

# CONSTRUCTION MANAGEMENT MASTER OF SCIENCE

## Leading to a Master of Science in Construction Management Degree

The Master of Science in Construction Management (MSCM) program at Wentworth Institute of Technology is designed to educate students in foundational, post graduate construction management principles combined with relevant industry related education. The program prepares students with experience in topics that are specific to advancing professional skills in administrative and executive leadership positions within design firms, construction companies, and related disciplines. Both thesis and non-thesis options are available, allowing for various employment or educational opportunities, including but not limited to working for general contractors, real-estate developers, sub-contractors, construction management, and architectural/engineering firms, as well as advanced academic and teaching opportunities.

The Master of Science in Construction Management (MSCM) program at Wentworth Institute of Technology is accredited by the American Council for Construction Education (ACCE). The primary goal of ACCE is to promote and improve construction education in colleges and universities. By working together through ACCE, representatives of the total construction community and the public at large, construction educators and constructors establish and maintain standards and criteria for accreditation. ACCE provides guidance to those programs seeking to achieve accredited status, and carry out the accreditation process.

ACCE accreditation serves the interests of:

- Students: by helping them identify institutions and programs that offer quality education in construction education,
- The Construction Industry: by enabling employers to identify persons who have the potential for making lasting contributions to the construction industry and their profession, and
- Owners / Users of Constructed Facilities and the Public at Large: by raising the professional caliber of constructors and thus the quality of the construction for which they assume responsibility.

Specifically, accreditation of a construction education program by ACCE assures;

- Students and prospective employers that the program has met stringent industry standards of content and quality,
- That program graduates have been provided a quality education enabling them to perform a broad range of professional responsibilities, and
- The construction industry and students that the program performs periodic self-evaluations to keep current with emerging technologies and requirements of the construction industry.

Accreditation by ACCE assists an institution and its construction education program in maintaining contact with other programs and practicing construction professionals, and enables the program to;

- Keep current with emerging technologies in the field,
- Increase awareness of current courses, facilities, and services provided by other accredited programs,
- Improve instructional techniques, and
- Access construction industry contacts nationwide.

## Program Educational Objectives

To accomplish the mission of the Master of Science in Construction Management program, the following program goals have been developed in order to prepare students academically for personal and professional success in the built environment. The attainment of goals is evaluated through the program's outcome assessment program.

- Program Outcome 1: Present opportunities to develop meta-cognitive and life-long learning skills for students seeking increasingly complex management responsibilities, new leadership roles and overall career advancement,
  - Create effective and professional written communications
  - Apply critical thinking
  - Apply problem solving techniques
  - Apply research methods
- Program Outcome 2: Expose students to subject matter and industry experts and the latest technological and managerial/leadership advancements and their effects on the Construction Industry, and
  - Apply advanced communication technology
  - Understand risk management
  - Understand the principles of leadership in business
- Program Outcome 3: Prepare and develop students from related disciplines to advance into the field of Construction Management.
  - Apply decision making techniques
  - Apply professional ethics
  - Apply advanced construction management practices

The Graduate Program in Construction Management emphasizes integrating professional experience with Construction Management (CM) concepts. With an established MSCM program, the School of Management provides a curriculum with flexible course electives and three distinct and different degree tracks. This curriculum's vision is to give graduate students more flexibility to select their electives from the established MSCM curriculum, the facility management (MSFM), and the project management (MSPM) curriculum. Students will have the option to select one of the following tracks (*track declaration must be made and graduate faculty advisor notified of selection, prior to the start of the second semester of attendance in the MSCM program*); **Track 1 Coursework - 30 credit hours** (open for rolling admission Fall, Spring, and Summer), which focusses on pure graduate coursework only, **Track 2 Capstone Project - 30 credit hours** (Fall admission only), which contains an industry or research-focused project that serves as the culminating experience for the degree program, or **Track 3 Thesis - 30 credit hours** (Fall admission only) that include 6 credit hours in research thesis embedded across the final year. The program also allows full-time students to engage in an optional 1 credit Graduate Program Internship INTN6000 to gain hands-on experience in the construction industry (3 credits maximum during their tenure at Wentworth). Once a track has been declared by the student, any future changes to the plan of study must be approved via signature from their primary, graduate faculty advisor and the Dean's Office. **Note:** *Students without a CM-related, undergraduate degree (Civil Engineering, Architecture or Construction Management)* will be required to enroll in two pre-requisite

courses, which are in addition to the standard 30 credit hour degree tracks outlined by program.

### Track 1 Coursework

Course	Title	Credits
<b>Foundation courses: Required 9 credits</b>		
CONM7000	EXECUTIVE MANAGEMENT FOR CONSTRUCTION MANAGEMENT	3
CONM7050	RESEARCH METHODOLOGY FOR CONSTRUCTION MANAGEMENT	3
CONM7400	ADVANCED PROJECT CONTROLS	3
<b>CONNM Electives: Select a minimum of 9 credits from the following courses</b>		
CONM7100	MODERN CONSTRUCTION DELIVERY METHODS	3
CONM7200	CONSTRUCTION LAW	3
CONM7250	CONFLICT RESOLUTION & NEGOTIATION FOR CONSTRUCTION MANAGEMENT	3
CONM7300	REAL ESTATE DEVELOPMENT	3
CONM7500	INTERNATIONAL CONSTRUCTION	3
CONM7800	GRADUATE SPECIAL TOPICS IN CONSTRUCTION MANAGEMENT	3
<b>MGMT &amp; FMGT Electives: Select a maximum of 12 credits from the following courses</b>		
MGMT7025	PROJECT SCHEDULING & COST PLANNING	3
MGMT7050	BUSINESS FINANCE & INVESTMENT	3
MGMT7125	RISK MANAGEMENT	3
MGMT7225	PROJECT TEAM BUILDING & LEADERSHIP	3
MGMT7250	STRATEGIC FINANCIAL DECISION MAKING	3
MGMT7425	MANAGING TROUBLED PROJECTS	3
MGMT7450	COMMUNICATION STRATEGIES	3
MGMT7525	GLOBAL & VIRTUAL PROJECT MANAGEMENT	3
FMGT7000	PROJECT MANAGEMENT APPLICATIONS	3
FMGT7100	CONTEMPORARY ISSUES IN MANAGING TECHNOLOGY	3
FMGT7200	ENERGY & SUSTAINABILITY	3
FMGT7300	FACILITY OPERATIONS	3
FMGT7800	GRADUATE SPECIAL TOPICS IN FACILITIES MANAGEMENT	3
<b>Total Credits 30</b>		<b>30</b>

### Track 2 Capstone Project

Course	Title	Credits
<b>Foundation courses: Required 12 credits</b>		
CONM7000	EXECUTIVE MANAGEMENT FOR CONSTRUCTION MANAGEMENT	3
CONM7050	RESEARCH METHODOLOGY FOR CONSTRUCTION MANAGEMENT	3
CONM7400	ADVANCED PROJECT CONTROLS	3

Course	Title	Credits
CONM8000	CAPSTONE PROJECT IN CONSTRUCTION MANAGEMENT	3
<b>CONNM Electives: Select a minimum of 9 credits from the following courses</b>		
CONM7100	MODERN CONSTRUCTION DELIVERY METHODS	3
CONM7200	CONSTRUCTION LAW	3
CONM7250	CONFLICT RESOLUTION & NEGOTIATION FOR CONSTRUCTION MANAGEMENT	3
CONM7300	REAL ESTATE DEVELOPMENT	3
CONM7500	INTERNATIONAL CONSTRUCTION	3
CONM7800	GRADUATE SPECIAL TOPICS IN CONSTRUCTION MANAGEMENT	4
<b>MGMT &amp; FMGT Electives: Select a maximum of 9 credits from the following courses</b>		
MGMT7025	PROJECT SCHEDULING & COST PLANNING	3
MGMT7050	BUSINESS FINANCE & INVESTMENT	3
MGMT7125	RISK MANAGEMENT	3
MGMT7225	PROJECT TEAM BUILDING & LEADERSHIP	3
MGMT7250	STRATEGIC FINANCIAL DECISION MAKING	3
MGMT7425	MANAGING TROUBLED PROJECTS	3
MGMT7450	COMMUNICATION STRATEGIES	3
MGMT7500	QUANTITATIVE METHODS IN FACILITY MANAGEMENT RESEARCH	3
MGMT7525	GLOBAL & VIRTUAL PROJECT MANAGEMENT	3
FMGT7000	PROJECT MANAGEMENT APPLICATIONS	3
FMGT7100	CONTEMPORARY ISSUES IN MANAGING TECHNOLOGY	3
FMGT7200	ENERGY & SUSTAINABILITY	3
FMGT7300	FACILITY OPERATIONS	3
FMGT7800	GRADUATE SPECIAL TOPICS IN FACILITIES MANAGEMENT	4
<b>Total Credits</b>		<b>30</b>

### Track 3 Thesis

Course	Title	Credits
<b>Foundation Courses: Required 15 credits</b>		
CONM7000	EXECUTIVE MANAGEMENT FOR CONSTRUCTION MANAGEMENT	3
CONM7050	RESEARCH METHODOLOGY FOR CONSTRUCTION MANAGEMENT	3
CONM7400	ADVANCED PROJECT CONTROLS	3
CONM8900	CONSTRUCTION MANAGEMENT THESIS	6
<b>CONNM Electives: Select a minimum of 9 credits from the following courses</b>		
CONM7100	MODERN CONSTRUCTION DELIVERY METHODS	3
CONM7200	CONSTRUCTION LAW	3

Course	Title	Credits
CONM7250	CONFLICT RESOLUTION & NEGOTIATION FOR CONSTRUCTION MANAGEMENT	3
CONM7300	REAL ESTATE DEVELOPMENT	3
CONM7500	INTERNATIONAL CONSTRUCTION	3
CONM7800	GRADUATE SPECIAL TOPICS IN CONSTRUCTION MANAGEMENT	4
<b>MGMT &amp; FMGT Electives: Select a maximum of 6 credits from the following courses</b>		
MGMT7025	PROJECT SCHEDULING & COST PLANNING	3
MGMT7050	BUSINESS FINANCE & INVESTMENT	3
MGMT7125	RISK MANAGEMENT	3
MGMT7225	PROJECT TEAM BUILDING & LEADERSHIP	3
MGMT7250	STRATEGIC FINANCIAL DECISION MAKING	3
MGMT7425	MANAGING TROUBLED PROJECTS	3
MGMT7450	COMMUNICATION STRATEGIES	3
MGMT7525	GLOBAL & VIRTUAL PROJECT MANAGEMENT	3
FMGT7000	PROJECT MANAGEMENT APPLICATIONS	3
FMGT7100	CONTEMPORARY ISSUES IN MANAGING TECHNOLOGY	3
FMGT7200	ENERGY & SUSTAINABILITY	3
FMGT7300	FACILITY OPERATIONS	3
FMGT7800	GRADUATE SPECIAL TOPICS IN FACILITIES MANAGEMENT	4
Total Credits		30