiors, peers, and subordinates.
- Any participant who demonstrates a 10% or higher performance improvement, will be noted as demonstrating their potential as a high talent member on their Letter of Recognition.
- You will understand which type of industry leader model you closely embody, as well as the key skills and development path needed to achieve Leadership 4.0 - the model advocated to lead the next era of industry.
- Utilize the Mentorship Program to complement internal business/organization Professional Development Plans to coach high-talent individuals.
- At the completion of the program, you will be equipped with the skills and products necessary to continue an industry 4.0 mentorship program within your own business/organization.

The Mentorship Program is not available for Per Course participants (Enrollment Option 1).



Leonardo Guerrero
Plant Manager
Tesla



"The Industry Operations Leadership Fundamentals Course provides a very detail introduction of what is Industry 4.0 which is unclear for many of us. It also introduces the Strong Link Archetype which provides a very specific and practical model of leadership intended to learn and develop tools, techniques and leadership styles for the Industry 4.0 environment combined with specific methodologies or techniques to enable leaders with powerful tools for project and resources management.



Gurmeet Sidhu
Director of Regional Operations
Loblaw



"As we know, technology is disrupting almost every industry in the world, and the breadth & depth of these changes are transforming the entire systems of production, management and governance. I believe that McMaster University's Industry Operations Leadership Fundamental (IOLF) course is designed to equip leaders with the practical knowledge and skills required to be successful in this new era. I was very impressed with the course contents, especially Industry 4.0 and Advanced manufacturing Operations presentation delivered by Dr. Andy Simoneau. The virtual classroom experience was exceptional as it provided a unique opportunity to learn from international experts and leaders."

Industry Operations & Leadership Management Program

Courses



Industry Operations Leadership Fundamentals

- Learn the anatomy of high-performance teams and industry 4.0 business unit operations.
- Focus on high-performance leadership, strategic alignment, communication, tactical execution, disruption management, and performance management.



Industry Tactical Planning & Execution

- Gain the knowledge and competencies to develop a high-performance industry team and execute efficiently within an industry operation.
- Intent-based leadership, team development, tactical level operations execution, performance & disruption management, and driving continuous improvement.



Industry Business Unit Management

- Develop the operational competencies and industry-insights needed to maneuver, sustain, and efficiently execute an industry business unit (IBU).
- Understand the anatomy of an IBU, supply chain management, the digitization of industry operations, critical operational tools, project planning, change management, strategies to scale, and threat and disruption management.



Advanced Leadership Skills

- Solidify and elevate the leadership skills needed to develop, deploy, and drive high-performance teams.
- Learn to cultivate a high-performance team culture, performance & change management, coaching & mentorship, conflict management, stakeholder buy-in communication skills, and instructional technique.



Advanced Industry Business Unit Execution

- Obtain competencies and strategies needed to scale industry 4.0 operations
- Study intent-based strategic execution, lean manufacturing techniques, sustainability, advanced project planning techniques, risk & financial management, cyber-security, forecasting & foreplanning, and auditing.

Learn more at www.mccmcmaster.ca or download the individual course brochure.



Advanced Manufacturing & Industry 4.0 Program

Equip your organization with the skills needed to seamlessly integrate into the emerging digital industrial landscape.

By gaining foundational knowledge and applying it through case studies and practice exercises alongside talks from numerous leaders in the private and public sectors, participants are expected to take roles in leading and managing the transformation journey required to make their organization more efficient and competitive in the new digital age.

Program Courses:

- **Industry 4.0 and Cyber-Physical Systems**
- **Advanced Manufacturing and Hybrid Engineering**
- **Big Data, AI, and Cyber-Security**
- **Automation**



Who Should Attend?

Our Advanced Manufacturing & Industry 4.0 program brings together a dynamic and diverse group of people with varying backgrounds.

Common career backgrounds: Manufacturing, Operations & Technical Engineers, Managers, and Professionals, Automation Experts, Scheduling & Production Planners, CAD/CAM Engineers, Hardware Integrators, Quality Assurance & Reliability Professionals



Program Lead
Andy Simoneau



simonea@mcmaster.ca

Advanced Manufacturing & Industry 4.0 Program

Courses



Industry 4.0 and Cyber-Physical Systems

- Learn fundamental elements of Industry 4.0 and cyber-physical systems.
- Identify current trends and best practices for developing and deploying Industry 4.0 solutions, providing practical tools to help you successfully implement digital change at different levels in your organization.



Advanced Manufacturing and Hybrid Engineering

- Discover the fundamentals of AM and the latest hybrid engineering and manufacturing processes.
- Learn the pros and cons of each processes, highlighting potential opportunities for adoption in your organization.
- Walk through case studies and work through hands-on additive design and manufacturing problems to help facilitate a deeper understanding of additive manufacturing and hybrid engineering processes that together can open up new opportunities for improvement and product development in your organization.



Big Data, AI, and Cyber-Security

- Understand the fundamentals of big data, machine learning, AI, and Cyber Security.
- Connect data to your processes and operations, and how to capitalize on that data to increase efficiencies and add value to your organization.
- Learn to assess the risks and benefits to deploying IoT technologies, identifying weaknesses and vulnerabilities, and how to effectively mitigate those risks.



Automation

- Progress through each level of the automation hierarchy.
- Work your way up through the control and acquisition devices and examine the components of the industrial communications network.
- Learn how best to design and setup effective communication between automated systems and people throughout your organization.

Learn more at www.mccmcmaster.ca or download the individual course brochure.

Recent Industry Guest Speakers



Alex Tsoulis
Senior Advisor
Mitsubishi Heavy Industries
Canada Aerospace



Andy Simoneau
Associate Professor
Professional Engineer
University of New Brunswick



Amelia Kuch
Policy Research Manager
Ellen MacArthur Foundation



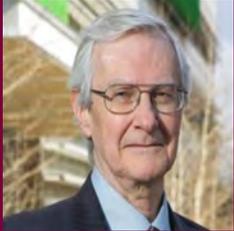
Ashan Corea
Principal
The Strong Link Inc.



Audrey Nuk
Manager
Indigenous Services Canada



Bill Mateer
Executive
GE Aviation



Bob Willard
Author & Speaker
Sustainability Advantage



Brady Pyle
Deputy Chief Human
Capitol Officer
NASA



Brian Macdonald
Senior Political Strategist
Samuel Associates



Bruce Lourie
President
Ivey Foundation



Chris Coulter
CEO
GlobeScan



Dave Hyem
Vice President Metals &
Fabrication
Boeing



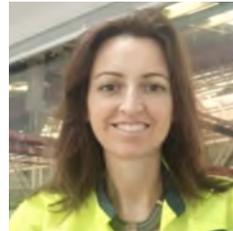
David Wheeler
Principal
Sustainable Transitions



Diane Saxe
President
Saxe Facts



Egan Greenstein
Senior Director
Boeing Next



Filipa Hoppenbrouwers
Vice President Logistics
Volvo Group



Florent Lefevre-Schlick
Manager Certificates of Completion
and Industrial Training Programs
McMaster University



George Dom
USN (Ret), COO
ACI Jet



Graham Brown
President & CEO
Catapult



Greg Wamsley
Senior Director of Operations
Elevate



Greg Zilberbrant
Program Lead, Circular
Economy & Climate Change
McMaster University



Heather Chalmers
President, GE Healthcare Canada
President And CEO
GE Canada



Herve Doan
Head of Quality Transport
& Logistics
Airbus



Isabelle Hertanto
Director, Cyber Security
ADGA Group Consultants



James K. Franz
Vice President Global Operations
Toyota Way Academy



Jamie Engdahl
Program Director
Northrop Grumman



Jeffrey Leandro
Armed Nuclear Security Officer,
Warrant Officer
Department of Defence



Colonel John McEwen
CD Commander
32 Canadian
Brigade Group



Julia Menninga
Learning and
Development Director
Volvo Car UK



Justine Hendricks
Senior Vice President, Sustainable
Business and Enablement
Export Development Canada

Recent Industry Guest Speakers



Dr. Katy Kamkar
Clinical Psychologist
University of Toronto



Lakshmi Eleswarpu
VP & CIO, Digital Transformation
Boeing



Lindsay James
Principal
Chrysalis Strategies



Mac Brazina
Founder
The Human Builder



Marcelo Lu
President
BASF Canada



Meaghan Davis
Acting Director, Circular
Economy and Innovation
City of Toronto



Michael Berends
Managing Director
Clear Blue Markets



Michelle Arbid
Acting FEMA Ombuds
FEMA



Michelle Oryschak
Talent and HR Consultant
JAE Consulting



Nadine Gudz
Vice President
Academy for
Sustainable Innovation



Nancy Barber
COO
Bombardier Aerospace



Nicole Verkindt
Founder & CEO
OMX



Nuno Lourenco
Head of Materials Engineering
& Product Sustainability
Jaguar Land Rover



Patricia McCunn-Miller
President and General Counsel
Blue Bridge Energy Inc.



Paul Rak
President
Veriform Inc.



Peter Howard
VP, Project Development
Pond Technologies



Raghav Khosla
Director
Amazon Logistics



Ron Dawson
Application Engineer
Copa Data



Rubin Jen
Agile/ Project Management
Philosopher
Consultant



Samantha Waytowich
Mohawk Commercial
Enterprise
Mohawk College



Sandra Odendahl
Vice President
Social Impact &
Sustainability, Scotiabank



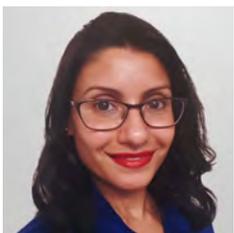
Shelley Peterson
Prin Investigator Augmented
& Mixed Reality
Lockhead Martin



Steve Wallace
CEO
Play On! Canada



Tanya Skilton
Director Global Innovation
General Motors



Thanuja Ruckman
Risk Manager, Warrant Officer
Department of Defence



Vishwanath Baba
Dean & Professor of
Management
McMaster University



Walter Miller
Director Continuous
Improvement
BAE Systems



Yasmeen Tonnos
CPCC, BA
Founder & CEO
BETR Inc.



Zoltan Koltai
Global Head of Manufacturing
Rolls-Royce Electrical



ENGINEERING
W Booth School of
Engineering Practice
and Technology

Tuition/ Fees

McMaster's Certificates of Completion are eligible for qualifying Canadian businesses and associations in collaboration with NGen Canada and the AMP UP Program to obtain a subsidy for our current offerings. Please add HST for Canadian applicants, and VAT for international applicants.

Any Individual McMaster Certificate of Completion Course <ul style="list-style-type: none"> • Course Certificate 	NGEN AMP UP / Association Cost \$750 CAD	Alumni & NGEN Member Cost \$1,500 CAD	Regular Cost \$2,000 CAD
Industry Operations Leadership & Management Full Program Participant <ul style="list-style-type: none"> • All Five Courses • Mentorship Program • Letter of Recommendation • Six Certificates 	NGEN AMP UP / Association Cost \$3,750 CAD	Alumni & NGEN Member Cost \$7,500 CAD	Regular Cost \$10,000 CAD
Sustainable Infrastructure Courses	Ontario (Public Sector)	Ontario (Private Sector)	Outside Ontario
CSCE Member	\$225 CAD	\$450 CAD	\$1,500 CAD
Non-CSCE Member	\$445 CAD	\$670 CAD	\$2,000 CAD

Please note both the Sustainable Infrastructure courses are not eligible for the NGEN subsidy. To inquire about costs for both these courses, please visit www.mccmcmaster.ca or contact our Outreach Lead.

Take the Next Step

Ready to enroll?

Do you have questions about the McMaster Certificates of Completion? Our team is here to help.

- Learn more about McMaster's certificate programs
- Determine which program is right for you or your organization
- Discuss payment options

Find upcoming **course dates** and **register** at www.mccmcmaster.ca

Outreach Lead
Ashan Corea

✉ coreaa@mcmaster.ca
 ☎ **+1 416-723-4218**





McMaster
University 

ENGINEERING

W Booth School of
Engineering Practice
and Technology

CONTACT US



coreaa@mcmaster.ca



www.mccmcmaster.ca