

Accounting – Finance	Economics and Finance	Leadership in Organizations
Accounting Level 1 (Foundations)	Economics: Fundamentals	Level 1 Public Administration and Governance
Accounting Level 2 (Intermediate I)	Economics: Theory and Applications	Level 2 Public Administration and Governance
Accounting Level 3 (Intermediate II)	Emergency Management, Threat and Response Planning	Lighting Design
Accounting Level 4 (Advanced)	Energy Management and Conservation	Local Economic Development
Advanced Applied Digital Geography and GIS	English Literature and Popular Culture	Mental Health and Addictions
Advanced Architecture	Entering Foreign Markets	Music: Global and Cultural Contexts
Advanced Enterprise Architecture and Infrastructure Management	Entrepreneurship and Small Business	Nonprofit and Voluntary Sector Management
Advanced International Trade Management	Ethics	Nursing and Interprofessional Healthcare Leadership and Management
Advanced Safety Management	Facility and Property Management	Occupational Health and Safety
Aging and Gerontology	Fashion Innovation	Occupational Health and Safety Leadership
Applied Digital Geography and GIS	Film Studies	Photography Studies
Architecture	Financial Mathematics Modeling and Predictive Analytics	Practical Data Science and Machine Learning
Business Communication	Financial Planning	Privacy, Access, and Information Management
Business Decision Analysis	Food Security	Proficiency in French
Business French and Translation	Foundations of International Management	Proficiency in Spanish
Business Management	Full Stack Developer	Project Management
Canadian Dietetic Knowledge Competencies	Fundamentals of Interior Design	Project Management for Technical Professionals
Canadian Social Work Practice	Fundraising Management	Psychology
Caribbean Studies	Graphic Communications	Public Administration and Leadership
Community Engagement, Leadership, and Development	Health Informatics	Public Relations
Computer Coding (Formerly Computer Programming Applications)	Health Services Management	Publishing
Crime Analytics	Health Studies	Retail Management
Criminal Justice and Criminology	Human Resources Management	Robotics and Embedded Systems
Cybersecurity, Data Protection and Digital Forensics	Image Arts (with specializations in Film Studies or Photography Studies)	Social Sciences and Humanities Foundations
Data Analytics, Big Data, and Predictive Analytics	Indigenous Child and Youth Engagement	Strategic Marketing Management
Design for Arts and Entertainment	Indigenous Knowledges and Experiences	Urban Agriculture
Design Management	Information Systems Management	
Digital Art Production	Introduction to Community Services	
	Landscape Design for Climate Resilience	

# Accounting – Finance

Note: Effective Fall 2022, the Certificate in Accounting-Finance has been discontinued and is now part of the Accounting Certificate Series. Students who registered in the certificate prior to July 2, 2022, should refer to the archived calendar for the curriculum details of your year of registration.

If you would like to consider following the revised curriculum, please reach out to our Client Services team at [ce@torontomu.ca](mailto:ce@torontomu.ca) for help in reviewing your options.

## Required Courses

- CACC 110 Financial Accounting
- CACC 410 Management Accounting
- CACC 414 Intermediate Accounting I
- CACC 514 Intermediate Accounting II
- CFIN 300 Managerial Finance I
- CFIN 401 Managerial Finance II

## Electives (select 2)

- CACC 504 Accounting Cases and Concepts I
- CACC 521 Auditing
- CACC 522 Taxation for Managers and Financial Planners
- CFIN 502 Personal Financial Planning
- CITM 102 Business Information Systems I
- CLAW 122 Business Law
- CQMS 210 Applied Statistics for Business

## Certificate Requirements

- 6 required courses\*
- 2 electives
- Cumulative grade point average (GPA) 1.67+

\*If you are an internationally educated professional who has received a waiver from CPA Ontario for CACC 110 and CACC 410, you may apply to the academic coordinator to waive these courses. If granted a waiver, you will need to complete 4 electives (instead of 2) to fulfill the certificate requirements.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Foundations for Accounting

Upon completion of all four certificates, you will be able to apply for the CPA Professional Education Program (CPA PEP). After completing the PEP, you will be able to write the three-day Common Final Examination (CFE) exam.

The certificate series is fully online, so you can fit learning into your busy schedule. As a Chang School learner, you will have access to support from advisors, staff, instructors, and classmates to help you move towards your goal and build out your professional network.

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## Industry and Careers

This certificate can lead to career paths in roles such as:

- Accounting clerk
- Accounting technician
- Bookkeeper
- Budget analyst
- Business or credit analyst
- Fund accountant
- Payroll officer
- Property accountant

## Who Should Take This Certificate?

- College or university graduates of non-accounting fields who want to pursue the Chartered Professional Accountant (CPA) designation
- Newcomers to Canada who are seeking a Canadian university credential in accounting and finance to build their resume and help secure a job
- Business owners or managers who want to enhance their accounting acumen
- Working professionals with the goal of pivoting their career into accounting or finance

## What Will You Learn?

After completing this certificate, you will have:

- A fundamental understanding of current accounting standards and procedures
- An exposure to basic knowledge in general areas relevant to business practice
- Four courses accredited by the CPA that count towards the PEP prerequisites
- Foundational accounting methods and current business knowledge that can be applied to a business or entry-level position

## Required Courses

- ☐ CACC 110 Financial Accounting
- ☐ CLAW 122 Business Law
- ☐ CECN 210 Understanding Economics
- ☐ CQMS 210 Applied Statistics for Business

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) 1.67+

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Intermediate Accounting I

Upon completion of all four certificates, you will be able to apply for the CPA Professional Education Program (CPA PEP). After completing the PEP, you will be able to write the three-day Common Final Examination (CFE) exam.

The certificate series is fully online, so you can fit learning into your busy schedule. As a Chang School learner, you will have access to support from advisors, staff, instructors, and classmates to help you move towards your goal and build out your professional network.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Accounting assistant
- Accounting receivable or payable clerk
- Bookkeeper
- Business or credit analyst
- Payroll officer
- Accounting clerk
- Accounting technician
- Budget analyst
- Fund accountant
- Property accountant

## Who Should Take This Certificate?

- College or university graduates of non-accounting fields who want to pursue the Chartered Professional Accountant (CPA) designation
- Newcomers to Canada who are seeking a Canadian university credential in accounting and finance to build their resume and help secure a job
- Business owners or managers who want to enhance their accounting acumen
- Working professionals with the goal of pivoting their career into accounting or finance

## What Will You Learn?

After completing this certificate, you will have:

- Technical and enabling competencies required by CPAs, such as management accounting, finance, other general business topics and data analytics and information systems
- 3 courses accredited by the CPA that count towards the PEP prerequisite
- A foundation in financial and managerial competence and business confidence in relevant practice areas applied to a business or entry-level position

## Required Courses

- ☐ CACC 410 Management Accounting
- ☐ CLAW 603 Advanced Business Law
- ☐ CFIN 300 Managerial Finance I
- ☐ CITM 102 Business Information Systems I

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) 1.67+

## Admission Criteria

Completion of Level 1 in the Accounting Certificate Series.

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Intermediate Accounting II

Upon completion of all four certificates, you will be able to apply for the CPA Professional Education Program (CPA PEP). After completing the PEP, you will be able to write the three-day Common Final Examination (CFE) exam.

The certificate series is fully online, so you can fit learning into your busy schedule. As a Chang School learner, you will have access to support from advisors, staff, instructors, and classmates to help you move towards your goal and build out your professional network.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Accounting assistant
- Accounting receivable or payable clerk
- Bookkeeper
- Business or credit analyst
- Payroll officer
- Accounting clerk
- Accounting technician
- Budget analyst
- Fund accountant
- Property accountant

## Who Should Take This Certificate?

- College or university graduates of non-accounting fields who want to pursue the Chartered Professional Accountant (CPA) designation
- Newcomers to Canada who are seeking a Canadian university credential in accounting and finance to build their resume and help secure a job
- Business owners or managers who want to enhance their accounting acumen
- Working professionals with the goal of pivoting their career into accounting or finance

## What Will You Learn?

After completing this certificate, you will have:

- Technical and enabling competencies required by CPAs, such as financial reporting, finance, and management accounting at an intermediate level
- Communication, critical thinking, and problem-solving skills through extensive use of case analysis and writing strategies
- 5 courses accredited by the CPA that count towards the PEP prerequisite

## Required Courses

- ☐ CACC 414 Intermediate Accounting I
- ☐ CFIN 401 Managerial Finance II
- ☐ CACC 514 Intermediate Accounting II
- ☐ CACC 504 Accounting Cases and Concepts I
- ☐ CACC 801 Intermediate Cost and Management Accounting

## Certificate Requirements

- 5 required courses
- Cumulative grade point average (GPA) 1.67+

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Advanced Accounting

Upon completion of all four certificates, you will be able to apply for the CPA Professional Education Program (CPA PEP). After completing the PEP, you will be able to write the three-day Common Final Examination (CFE) exam.

The certificate series is fully online, so you can fit learning into your busy schedule. As a Chang School learner, you will have access to support from advisors, staff, instructors, and classmates to help you move towards your goal and build out your professional network.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Accounting analyst
- Accounting assistant
- Accounting clerk
- Accounting receivable or payable clerk
- Accounting technician
- Bookkeeper
- Budget analyst
- Business or credit analyst
- Fund accountant
- Internal or external auditor
- Junior accounting analyst
- Payroll officer
- Property accountant
- Staff accountant
- Tax specialist

## Who Should Take This Certificate?

- College or university graduates of non-accounting fields who want to pursue the Chartered Professional Accountant (CPA) designation
- Newcomers to Canada who are seeking a Canadian university credential in accounting and finance to build their resume and help secure a job
- Business owners or managers who want to enhance their accounting acumen
- Working professionals with the goal of pivoting their career into accounting or finance

## What Will You Learn?

After completing this certificate, you will have:

- Technical and enabling competencies required by CPAs, such as financial reporting, audit and assurance, taxation, management, and governance and data analytics and information systems
- Skills necessary to evaluate accounting and reporting methods, examine audit processes
- A detailed overview of the federal income tax laws concerning income and taxes payable of individuals, corporations, and trusts, as well as practical tax planning considerations
- An understanding of tax compliance obligations
- Developed the analytical skills necessary to evaluate accounting and reporting methods
- 6 courses accredited by the CPA and count towards the association's PEP prerequisite
- A comprehensive understanding financial information and accounting practices
- The ability to progress/apply to intermediate or more senior level employment opportunities that require a diploma or certificate in accounting from a post-secondary institution
- The ability to expand accounting applications to a wide variety of business and financial settings
- The ability to apply tax concepts to routine situations

## Required Courses

- ☐ CACC 703 Advanced Financial Accounting
- ☐ CACC 742 Canadian Business Taxation I
- ☐ CACC 842 Canadian Business Taxation II
- ☐ CACC 521 Auditing
- ☐ CACC 696 Information Systems Audit + Data Analytics
- ☐ CBUS 800 Strategic Management

## Certificate Requirements

- 6 required courses
- Cumulative grade point average (GPA) 1.67+

## Admission Criteria

Completion of Levels 1-3 in the Accounting Certificate Series.  
Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Advanced Applied Digital Geography and GIS

Important Note: The Advanced Applied Digital Geography and GIS Certificate in Arts will not be accepting any new registrants. This certificate has been discontinued effective Fall 2022. Students formally registered in the certificate must complete the program requirements in effect at the time they registered. For curriculum details, please refer to the archived calendar for your year of registration. For more information, please contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

## Required Courses - First Level

- CODG 210 Spatial Database Management Systems
- CODG 211 Advanced GIS Programming
- CODG 212 Spatial Statistical Methods
- CODG 213 Internet GIS

## Required Courses - Second Level (select 1 or 2)

You may select 1 or both of the following courses. If you choose 1, you need to complete 1 course from the Electives to fulfill the certificate requirements.

- CODG 220 GIS Implementation
- CODG 221 GIS Project

## Electives (select 1)

This category only applies if you select 1 course from the Required Courses – Second Level. If you choose both courses, you do not need to complete this category

- CODG 130 Legal and Ethical Issues in GIS and Digital Data
- CODG 131 Issues and Innovations
- CODG 132 Customizing GIS Software: Applications Programming
- CODG 133 Map Algebra: Topology and Overlay
- CODG 135 Digital Image Processing and Applications
- CODG 136 Web Mapping

## Certificate Requirements

- 6 required courses
- 1 elective\*
- Cumulative grade point average (GPA) 1.67+

\*The elective category only applies if you select 1 course from the Required Courses – Second Level category. If you choose both courses, you do not need to complete this category.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Completion of Levels 1-3 in the Accounting Certificate Series.

Recommended:

- Certificate in Applied Digital Geography and GIS or equivalent

Admission Application

You must complete an application for pre-approval and be approved before registering for your first course. To obtain an application, visit Forms and Documents. The completed application, together with transcripts, may be presented to the academic coordinator during the Open House or mailed to the address on the form.

Admission Interview/Placement Assessment

You must also complete an interview with the academic coordinator to facilitate assessment of prior learning. Official documentation of English proficiency may be required if English is not your first language.

# Advanced Architecture

Note: Effective Fall 2022, the Certificate in Advanced Architecture has been discontinued. Students who registered in the certificate prior to July 2, 2022, should refer to the archived calendar for the curriculum details of your year of registration. You might also be interested in pursuing one of our other certificates in Project Management, Fundamentals of Interior Design, or Landscape Design and Climate Resilience. For more information, reach out to our Client Services team at [ce@torontomu.ca](mailto:ce@torontomu.ca).

## Required Courses

- ❑ CCMN 432 Communication in the Engineering Professions
- ❑ CKAR 215 Computer-Aided Architectural Drawing
- ❑ CKAR 500 Sustainable Buildings
- ❑ CKAR 601 Building Science for Architectural Preservation and Conservation

## Electives (select 2)

- ❑ CENT 500 New Venture Startup
- ❑ CKAR 203 Specifications and Contractual Documents
- ❑ CKAR 209 Digital Graphics for Architecture and Design
- ❑ CKAR 785 Building Info Modelling (REVIT)
- ❑ CKPM 214 Project Development and Control
- ❑ CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 4 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

## Admission Criteria

Required:

- Certificate in Architecture

OR

- Equivalent academic qualifications and relevant work experience



# Advanced Enterprise Architecture and Infrastructure Management

Enterprise Architects are some of the most senior and well-paid Information Technology professionals. The occupation requires high educational attainment and the ability to understand the interdependence of organizational processes. This program will give you the advanced analytical skills to solve business problems by applying IT architecture and infrastructure, and the knowledge to enhance computer and network security in an operational environment.

## Industry and Careers

This program can lead to career paths in various areas such as:

- Business analyst
- Enterprise architect

## Who Should Take This Certificate?

- Graduates from the following programs who want to develop a specialty in Enterprise Architecture:
  - Engineering degree
  - IT-related degree or diploma
  - Master of Business Administration
  - The Chang School's Certificate in Information Systems Management
- Professionals currently working in the following areas who seek a specialized role in Enterprise Architecture:
  - business analytics
  - database development
  - engineering
  - network administration
  - software development
  - security administrator

Students should have an Information Systems Management (ISM) certificate or an IT educational background at college or university levels.

## What Will You Learn?

This advanced certificate program offers students the knowledge and necessary tools for determining how an organization can effectively achieve its current and future objectives. It offers IT-enabled business process management from an analytical perspective. This analytical capability is enriched with advanced topics in information systems security and privacy.

After completing this certificate, you will be able to:

- advise organizations on how to respond to emerging technologies and the growing complexity of information systems
- develop and manage information technology architecture and infrastructure to meet the strategic needs of business and government
- analyze and solve business problems by applying information technology architecture and infrastructure
- understand the context of enterprise architecture frameworks, including:
  - the open group architecture framework (togaf)
  - service-oriented architecture (soa)
  - control objectives for information and related technologies (cobit)
  - zachman

## Required Courses

- ☐ CITM 410 Business Process Design
- ☐ CITM 706 Enterprise Architecture
- ☐ CITM 820 Information Systems Security and Privacy

## Electives (select 1)

- ☐ CITM 330 Supply Chain Process Architecture
- ☐ CITM 600 Data Communications Network Design
- ☐ CITM 711 Cloud Computing
- ☐ CITM 750 IS Project Management

## Certificate Requirements

- 3 required courses
- 1 elective
- Cumulative grade point average (GPA) 1.67+

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

AND

- All of the following courses or equivalents:
  - CITM 100 or CITM 102
  - CITM 207
  - CITM 301

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Advanced International Trade Management

Did you know that 1.9 million Canadian jobs are related to Canada's exports to the United States with one in six jobs in Canada related to exports? With its diverse set of actors and interests, international trade has always been complex. Yet, in today's political and economic climate, even the most solid international trade agreements – as well as the institutions and norms necessary to facilitate trade – are in flux. Employers across sectors are seeking talented graduates who understand the complexities of international trade management. This certificate program provides an advanced understanding of the current international trade environment and helps you develop the analytical skills necessary to assess business risk in international transactions.

## Industry and Careers

This program can lead to career paths in various areas such as:

- Executive management
- Foreign services
- Import/export small business
- International procurement
- Export compliance
- Global risk analysis
- International freight forwarding
- International trade logistics

## Who Should Take This Certificate?

- Graduates of the Certificate in Foundations of International Management who want to advance their knowledge
- Working professionals in either the private or public sector who need specialized expertise in international trade
- Owners, managers, and employees of enterprises that conduct business across borders.

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Utilize analytical skills to mitigate financial and political risk when conducting international business transactions
- Understand how international trade agreements and international institutions influence the sale of products and services across borders
- Recognize the meaning and importance of ethical leadership in dealing with government regulations, customers and employees
- Appreciate the role of the export manager in areas including:
  - export pricing
  - documentation
  - shipping
  - insurance
  - sourcing export promotion assistance

## Required Courses

- ☐ CGMS 723 International Trade
- ☐ CGMS 724 Management of International Enterprise
- ☐ CGMS 802 Ethics and Regulation of Int'l Bus

## Electives (select 2)

- ☐ CECN 104 Introductory Microeconomics
- ☐ CGMS 400 The Global Business Environment
- ☐ CGMS 450 Project Management
- ☐ CLAW 122 Business Law
- ☐ CLAW 724 Legal Aspects of International Business

## Certificate Requirements

- 3 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Certificate in Foundations of International Management or equivalent

AND

- All of the following courses or equivalents:
  - CGMS 200
  - CGMS 401
  - CQMS 102

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Advanced Safety Management

Gain the tools and expertise you need to become an occupational health and safety (OHS) professional. With the fully online Certificate in Advanced Safety Management, develop an understanding of advanced safety-specific topics and meet a growing demand across industries. Acquire the skills to analyze and apply accident theory, evaluate safety and control measures, and put systems management approaches into practice to ensure safe workplaces.

## Industry and Careers

Every workplace in Ontario with more than five employees is legally required to plan and put into practice an occupational health and safety policy. Almost all industries need personnel with in-depth, applied knowledge of OHS.

OHS roles are found in public and private workplace settings, including:

- Airports
- Construction
- Heavy industry such as mining and forestry
- Hospitals and other health care providers
- Local government and other public sector organizations
- Transportation agencies and providers
- Universities and other educational institutions

Possible job titles:

- Compliance officer
- Health and safety officer
- Occupational hygiene technician
- OHS manager Safety supervisor

## Who Should Take This Certificate?

If you're looking to build on your existing knowledge and expertise in OHS to explore advanced, safety-specific topics and set you on a course to the top of your field.

You may be interested if you are:

- a graduate of our Certificate in Occupational Health and Safety (or equivalent)
- an experienced occupational health and safety practitioner
- in charge of directing OHS management systems in your workplace

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Apply accident theory and analysis
- Advise on ergonomic issues
- Implement hazard evaluation and control techniques
- Execute OHS practices in a variety of workplace contexts, including: construction, health care facilities, retail outlets, offices, utilities, forestry and mining
- Manage fire and radiation safety

Courses are drawn from Toronto Metropolitan University's Bachelor of Applied Science in Occupational and Public Health (BASc). Courses completed as part of this certificate may be recognized towards the completion of the BASc. By completing this program after the Certificate in Occupational Health and Safety, and then continuing on to the Certificate in Occupational Health and Safety Leadership, you will meet the educational requirements to write the Board of Canadian Registered Safety Professionals (BCRSP) exam to become a Canadian Registered Safety Professional (CRSP).

## Required Courses

- ☐ COHS 323 Accident Theory
- ☐ COHS 516 Ergonomics
- ☐ COHS 523 Safety Evaluation Techniques
- ☐ COHS 623 Safety Control Methods
- ☐ COHS 709 Fire and Radiation Safety
- ☐ COHS 800 Sectoral Applications

## Electives (select 2)

- ☐ CINT 900 Program Planning and Evaluation Strategies
- ☐ CINT 902 Disability Issues
- ☐ CINT 905 Conflict Resolution in Community Services

## Certificate Requirements

- 6 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Certificate in Occupational Health and Safety or equivalent
- OR

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

OR

- Mature student status and five years of professional experience in occupational health and safety, plus the following courses:
  - COHS 208
  - COHS 718

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Aging and Gerontology

In the next decade, it's expected that older adults will represent a quarter of the Canadian population, according to Statistics Canada. This demographic shift will present unprecedented opportunities for those serving our aging population. It also means that most professionals will work with older people. Equip yourself with the skills to meet the unique needs of this growing demographic through the application of gerontology theory, practice, and policy change.

## Industry and Careers

This certificate can lead to career paths in roles such as.

- Family counsellor
- Legal advocate
- Occupational therapist
- Psychogeriatric case manager
- Recreation specialist
- Research and community engagement coordinator
- Residential support worker
- Social worker
- Ultrasound technician
- Wellness consultant

## Who Should Take This Certificate?

- Recent graduates of health, social work, counseling, sociology, and psychology who are looking to start a career working with older adults
- Individuals working as educational or public administrators, retirement housing managers, recreational/health consultants, and human resource coordinators who need to build their skill set so they can design programs and develop policies for older adults

## What Will You Learn?

- Examine the implications of aging and evaluate the services available for aging populations in Canada and globally from the following a variety of perspectives, including social, political, psychological, demographic, and more
- Influence practice and policy change in the field of aging
- Identify how technological innovation influences health and social engagement within aging populations
- Practice well-honed leadership, conflict management, and customer service skills

## Required Courses

- ❑ CINT 901 Gerontology: Critical Issues and Future Trends
- ❑ CINT 930 Aging: From Cells to Society
- ❑ CINT 935 Ethical/Legal Frameworks in Aging
- ❑ CINT 940 Mobilizing Research for Change

## Electives (select 2)

- ❑ CHSM 307 Principles of Long Term Care Service Del.
- ❑ CINT 555 Special Topics in Interdisciplinary Studies
- ❑ CINT 900 Program Planning and Evaluation Strategies
- ❑ CINT 904 Health Promotion and Community Development
- ❑ CINT 907 Team Work for Community Services
- ❑ CINT 945 Technology and Aging Populations
- ❑ CINT 950 Practicum/Project in Gerontology

## Certificate Requirements

- 4 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

OR

- Mature student status

# Applied Digital Geography and GIS

Geographic information systems (GIS) are used by a growing number of businesses, industries, and government organizations to help them make more informed decisions. Our certificate will help you to gain enhanced computer literacy in the management and analysis of digital spatial data, and to use that data effectively in decision-making – the skills needed to become a successful GIS professional.

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Learn principles and concepts of digital geography and fundamental GIS skills. In the certificate program, you will focus on specific specialties and workplace applications, GIS tools, and implementation issues.

## Industry and Careers

GIS are used in government, industry, utilities, planning, municipal services, health, and retailing.

This certificate can lead to a career in various roles. Here are some examples.

- Crime analyst
- Decision support analyst/specialist
- GIS analyst/specialist/technician
- Location analyst
- Research analyst
- Spatial database technician

## Who Should Take This Certificate?

- Recent university graduates who are interested in starting a career in the GIS industry
- Professionals in other fields who are interested in pivoting to a career as a GIS professional

## What Will You Learn?

After completing this certificate, you will be able to:

- Understand geographic databases, visualization, digital geography, system components
- Identify GIS applications in business, municipalities, utilities, environmental management, and community and social services
- Understand and address legal and ethical issues, innovations in GIS, GIS programming, map algebra, digital image processing, and web mapping

## Required Courses

- CODG 101 Spatial Databases and Digital Cartography
- CODG 102 Digital Geography and Spatial Analysis

## Electives - Group A (select 1 or 2)

These professional applications courses allow you to focus on an area of interest

- CODG 123 Digital Geography Applications in Utilities Planning
- CODG 124 Digital Geography Applications in Business Decision-Making
- CODG 125 Digital Geography Applications for the Municipal Professional
- CODG 126 Digital Geography Applications in Environmental Management
- CODG 127 Digital Geography Applications in Community and Social Services

## Electives - Group B (select 2 or 3)

These courses are designed to provide you with some understanding of the more complex core skills and issues facing business, municipal, environmental, utilities or community and social services professionals when they employ digital geography in their decision-making.

- CODG 130 Legal and Ethical Issues in GIS and Digital Data
- CODG 131 Issues and Innovations
- CODG 132 Customizing GIS Software: Applications Programming
- CODG 133 Map Algebra: Topology and Overlay
- CODG 135 Digital Image Processing and Applications
- CODG 136 Web Mapping

## Electives - Group C (select up to 1)

This category only applies if you select a total of 3 electives from Groups A and B (combined), and wish to take 1 of the following electives as your final course for certificate completion.

- CODG 210 Spatial Database Management Systems
- CODG 211 Advanced GIS Programming
- CODG 212 Spatial Statistical Methods
- CODG 213 Internet GIS

## Certificate Requirements

- 2 required courses
- 4 electives\*
- Cumulative grade point average (GPA) 1.67+

\*Electives are divided into 3 groups, allowing you to focus on an area of interest and then dive into more specialized skills. Select 1 or 2 electives from Group A and 2 or 3 electives from Group B; alternatively, as the final course for certificate completion, you may choose to take 1 elective from Group C.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

An undergraduate degree or college diploma in an acceptable related field.

Admission Application

You must complete an application for pre-approval and be approved before registering for your first course. To obtain an application, visit Forms and Documents. The completed application, together with transcripts, may be presented to the academic coordinator during the Open House or mailed to the address on the form.

Advanced Credit:

All applicants to the program are eligible to apply for advanced standing, with credit being granted for course work undertaken, or for professional practice, providing the course work or professional practice meets or exceeds the academic goals and content of the program courses for which credit is being sought. Advanced credit applications will be evaluated by the academic coordinator and the program director, and are subject to normal Toronto Metropolitan University admission policies and procedures. Students may be required to take a challenge examination in order to ascertain eligibility for advanced standing. Students will be eligible for a maximum of three course credits toward the certificate.

# Architecture

Job posting for “architect” and “architectural technologists” saw a 59.54 percent increase between 2020 and 2021, according to Burning Glass Labour Market Insights. Whether you need university-level qualification to compliment your undergraduate degree or to get trained on digital architecture technologies and building codes and materials related to Canada’s northern climate, the Certificate in Architecture will help you get there.

This six-course certificate is the only one of its kind available online and is shorter than similar programs offered at other post-secondary institutions. Because it isn’t a full-time program, you can continue working and get the credentials you need.

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Learn from practicing Canadian Architects who are working in the field, bringing real-world expertise to the courses they teach. Many of our instructors are leading architects and faculty members in the Department of Architectural Science at Toronto Metropolitan University.

## Industry and Careers

Graduates from this certificate are hired in the architecture, engineering, and construction (AEC) industries. Job titles include but are not limited to:

- Architectural technologist
- Building science professional
- Architect assistant

This certificate can help you build in-demand skills that can help you move into job roles related to:

- digital architectural drawing and drafting, including REVIT
- building materials and methods for northern climates, among others
- municipal and provincial planning, codes, and standards
- building science principles

## Who Should Take This Certificate?

- Individuals who hold an undergraduate degree in a related field, including urban planning, sustainability and sustainable science, economics, design, urban agriculture, civil engineering, or mechanical engineering
- New Canadians looking to get Canadian credentials and have Canadian-based training related to our climate. (New Canadians can only become architects if they take an accredited four-year undergraduate degree and a Master’s degree at a Canadian university but may be employed in architectural technologist positions after completing this certificate.)

## What Will You Learn?

In this certificate, you will learn how to use the digital architecture technologies that employers are looking for. These include but are not limited to:

- AutoCAD
- REVIT

You will also learn all of the building regulations, policies, sustainable building practices, building materials for the Canadian climate, which will give you Canadian-specific training and knowledge.

Stand out from the competition by learning how to build presentation and communication skills on top of architectural skills.

## Required Courses

- CKAR 205 Building Codes and Regulations
- CKAR 310 Materials and Methods
- CKAR 500 Sustainable Buildings
- CKAR 601 Building Science for Architectural Preservation and Conservation
- CKAR 785 Building Info Modelling (REVIT)

## Electives (select 1)

- CKAR 215 Computer-Aided Architectural Drawing
- CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 5 required courses
- 1 elective
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- A post-secondary undergraduate education (university or college) in a relevant field of study (including programs related to architecture and/or environmental sciences)



# Business Communication

Organizations and researchers consistently identify strong communication skills as key contributors to the success of job seekers and employees. The communication skills developed in this certificate are widely recognized and in demand across a broad range of employment sectors and organizations.

According to the Government of Canada, this demand will continue in the coming years as communications skills are integral to professional occupations in advertising, marketing, and public relations. The Canadian government projects that available positions in these occupations will exceed the number of job seekers until 2028.

## Industry and Careers

The skills taught in this certificate are applicable across nearly all sectors. Whether you wish to enrich your skill set in the following roles, or you are interested in pursuing a new career, this certificate offers opportunities for a variety of career paths:

- Communications consultant
- Communications officer
- Communications specialist
- Community manager
- Content creator
- Content manager
- Corporate trainer
- Creative technologist
- Experience designer Information architect
- Policy analyst
- Public relations manager or strategist
- Search marketing specialist
- Social media manager or specialist

## Who Should Take This Certificate?

- Professionals looking to improve their communication skills and hone their ability to write, speak, and communicate visually
- Individuals who want to increase their confidence and ability to reach internal and external audiences
- Professionals seeking to advance in their organization or career
- Individuals interested in new media platforms and developing skills to use them effectively

## What Will You Learn?

After completing this certificate, you will be able to:

- Utilize your newfound knowledge of and the ability to adapt the basic forms and genres of contemporary professional communication to workplace demands
- Analyze communication scenarios and develop appropriate and effective organizational and individual responses
- Understand fundamental principles of effective written, spoken, and visual communication techniques that will allow the learner to apply these skills and evaluate the communication products that rely on them
- Utilize practical skills that will help them communicate effectively using new media forms
- Employ communication skills that recognize and help to create equitable, diverse, and inclusive professional environments

## Required Courses

- ☐ CCMN 279 Introduction to Professional Communication
- ☐ CCMN 313 Organizational Report Writing
- ☐ CCMN 314 Professional Presentations
- ☐ CCMN 413 Corporate Communications
- ☐ CCMN 414 Interpersonal Communication in Management
- ☐ CCMN 443 Contemporary Intercultural Communication

## Electives (select 2)

- ☐ CCMN 114 Short Management Reports
- ☐ CCMN 315 Issues in Organizational Communication
- ☐ CCMN 447 Communication and Law
- ☐ CDCM 300 Communicating in Virtual Environments
- ☐ CDCM 415 Promotional Communications
- ☐ CFRE 502 Communication and Business French

## Certificate Requirements

- 6 required courses
- 2 electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U credits (including English, Mathematics (Advanced Functions and one of either Calculus and Vectors or Data Management), and Science (Biology or Chemistry or Physics)) OR M credits with a minimum average of 70 percent or equivalent academic status.

OR

- Mature student status



# Business Decision Analysis

The demand for specialists in data analytics is growing. Organizations worldwide continue to realize the potential of harvesting data to gain a competitive edge.

Up your game with our Certificate in Business Decision Analysis. Learn to identify and define particular business issues, ask the right questions, and use quantitative analysis to support your organization's business goals. Grounded in statistics, mathematics, and computer modeling, this program is designed to develop your skills in effectively using quantitative data for managerial decision-making, across the organization, to improve business outcomes.

## This Program

- offers both online and in-class learning
- is eligible for OSAP
- is comprised of degree credit courses
- offers students the opportunity to apply all, or most, of the credit earned through the certificate as transfer credits to a Bachelor of Commerce program at Toronto Metropolitan University or at other universities (subject to admission and the requirements of the degree to which you are applying)

Note to students registered in this certificate program: Effective Fall 2020, the Certificate in Business Decision Analysis has been revised. Students who were formally registered in the certificate prior to July 2, 2020, must complete the curriculum requirements that were in effect at the time of their registration. For curriculum details, please refer to the archived calendar for your year of registration.

## Who Should Take This Certificate?

- You want to add valuable skills in data analytics to your current professional practice.
- You are a recent graduate looking to increase your competitiveness on the job market by complementing your degree with skills in data analytics.
- You work in a sector (health, finance, retail) or job function (human resources) in which data analytics is increasingly driving business outcomes and you require a better understanding to excel in your role or be promoted.

## What Will You Learn?

- Describe, summarize, present, and analyze statistical data to support business decision-making
- Ask the right questions to identify and define particular business issues, then leverage data from across the organization to improve business outcomes
- Create data collection and management strategies to support business decision-making
- Use data to develop priorities for investing limited resources to the best advantage
- Analyze business problems using model formulation and problem-solving techniques
- Apply the more widely used time-series forecasting techniques and understand the practical problems of forecasting (data acquisition, model selection, and the interpretation of results) and inclusive professional environments

## Required Courses

- ☐ CQMS 210 Applied Statistics for Business

## Electives (select 4)

- ☐ CGMS 422 Quality Management
- ☐ CIND 123 Data Analytics: Basic Methods
- ☐ CITM 501 Prescriptive Analytics and Simulation
- ☐ CQMS 442 Multiple Regression for Business
- ☐ CQMS 521 Business Optimization
- ☐ CQMS 703 Business Forecasting Techniques

## Certificate Requirements

- 1 required courses
- 4 electives
- Cumulative grade point average (GPA) 1.67+

Supplies to be purchased by the student:

A calculator with specialized statistical features is integral to many Quantitative Methods courses. Software and calculator specifications will be announced at the first class.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits (including Mathematics)

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Business French and Translation

Studies show that Canadians who speak both French and English earn more on average than their peers who speak one language. French is the third most used language on the Internet and worldwide with over 350 million French speakers and many of them in new markets that are growing in economic importance.<sup>1</sup>

This certificate provides a wide range of specialized and practical French language courses that can help you improve your communication and translation skills.

Many of our students work in finance, banking, or government, and wish to improve their abilities in French. Some teach French courses and want to improve their business and translation skills. No matter your goals, this certificate can add to your professional qualifications and enhance your career opportunities.

If you are already proficient or fluent in French and wish to increase your business French and translation skills, this is the certificate for you.

## Industry and Careers

Fluency in French can widen your career opportunities in fields where bilingualism may be required or desired. This certificate can help you improve your French communication and translation skills, which can open many doors for your career.

## Who Should Take This Certificate?

This certificate is for individuals who have already completed the Certificate in Proficiency in French or can demonstrate at least an equivalent level of fluency.

It offers a range of specialized and practical courses to improve your French communication and translation skills, adding to your professional qualifications and career opportunities.

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Utilize analytical skills to mitigate financial and political risk when conducting international business transactions
- How to use French in business transactions and communications
- Business French vocabulary
- Important differences between English and French writing protocol
- English-to-French translation techniques
- How to express the same concepts naturally in French and English
- Difficulties of translating French to English
- Characteristics of expression in French and English
- Major grammatical structures
- Differences/parallels between written and oral French
- Contemporary French culture
- Evolution of the French language

## Required Courses

- ☐ CFRE 502 Communication and Business French
- ☐ CFRE 507 English-French Translation I
- ☐ CFRE 602 Business French in Practice
- ☐ CFRE 607 English-French Translation II
- ☐ CFRE 707 Introduction to French-English Translation

## Electives (select 1)

- ☐ CFRE 510 Effective Writing
- ☐ CFRE 515 Introduction to Business French
- ☐ CFRE 610 Cultural Context of Writing
- ☐ CFRE 706 The Life and Times of the French Language

## Certificate Requirements

- 5 required courses
- 1 elective\*
- Cumulative grade point average (GPA) 1.67+

\*You may be exempted from completing the elective if your level (as determined by placement assessment) is deemed more advanced. If granted advanced placement, you only need to complete the 5 required courses to fulfill the certificate requirements.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

- Certificate in Proficiency in French from Toronto Metropolitan
- OR
- Admission by placement assessment\*

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

\*You must complete our online placement assessment before enrolling in your first course. The results of this placement assessment will help determine which course you should enrol in first.

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Business Management

Expand your career options by building your foundational business skills through our Certificate in Business Management. The degree-credit courses in this certificate are OSAP-eligible, and many can be transferred as credits to a Bachelor of Commerce degree. Whether you're looking to start your career in business or pivot into this field, this certificate will help you carve that path.

The Certificate in Business Management comprises eight required courses that introduce you to the foundational areas of study necessary for a career in business.

## Industry and Careers

The top industries in Canada that require business management roles include the following\*:

- Accommodation and food services
- Educational services
- Finance and insurance
- Healthcare and social assistance
- Manufacturing
- Professional, scientific, and technical services
- Public administration
- Retail trade

\*Burning Glass, 2021

## Who Should Take This Certificate?

- Individuals who want to gain foundational business skills to expand their career options, but who may not want to commit to a full-time degree program
- Individuals who are interested in business and looking to change careers
- Individuals who are interested in starting their own business in the future

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Understand and analyze financial information communicated through financial statements
- Know the fundamentals of marketing, including theories, principles, and concepts of market and consumer behaviour
- Identify concepts and complexities of the contemporary business environment with an emphasis on competitiveness, quality, and the main functional areas of business (including marketing, accounting, economics, information management, law, and human resources management)
- Understand the fundamentals of economics including the basic concepts of demand and supply, the theory of the firm, and distribution of income
- Recognize and understand business behaviour and decision-making under various market conditions: pure competition, oligopoly, monopolistic competition, and monopoly

## Required Courses

You may only select one of CACC 100 or CACC 110. If you plan to pursue the Accounting Finance minor, you should take CACC 110. Note: CACC 100 and CACC 110 are not transferable to the Accounting major in the School of Accounting and Finance at Toronto Metropolitan University.

You may only select one of CITM 100 and CITM 102.

- ❑ CACC 100 Introductory Financial Accounting
- ❑ CACC 110 Financial Accounting
- ❑ CECN 104 Introductory Microeconomics
- ❑ CGMS 200 Introduction to Global Management
- ❑ CITM 100 Foundations of Information Systems
- ❑ CITM 102 Business Information Systems I
- ❑ CLAW 122 Business Law
- ❑ CMHR 523 Human Resources Management
- ❑ CMKT 100 Principles of Marketing
- ❑ CQMS 110 Applied Mathematics for Business

## Certificate Requirements

- 8 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Canadian Dietetic Knowledge Competencies

The Internationally Educated Professionals in Nutrition (IEPN) program is currently not accepting applications until further notice. For more information, please contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

Interested in certificates at The Chang School? Learn more about our wide range of programs and find the right fit for you.

The certificate bridges your foundational dietetic knowledge to the Canadian context, and provides a Canadian university credential to supplement your international university education. The certificate also means you are eligible to apply for the practicum year, which focuses on bridging your practice-based competencies to the Canadian context.

The College of Dietitians of Ontario regulates the dietetic profession in Ontario, and administers the Prior Learning and Assessment Recognition (PLAR) process for internationally educated professionals in nutrition. The College recognizes successful completion of the certificate as equivalent to a Knowledge and Competencies Assessment Tool (KCAT) Level I result, and successful completion of the practicum year as equivalent to successful completion of the Performance-Based Assessment (PBA). Both are required to be eligible to write the Canadian Dietetic Registration Examination (CDRE).

## Required Courses

- ❑ CFNN 202 Public Health Nutrition
- ❑ CFNN 301 Intro to Nutrition Management of Human Disease
- ❑ CFNN 400 Advanced Nutrition and Health
- ❑ CFNN 401 Advanced Nutrition Management of Human Disease
- ❑ CFNP 100 Introduction to Professional Practice
- ❑ CFNP 350 Interpersonal Comm/Counselling Nutrition
- ❑ CFNP 550 Introduction to Dietetics Practice
- ❑ CFNR 201 Research Methods and Statistics
- ❑ CFNS 200 Quantity Food Management
- ❑ CFNS 400 Food Service Systems Management

## Certificate Requirements

- 10 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

- An assessment completed by the College of Dietitians of Ontario (CDO)
- And proof of English proficiency at the required level

For the CDO assessment, eligible applicants must have written the Knowledge and Competency Assessment Tool (KCAT) exam within the context of The College of Dietitians of Ontario Competency Assessment.

Admission Application

An admission application is required for this program. A two-step pre-approval process will be conducted by the program coordinator including submission of an application package and an in-person assessment for qualifying applicants.

For more information, see How to Apply or contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

# Canadian Social Work Practice

This innovative, award-winning program is designed to assist internationally educated social work professionals to gain employment in the social service/human service sector in Ontario at levels that match their knowledge and experience. Since the program began in 2005, 89 percent of certificate program graduates have been hired into positions in the social work field within one year of graduation.

## Industry and Careers

This program can lead to career paths in various areas in social work (for those eligible for registration with the Ontario College Of Social workers and Social Service Workers - OCSWSSW) such as:

- Brief and supportive counselling
- Case management
- Child protection
- Children, youth and family support
- Crisis and housing, mental health and addiction
- Violence against women services

## Who Should Take This Certificate?

The certificate program is offered to two groups of applicants:

- Experienced social workers whose academic credentials have been recognized as equivalent to a BSW or an MSW by the Canadian Association of Social Workers (CASW), and/or who are registered members of the Ontario College of Social Workers and Social Service Workers (OCSWSSW)

OR

- Those with a degree in the social sciences or humanities who also have significant social service experience

Everyone admitted to the program will be assessed for English proficiency to ensure capacity for success in university-level courses instructed in English. Both streams include placement and job search support.

## What Will You Learn?

Offered part-time over a 13-month period (beginning in the Summer term), the program includes courses, mentorship, and work experience. The Internationally Educated Social Work Professionals (IESW) Program provides advanced entry for its nine-month certificate program to underemployed IESWs with proof of advanced academic English language proficiency. The certificate is open only to internationally educated professionals with social service experience approved through the IESW Program admissions process.

## Required Courses

CSWP 36A is a multi-term course. If you enrol in CSWP 36A for the selected term, you will automatically be enrolled in CSWP 36B for the subsequent term. The automatic enrolment usually occurs near the completion of "A" term, and therefore the "B" term will not appear on your schedule of classes until that time.

- CSWP 301 Decolonizing and Anti-Oppression Practice
- CSWP 402 Social Policy and Social Inclusion
- CSWP 917 Special Topics I
- CSWP 918 Special Topics II
- CSWP 36A Field Practicum-A
- CVSW 900 Foundations of Social Work

## How to Apply

Please contact the IESW Program office to request an online application form.

# Caribbean Studies

Enrich your knowledge of the Caribbean through this fascinating interdisciplinary program. Learn about the Caribbean's history, politics, and economy. Examine the region's rich cultural, racial, and ethnic diversity. Explore the importance of the Caribbean community in Canada. A diverse selection of courses will allow you to engage with contemporary issues in the Caribbean region and its diaspora, including tourism impacts and resistance, environmental sustainability, globalization, migration, equity, inclusion, and many more.

If you want to learn more about contemporary issues in the Caribbean and the region's influence on the world, this program is for you.

## Industry and Careers

Many graduates find that the Certificate in Caribbean Studies enhances their expertise in fields including:

- Business
- Child and youth care
- Cultural studies
- Education Environment and sustainability
- Festival management
- Healthcare
- Hospitality and tourism
- Immigration
- Languages
- Performing arts
- Social services

## Who Should Take This Certificate?

Anyone who would like to do business with or provide services to Caribbean communities, in the region or the diaspora.

## What Will You Learn?

The impact of global issues, such as climate change, pandemics, food sustainability, migration, on small economies such as those found in the Caribbean.

## Required Courses

- ☐ CCRB 100 Introduction to the Caribbean

## Electives (select 5)

- ☐ CCRB 500 Families in the Caribbean
- ☐ CCRB 501 Racism and Caribbean Peoples in Canada
- ☐ CCRB 502 Cultural Traditions in the Caribbean
- ☐ CCRB 600 Postcolonial Caribbean Society
- ☐ CCRB 603 Special Topics in Caribbean Studies
- ☐ CCRB 605 Caribbean Tourism: Impacts and Resistance
- ☐ CCRB 614 Caribbean Critical Thought
- ☐ CENG 620 Literatures of the Caribbean
- ☐ CFRS 602 French Caribbean Literature and Culture
- ☐ CGEO 705 Environment and Society in the Caribbean
- ☐ CHST 222 The History of The Caribbean
- ☐ CSPN 804 Latin American Culture II
- ☐ CSPS 502 Spanish Caribbean Literature and Culture

## Certificate Requirements

- 1 required course
- 5 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.



# Community Engagement, Leadership, and Development

Seeking meaningful, transformative work rooted in the community and its well-being? Find it through our Certificate in Community Engagement, Leadership, and Development. From policy and processes to mobilization, you will have the chance to immerse yourself in a practical and comprehensive certificate and apply your learnings in the community.

Engage with topics such as food security, family support, Indigenous communities' world views, social work, fundraising, and conflict resolution. This program is geared toward practitioners from a variety of areas, including social services, education, labour, health, housing, transportation, and more.

## Industry and Careers

Specially designed in consultation with community practitioners who work in the field, this certificate helps students to develop or enhance their career in a wide variety of areas within the community engagement and services sector.

This certificate can lead to career paths in various roles. Here are some examples:

- Community educator
- Community outreach coordinator
- Housing support worker
- Labour organizer, leader, or union steward
- Manager of a hospital or other health institution
- Occupational therapist
- Physiotherapist
- Program manager for a non-governmental organization (NGO)
- Relief harm reduction worker
- School board community relations consultant
- Social housing manager
- Social worker

## Who Should Take This Certificate?

- Undergraduate, and recently graduated students in fields including: social work, child and youth care, early childhood studies, nursing, midwifery, public health, urban and regional planning, political science, education, and healthcare
- Individuals who wish to pursue a career serving and interacting with community services related to development, health, housing, municipal government, and charitable and non-governmental programs
- Experienced community workers seeking to further enhance their education, skill set, and career opportunities

## What Will You Learn?

This certificate is comprehensive in its teachings of community engagement and the related challenges, providing learners with a well-rounded understanding of both theory in the classroom and practice in the community. After completing this certificate, you will be able to do the following:

- Enact and support active citizen participation in community and civic affairs
- Engage excluded groups to improve the well-being of neighbourhoods and organizations
- Assess and understand the demographics of an area
- Guide community outreach and engagement initiatives
- Develop and support the implementation of an engagement plan with diverse communities
- Advocate, conduct research, and evaluate community programs

## Required Courses

- CSWP 934 Community Engagement Foundations
- CSWP 935 Engaging Diverse Communities
- CSWP 936 Community Engagement Practices
- CSWP 937 Community Engagement Capstone

## Electives (select 2)

### Community Development Focus

- CFNY 407 Community Development and Food Security
- CINT 904 Health Promotion and Community Development
- CINT 905 Conflict Resolution in Community Services
- CINT 907 Team Work for Community Services
- CINT 911 International Community Development
- CINT 920 Community Collaborations

### Equity, Diversity, and Inclusion Focus

- CINT 902 Disability Issues
- CINT 914 Settlement Experiences
- CSWP 505 Critical Equity and Movements of Resistance
- CSWP 900 Race and Ethnicity

### Family Support Focus

- CVFS 401 Contemporary Family Issues
- CVFS 403 Family Supports Theory and Practice

### Harm Reduction Focus

- CINT 908 Homelessness in Canadian Society
- CINT 965 Sex, Drugs and Incarceration

### Indigenous Studies Focus

- CINT 910 Indigenous Peoples, Pol and Reconciliation
- CINT 922 Introduction to Indigenous Worldviews
- CSWP 933 Indigenous Health and Well Being

### Organizational Development Focus

- CINT 913 Leadership in Nonprofits
- CINT 900 Program Planning and Evaluation Strategies
- CINT 916 Introduction to Fundraising
- CINT 960 Leadership Framework for Community
- CPLE 795 Local Economic Development Fundamentals
- CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 4 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant work experience



# Computer Coding (Formerly Computer Programming Applications)

The tech sector is an ever-expanding field of opportunity for coders, software developers, including web developers. Whether you're looking to advance your existing tech career and boost your coding skills, or you're interested in pursuing a new career in this dynamic sector, our Certificate in Computer Coding provides the hands-on coding capacities, technical knowledge and skills you need. Learn to code in the most current, in-demand coding languages with employers, and master client/server architecture, dynamic databases, and enterprise network infrastructures.

## Industry and Careers

Computer coders with highly developed skills are in demand for digital products and services deployment and production, and this certificate can help graduates find work in a range of companies, firms, and industries:

- Consulting firms
- Energy corporations
- Financial and insurance institutions
- Healthcare industries
- Manufacturers
- Professional and scientific institutions
- Software companies
- Technology companies
- Telecommunications companies

This certificate can lead to career paths in various roles. Here are some examples:

- Coder
- Computer programmer
- Database manager
- Network systems manager
- Software developer
- Software engineer
- Specialist in artificial intelligence (AI)

## Who Should Take This Certificate?

- Individuals from a non-STEM background who wish to work as coders and gain experience in hands-on coding, software engineering, database technology, web and mobile development, and related user-support positions
- IT professionals who are interested in upskilling in the most in-demand technical coding skills for career advancement

## What Will You Learn?

This certificate will equip you with well-rounded technical skills. After completing this certificate, you will be able to do the following:

- Code for and develop digital products and services
- Perform statistical and data analysis on relational databases
- Execute solutions to problems in enterprise network infrastructures, operating systems, and data communications
- Explore file management techniques involving the fundamentals of database organization, design, and management
- Use computer applications to design outdoor spaces
- Analyze networks, operating systems, and data communications

## Required Courses

- ❑ CCPS 109 Computer Science I
- ❑ CCPS 209 Computer Science II
- ❑ CCPS 305 Data Structures
- ❑ CCPS 393 Introduction to UNIX, C and C++

## Electives (select 2)

- ❑ CCPS 270 Data Access and Management
- ❑ CCPS 311 Object Oriented Programming and Design
- ❑ CCPS 420 Discrete Structures
- ❑ CCPS 506 Comparative Programming Languages
- ❑ CCPS 510 Database Systems I
- ❑ CCPS 590 Operating Systems I
- ❑ CCPS 610 Database Systems II
- ❑ CCPS 613 Human-Computer Interaction
- ❑ CCPS 706 Computer Networks I
- ❑ CCPS 721 Artificial Intelligence I
- ❑ CIND 123 Data Analytics: Basic Methods
- ❑ CSCI 130 Mobile Robotic Devices Embedded Systems
- ❑ CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 4 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with permission of the academic coordinator

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details

# Computer Coding (Formerly Computer Programming Applications)

- Implement AI Frameworks and human-computer interaction systems
- Utilize object-oriented programming languages
- Plan and manage computer programming projects using project management tools

You'll learn how to code in these tools:

- C
- C++
- UNIX
- Python
- JavaScript
- R
- MATLAB
- SPSS
- GIS Software
- Object-oriented programming (OOP)
- Artificial intelligence frameworks
- MS Project
- 3D Studio Max
- REVIT

# Crime Analytics

Crime analytics is a part of the new wave of intelligence-led policing being adopted by financial institutions, intelligence agencies, and private security firms across Canada. In this certificate, which can be completed in a year, you'll gain experience in using crime analysis tools for tactical, strategic, and administrative decision-making in law enforcement.

## Industry and Careers

This certificate can lead to career paths in various roles. Here are some examples:

- Crime analyst in national security and law enforcement agencies at municipal, provincial, and federal levels
- Crime analyst for private consulting firms and financial institutions

Note: In law enforcement or security agencies, crime analytics are usually carried out by the civilian workforce rather than uniformed or sworn law enforcement personnel.

## Who Should Take This Certificate?

- Individuals who have an interest or previous background in criminology, urban planning, geography, sociology, or psychology
- Young professionals who are looking for a more data-driven job but who need to strengthen their skills in computer science

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Apply your extensive practical experience in GIS mapping, data analysis, and decision support
- Understand criminal justice, policing, and criminal behaviour
- Understand the role of crime analysts in evidence-based policing, and the uses and misuses of data analysis

## Required Courses

- ❑ CODG 101 Spatial Databases and Digital Cartography
- ❑ CODG 102 Digital Geography and Spatial Analysis
- ❑ CODC 910 Spatial Methods in Crime Analysis
- ❑ CODC 911 Crime Analytics Project
- ❑ CCRM 318 Violence and Communities

## Electives (select 1)

- ❑ CCRM 100 Introduction to Canadian Criminal Justice
- ❑ CCRM 102 Introduction to Criminology
- ❑ CCRM 300 Policing in Canada
- ❑ CODG 127 Digital Geography Applications in Community and Social Services
- ❑ CODG 210 Spatial Database Management Systems
- ❑ CODG 212 Spatial Statistical Methods
- ❑ CPSY 300 Psychology and Law
- ❑ CPSY 622 The Psychology of Criminal Behaviour

## Certificate Requirements

- 5 required courses
- 1 elective
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status

# Criminal Justice and Criminology

Learn about how the criminal justice system operates and explore the key players and institutions. Examine how people are affected by the justice system and other institutions of regulation.

Are you looking to get into criminal justice-related fields?

The degree-credit courses in this certificate will help you understand balancing the interests of victims, offenders, the public, and politicians, along with concerns about human rights and social justice.

Learn from our instructors, many of whom are faculty members in Toronto Metropolitan University's Department of Criminology with professional and academic backgrounds in fields including, law, social anthropology, criminology, and sociology.

## Industry and Careers

This certificate can lead to career paths in the following areas:

- Non-profit organizations assisting justice-involved people with life skills and community involvement
- Organizations involved in the capacity of safety administration, operations compliance, or those that assist with anti-fraud measures
- Police or security services
- Young offenders in the community or in an institutional setting
- Women in conflict with the law
- Victims of crime

## Who Should Take This Certificate?

You may be interested in this program if you already work in the public or private sector and want to enter, change, or advance your career in fields related to criminal justice.

Successful completion of these courses may count towards a BA in the event of admission to Toronto Metropolitan University's Bachelor of Arts in Criminology program.

## What Will You Learn?

Learn to think critically about issues in criminology.

Our wide range of courses will help you explore topics related to:

- the operation of the criminal justice system
- the professionals who work within the system
- the various stakeholders involved in the system

Gain interdisciplinary knowledge and critical thinking skills with respect to social and criminal justice, including:

- public and private security
- policing
- the administration of criminal justice
- corrections
- community engagement

Prepare for work in criminal justice-related fields or gain the experience to apply for a degree program.

## Required Courses

- ☐ CCRM 100 Introduction to Canadian Criminal Justice
- ☐ CCRM 102 Introduction to Criminology

## Electives - Group A (select 3)

- ☐ CCRM 200 Criminal Law
- ☐ CCRM 202 Victims and the Criminal Process
- ☐ CCRM 300 Policing in Canada
- ☐ CCRM 304 Youth Justice in Canada
- ☐ CCRM 306 Corrections in Canada
- ☐ CCRM 308 Criminal Courts in Canada
- ☐ CCRM 318 Violence and Communities
- ☐ CCRM 402 Criminal Justice and Social Inequality

## Electives - Group B (select 1)

- ☐ CGEO 581 GIS, Geographic Data and Mapping
- ☐ CPHL 449 Philosophy of Punishment
- ☐ CPHL 612 Philosophy of Law
- ☐ CPSY 300 Psychology and Law
- ☐ CPSY 602 Developmental Psychopathology
- ☐ CSOC 502 Violence and the Family

## Certificate Requirements

- 2 required courses
- 3 electives from Group A
- 1 elective from Group B
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

OR

- Mature student status with relevant work experience including policing, corrections, courts, social service agencies, security management services, or regulatory enforcement agencies

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Cybersecurity, Data Protection and Digital Forensics

Equip yourself with a diverse set of technical cyber security skills and be hired into the cybersecurity field through our Certificate in Cybersecurity, Data Protection, and Digital Forensics. Gain first-hand experience with key industry tools and technical skills necessary to work in the field through virtual labs and real-work projects. The practical experience you can gain through this certificate will include collecting digital evidence after a cybersecurity break, legal hacking, and detecting and closing any security gaps.

This certificate will qualify you to take the Certified Information Systems Security Professional (CISSP) exam and other similar examinations. Graduate with the right tools and a recognized certification are able to attain cybersecurity positions across the private and public sectors right away.

## Industry and Careers

Analysts with highly developed skills provide protection and security while upholding international laws in cybersecurity. Completion of this certificate can lead to roles within the following industries:

- Consulting firms
- Financial institutions such as banks
- Government entities
- IT companies
- Law enforcement
- Major corporations

## Who Should Take This Certificate?

- Individuals who seek to enrich their existing knowledge and learn the essential technical and real-work capabilities intrinsic to computer security assurance and cybersecurity forensics
- Employees in public and private corporations and government entities who wish to improve or develop skills sets in cybersecurity
- Individuals who aspire to join a field with long-term career prospects

## What Will You Learn?

This program teaches a set of technical cybersecurity skills that can be applied to systems security, protection, and privacy as a cybersecurity specialist at your workplace. After completing this certificate, you will be able to do the following:

- Extract evidence using investigative protocols and report on a variety of complex issues that may arise in enterprise information systems. Here are some examples:
  - Network and computer hacking
  - Cyber extortion
  - Organized cyber crime
  - Cyber espionage detection
- Understand privacy and security protocols in compliance with complex legal and regulatory parameters
- Apply best-in-kind cybersecurity technical practices to real world problems. Here are some examples:
  - White/black box penetration testing
  - System and network vulnerability identification
  - Security weakness remediation

## Required Courses

You may only select 1 of CKDF 145, or CSCI 243

- CKDF 110 Computer Network Security
- CKDF 120 Computer Cryptography and Digital Steganography
- CKDF 130 Digital Forensics Systems
- CKDF 140 Security Architecture and Design
- CKDF 145 Certified Information Systems Security Professional (CISSP)
- CKDF 150 Digital Forensics Investigation
- CSCI 243 Continuity and Risk Management

## Certificate Requirements

- 6 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits
  - With a minimum average of 70 percent

OR

- Mature student status

Note: Knowledge of TCP/IP is recommended.

- Manage and evaluate information security and data protection functions integrated within the greater organizational governance structure

Tools in use include the following:

- Penetration testing
  - Kali Linux, Metasploit
- Network assessment and protection
  - Wireshark, Nmap, Ncrack, Nessus, hping3
- WebGoat
- Online virus scanners
- Intrusion detection
  - iptables
  - Snort
- Encryption and decryption methods
  - Certificate authority/digital signatures and digital watermarking
  - Hash functions
  - CrypTool, S-Tools
- Forensics analysis
  - Autopsy
  - Honeypots
  - FTK Imager
  - Mobile: iPhone Analyzer

# Data Analytics, Big Data, and Predictive Analytics

Data analytics is critical in almost all industries – from business and finance to government and healthcare. This is driving the need for people who can analyze and integrate data into business decision making. Not only does this certificate equip you with that skill set, it also meets the requirements for you to become a Certificated Analytics Professional (CAP®). Toronto Metropolitan University is recognized by an industry leading association, The Institute for Operations Research and the Management Sciences (INFORMS).

## Career-Ready Support Offered

While enrolled in the Certificate in Data Analytics, Big Data, and Predictive Analytics (or Certificate in Practical Data Science and Machine Learning), you will receive a variety of supports, including:

- Educator support: instructors, teaching assistants, and data analytics tutors provide support for your hands-on practice with virtual data analytics lab activities.
- Synchronous weekly online sessions: in these Zoom sessions, the teaching team, with practitioner-expert, credentialed data scientists as instructors and teaching assistants, addresses learners' questions and strengthens their hands-on, data analytics skills and working knowledge for future jobs in the field.
- Discussion forums: the teaching team will monitor discussion forums where learners ask questions on data analytics applied lab activities, readings, video lectures, assignments, and projects.
- Virtual tutor services: the virtual mentor is offered at no cost upon request to certificate registrants taking courses for one-on-one Zoom meetings and for consultations by email about the coursework, assignments, final projects, and for career advising.
- Career support: data science job search and career advising will be offered during the final capstone course, CIND 820 - Big Data Analytics Project.
- Alumni networking support: participating alumni will receive informal career and networking support through LinkedIn to certificate candidates and graduates.

## Industry and Careers

This certificate can lead to a career in various roles. Here are some examples:

- Business analyst
- Data analyst
- Data scientist
- Financial data analyst

## Who Should Take This Certificate?

- Recent graduates or individuals who want a data analyst or data scientist career and wish to gain the hands-on experience in analytics, coding, tools, and statistics needed to prepare and analyze data to make business decisions.
- Professionals looking to build their skill set in technically applied data analysis, machine learning, predictive analytics, together with data organization and management to advance in their career or change their career to data analytics
- Data analysts who want to advance their skills
- Managers and business leaders who work with data, manage data analytics projects or lead teams of data analysts.

## Required Courses

You may only select 1 of CIND 110 or CCPS 270.

- CCPS 270 Data Access and Management
- CIND 110 Data Organization for Data Analysts
- CIND 119 Introduction to Big Data
- CIND 123 Data Analytics: Basic Methods
- CIND 820 Big Data Analytics Project
- CIND 830 Python Programming for Data Science
- CMTH 642 Data Analytics: Advanced Methods

## Certificate Requirements

- 6 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U credits (including English, Mathematics (Advanced Functions and one of either Calculus and Vectors or Data Management), and Science (Biology or Chemistry or Physics)) OR M credits with a minimum average of 70 percent or equivalent academic status

OR

- Mature student status with 4 years of relevant professional experience
  - And permission of the academic coordinator

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Provide a well-refined hands-on education that covers essential skills and knowledge to excel in the data analytics domain, such as understanding data types and structures, data manipulation and cleaning, statistical analysis, data visualization, machine learning techniques, programming languages for querying data, and understand the business context to provide insights and recommendations effectively.
- Gain insight into the next steps for your entry-level or mid-level data analytics career, and enhance your practical experience in data analytics and machine learning, as well as your knowledge of AI to progress to senior roles within the data science domain.
- Understand the different types of databases and how to manage and organize them.
- Use statistics and machine-learning techniques to prepare, model, and analyze data.
- Use programming languages like R and Python to turn data into insights that can help a business.

Tools in use include the following:

- R
- SAS
- Python
- Tableau
- XPath and XQuery
- Structured Query Language (SQL)
- Hadoop (MapReduce)

Data Collection and Storage Tools

- MySQL
- MongoDB

Analytics Tools

- Python Libraries for Data Analysis
- R Packages for Data Analysis

Integrated Development Environment (IDE)

- MySQL Workbench
- RStudio
- MS-VSCode
- Robo3T



# Design for Arts and Entertainment

Prepare for a career in scenography and learn to design for motion pictures, live entertainment, and cultural events. This certificate program will help you develop the skills needed to make set, prop, and costume design proposals. Upon successful completion, we will direct you to paid apprenticeships in Toronto's vibrant entertainment sector through a policy of ongoing mentorship, including any additional professional development you may need.

## Industry and Careers

DGC film job titles include\*:

- 1st Assistant Art Director (Set Designer) (additional training required)
- 2nd Assistant Art Director
- Actual IATSE ADC 659 job titles include:
- Art Department Coordinator (A tactical/management position. They work closely with the Art Director.)
- Art Department Trainee (the Des A & E courses all contain portfolio outcomes to meet its requirements), leading up the ladder through union mentorship.
- Art Director under Production Designer, or Art Director, Head of Department.
- Costume Designer (additional training required)
- Lighting Designer (additional training required)
- Production Designer
- Scenographer
- Set Designer
- Sound Designer (additional training required)

IATSE 873 and NABET M-700 UNIFOR job titles include\*:

- Costumer (additional training may be required)
- Prop Maker (additional training may be required)
- Set Dresser

Other areas of practice:

- Art Exhibition Curator
- Directorial Photographer
- Event Planner
- Fashion Show Director
- Installation Artist ([www.thecollector.com/what-is-installation-art](http://www.thecollector.com/what-is-installation-art))
- Stop Motion Animators (building sets)
- Trade Show Marketing
- Window Dresser/Visual Merchandising

\*Note: Completion of the Certificate in Design for Arts and Entertainment does not guarantee the following job titles. This certificate will give you the skills leading to the apprenticeship applications in entertainment industry unions such as Directors Guild Canada (DGC) Art Department Caucus, National Association of Broadcast Employees and Technicians (NABET) Local 700-M of UNI [Fr. Unité; Eng. For], and The International Alliance of Theatrical Stage Employees, Moving Picture Technicians, Artists and Allied Crafts of the United States, Its Territories and Canada (IATSE) ADC 659.

## Required Courses

- ❑ CDID 150 Design Theory
- ❑ CDID 170 Drafting for Entertainment
- ❑ CDMP 130 History of Arts and Scenography
- ❑ CFPN 501 Scenography I: Art Direction
- ❑ CFPN 601 Scenography II - Production Design

## Electives (select 2)

- ❑ CCMN 314 Professional Presentations
- ❑ CDFA 104 Fashion Drawing I
- ❑ CDFC 106 Fashion, Culture, and Society
- ❑ CDFP 391 History of Photography I
- ❑ CDID 552 Entertainment Lighting Design
- ❑ CDMP 120 Film History
- ❑ CENG 101 Laughter and Tears: Comedy and Tragedy
- ❑ CFPN 323 Sound Design for Digital Media I
- ❑ CFPN 531 Cinematography and Lighting Design I
- ❑ CMPC 203 Art in the Modern World
- ❑ CRTA 180 Music and Film

## Certificate Requirements

- 5 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits
  - With a minimum average of 60 percent

OR

- Mature student status with relevant professional experience

Note: If you have no previous drawing experience, you must successfully complete CDID 803 - Drawing Fundamentals.

## Who Should Take This Certificate?

- Individuals wishing to pursue any form of stage design in: “page-to-stage” (live entertainment) or “script to screen” (motion pictures).
- Professionals already working in another area of live entertainment or motion pictures wishing to deepen their collaborative skills with designers.
- Artists and architects seeking a lateral career change, widening career opportunities, or simply enhancing their current practice.

## What Will You Learn?

After completing this certificate, you will be able to:

- Analyze scripts for the purpose of creating design proposals from sets and properties to costumes.
- Apply principles of colour theory, painting, illustration, and sculpting
- Utilize knowledge of theory and history of scenography
- Apply mental rotation, spatiality, and spatial representation, including technical drawing for entertainment as well as thinking in scale and making scale models (“maquettes” as well as camera models)
- Use SketchUp Pro software
- Apply project management skills, including crewing, budgeting, and workflows
- Utilize knowledge of scenery shifting and work safety
- Follow sustainable practices
- Design and/or perform art department roles in undergraduate 4th-year thesis films
- Complete real space and virtual work-seeking portfolios

# Design Management

Note: Effective Fall 2022, the Certificate in Design Management has been discontinued. Students who formally registered in the certificate prior to July 2, 2022, must complete the program requirements in effect at the time they registered. For curriculum details, please refer to the archived calendar for your year of registration. For more information, reach out to our Client Services team at [ce@torontomu.ca](mailto:ce@torontomu.ca).

## Required Courses

- CDDM 101 Introduction to Design Management
- CDDM 102 Design Management II
- CDDM 103 Design Management Project

## Electives (select 5)

- CCMN 314 Professional Presentations
- CDDM 104 Design Awareness I
- CDDM 106 Design Research
- CDID 150 Design Theory
- CENT 500 New Venture Startup
- CGCM 110 Introduction to Graphic Communications
- CITM 100 Foundations of Information Systems
- CMHR 405 Organizational Behaviour
- CMKT 100 Principles of Marketing
- CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 3 required courses
- 5 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status

Note: Work experience and/or post-secondary education related to design or business is desirable.

# Digital Art Production

Develop your creative and technical skills in digital content production. Learn design, visual communication, interaction design, and storytelling skills. Enrich your understanding of art, media, and culture.

This six-course, fully-online program is offered in cooperation with Toronto Metropolitan University's School of Image Arts. It is the only part-time program in Canada that offers a combination of applied creative and digital courses at the university degree-credit level.

## Industry and Careers

This certificate could lead career paths in:

- Animation
- Computer-generated effects
- Digital art
- Digital games
- Graphic design
- Interaction and interface design
- Mobile app development
- Web design

## Who Should Take This Certificate?

- Individuals looking to gain a solid foundation for further study at the undergraduate or graduate level
- Working professionals looking to make a career change to a rapidly growing creative field
- Visual artists looking to enhance their work in film, photography, fine art, graphic design, or journalism to expand their audience

This certificate program offers students the opportunity to apply some or all of the credit earned through the certificate as transfer credits to a BFA in Image Arts at Toronto Metropolitan or at other universities (subject to admission and the requirements of the degree to which you are applying).

## What Will You Learn?

After completing this certificate, you will be able to:

- Create original content and integrate it into the digital world
- Gain theoretical, historical, and contemporary knowledge of art, design, and global communication
- You can also customize your learning through your choice of electives that focus on skills including fiction screenwriting, digital skills and innovation, graphic design, interaction design, design for mobile devices, and more.
- You can also choose to take a Co-Operative Internship course to gain professional experience in production situations and settings.

## Required Courses

- ☐ CMPC 101 Visual Studies I
- ☐ CMPC 103 Reframing Art History

## Electives (select 4)

- ☐ CDMP 125 Fiction Screenwriting
- ☐ CEID 100 Digital Skills: Int'l Innovation
- ☐ CFPN 534 Graphic Design
- ☐ CFPN 535 User Experience Design
- ☐ CFPN 541 Animation Practices
- ☐ CFPN 542 Design for Mobile Devices
- ☐ CFPN 547 Co-Operative Internship
- ☐ CMPC 203 Art in the Modern World
- ☐ CNPF 566 History of Animation

## Certificate Requirements

- 2 required courses
- 4 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits
  - With a minimum average of 60 percent

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Economics and Finance

Designed for students who aspire to careers in banking and finance, this certificate can help you join an exciting industry or accelerate your current work in these fields. Our Certificate in Economics and Finance will help prepare you to qualify as a Chartered Financial Analyst (CFA) or Certified Financial Planner (CFP), or to pursue graduate studies in economics, finance, or business administration.

## Industry and Careers

Careers in economics and finance require many of the same skills, including the ability to analyze information, compile statistics, and make informed decisions. Professionals with these skills are particularly valuable to banks and other financial institutions.

This certificate can help you meet the educational criteria for several in-demand professional designations, including Chartered Financial Analyst (CFA) and Certified Financial Planner (CFP). It can also help you prepare to take the Canadian Securities Examination or pursue graduate studies in economics, finance, or business administration.

## Who Should Take This Certificate?

- Individuals aspiring to a career in banking and finance, or if you're already working in these fields and want to accelerate your career
- Career professionals who want to prepare to qualify as a Chartered Financial Analyst (CFA) or Certified Financial Planner (CFP)
- Students who want to pursue graduate studies in economics, finance, or business administration

## What Will You Learn?

Develop strong analytical skills through a wide range of introductory economics courses and specialized finance courses. Build a foundation in microeconomics, macroeconomics, and monetary economics.

Learn the major concepts in finance and investments, including the time value of money, discounted cash flows, and risk and return.

This certificate will also provide you with a thorough introduction to the mathematics of asset valuation and an overview of security analysis and portfolio management, including:

- equilibrium pricing relationships
- efficient market hypothesis
- evaluation of portfolio performance
- modern portfolio theory
- treasury bills and bonds
- valuation of common stock
- risk and return

## Required Courses

- CECN 104 Introductory Microeconomics
- CECN 204 Introductory Macroeconomics
- CFIN 300 Managerial Finance I
- CFIN 401 Managerial Finance II

## Electives (select 2)

You may only select 1 of CECN 721 or CFIN 621.

- CECN 129 Statistics for Economics I
- CECN 301 Intermediate Macroeconomics I
- CECN 504 Intermediate Microeconomics I
- CECN 506 Money and Banking
- CECN 606 International Monetary Economics
- CECN 703 Public Sector Economics
- CECN 721 International Financial Markets
- CFIN 501 Investment Analysis
- CFIN 502 Personal Financial Planning
- CFIN 510 Small Business Finance
- CFIN 512 Risk Management and Insurance
- CFIN 601 Derivatives
- CFIN 612 Retirement and Estate Planning
- CFIN 621 International Finance

## Certificate Requirements

- 4 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U credits (including English, Mathematics (one of which must be Advanced Functions, Calculus and Vectors, or Data Management)
- Or with M credits with a minimum average of 70 percent or equivalent academic status

OR

- Mature student status

AND

- CACC 110 or equivalent

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Economics and Finance

Designed for students who aspire to careers in banking and finance, this certificate can help you join an exciting industry or accelerate your current work in these fields. Our Certificate in Economics and Finance will help prepare you to qualify as a Chartered Financial Analyst (CFA) or Certified Financial Planner (CFP), or to pursue graduate studies in economics, finance, or business administration.

## Industry and Careers

Careers in economics and finance require many of the same skills, including the ability to analyze information, compile statistics, and make informed decisions. Professionals with these skills are particularly valuable to banks and other financial institutions.

This certificate can help you meet the educational criteria for several in-demand professional designations, including Chartered Financial Analyst (CFA) and Certified Financial Planner (CFP). It can also help you prepare to take the Canadian Securities Examination or pursue graduate studies in economics, finance, or business administration.

## Who Should Take This Certificate?

- Individuals aspiring to a career in banking and finance, or if you're already working in these fields and want to accelerate your career
- Career professionals who want to prepare to qualify as a Chartered Financial Analyst (CFA) or Certified Financial Planner (CFP)
- Students who want to pursue graduate studies in economics, finance, or business administration

## What Will You Learn?

Develop strong analytical skills through a wide range of introductory economics courses and specialized finance courses. Build a foundation in microeconomics, macroeconomics, and monetary economics.

Learn the major concepts in finance and investments, including the time value of money, discounted cash flows, and risk and return.

This certificate will also provide you with a thorough introduction to the mathematics of asset valuation and an overview of security analysis and portfolio management, including:

- equilibrium pricing relationships
- efficient market hypothesis
- evaluation of portfolio performance
- modern portfolio theory
- treasury bills and bonds
- valuation of common stock
- risk and return

## Required Courses

- ☐ CECN 104 Introductory Microeconomics
- ☐ CECN 204 Introductory Macroeconomics
- ☐ CFIN 300 Managerial Finance I
- ☐ CFIN 401 Managerial Finance II

## Electives (select 2)

You may only select 1 of CECN 721 or CFIN 621.

- ☐ CECN 129 Statistics for Economics I
- ☐ CECN 301 Intermediate Macroeconomics I
- ☐ CECN 504 Intermediate Microeconomics I
- ☐ CECN 506 Money and Banking
- ☐ CECN 606 International Monetary Economics
- ☐ CECN 703 Public Sector Economics
- ☐ CECN 721 International Financial Markets
- ☐ CFIN 501 Investment Analysis
- ☐ CFIN 502 Personal Financial Planning
- ☐ CFIN 510 Small Business Finance
- ☐ CFIN 512 Risk Management and Insurance
- ☐ CFIN 601 Derivatives
- ☐ CFIN 612 Retirement and Estate Planning
- ☐ CFIN 621 International Finance

## Certificate Requirements

- 4 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U credits (including English, Mathematics (one of which must be Advanced Functions, Calculus and Vectors, or Data Management)
- Or with M credits with a minimum average of 70 percent or equivalent academic status

OR

- Mature student status

AND

- CACC 110 or equivalent

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.



# Economics: Theory and Applications

With economic forces at play everywhere in both the private and public sectors, this certificate can help you gain a competitive edge in a wide range of career paths. It may also serve as a stepping stone if you have a degree in another field but wish to pursue graduate studies in Economics or a related field.

Learn how to apply mathematical and statistical tools to the analysis of a wide variety of economic and business problems. Build on your existing knowledge to gain an advanced understanding of Economics.

If you've already completed the Certificate in Economics: Fundamentals, this certificate can help you develop a deeper understanding of economic theory and quantitative methods.

## Industry and Careers

This advanced certificate can provide you with analytical skills that are in high demand in virtually every area of business, government, and the nonprofit sector.

You may find employment in roles ranging from risk analyst in a financial institution, to data analyst in a consumer goods company, to policy analyst in a government department.

## Who Should Take This Certificate?

- Undergraduate students who already possess a basic foundation in Economics, such as the concepts and theories learned in Certificate in Economics: Fundamentals, and want to build a more advanced set of knowledge and skills.
- Individuals who wish to use this certificate to focus on economic theory and quantitative methods, which will prepare them for deeper analysis of a variety of topics, including labour economics, environmental economics, or public sector economics.
- University graduates with a degree in another field may pursue this certificate as a stepping stone for graduate studies in Economics or a related field.

## What Will You Learn?

Build on your economics knowledge to gain an advanced understanding of key concepts and theories, as well as mathematical and statistical tools.

You can choose electives that meet your specific learning goals, including:

- Canadian tax policy
- Econometrics
- Economic growth and technological change
- Economics of information
- Economics of international trade
- Environmental economics
- Game theory
- Industrial organization
- Intermediate and advanced microeconomics and macroeconomics
- International monetary economics
- Labour economics
- Mathematics for economics
- Public sector economics

## Required Courses (select 1)

- CECN 301 Intermediate Macroeconomics I
- CECN 504 Intermediate Microeconomics I

## Electives (select 3 not previously taken in Required Courses)

- CECN 230 Mathematics for Economics II
- CECN 301 Intermediate Macroeconomics I
- CECN 501 Industrial Organization
- CECN 504 Intermediate Microeconomics I
- CECN 510 Environmental Economics
- CECN 600 Intermediate Macroeconomics II
- CECN 601 Economics of Information
- CECN 605 Labour Economics
- CECN 606 International Monetary Economics
- CECN 614 An Introduction to Game Theory
- CECN 627 Econometrics I
- CECN 700 Intermediate Microeconomics II
- CECN 702 Econometrics II
- CECN 703 Public Sector Economics
- CECN 707 Economics of International Trade I
- CECN 715 Advanced Microeconomics
- CECN 803 Canadian Tax Policy
- CECN 808 Economic Growth and Technological Change
- CECN 815 Advanced Macroeconomics

## Certificate Requirements

- 1 required course
- 3 electives\*
- Cumulative grade point average (GPA) 1.67+

\*You must take 3 selections from the Electives (that you haven't already taken as Required Courses).

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details..

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U credits (including English or Mathematics)
  - Or With M credits

OR

- Mature student status

AND

- The following course or equivalent:
  - CECN 189 - Mathematics for Economics I

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Emergency Management, Threat and Response Planning

Emergency response planning is now part of our “new normal” – every organization needs to prepare for and respond to a range of scenarios that can affect their operations in difficult times. Our fully online four-course certificate will give you a practical and timely foundation in key emergency management, threat planning, risk and continuity management, and response planning concepts that can minimize the impact of emergencies. Be part of the new generation of professionals equipped with the flexible, in-demand skills needed for Canadian and global emergency management.

## Industry and Careers

Analysts with highly developed skills in disaster and emergency management are required in the following areas:

- Businesses and other for-profit enterprises
- Community development organizations
- Disaster mitigation and recovery operations
- Emergency services
- Humanitarian agencies
- NGOs
- Public sector

This certificate can lead to a career in roles such as the following:

- Disaster response architect
- Disaster recovery program manager
- Emergency preparedness and services advisor
- Emergency response planner
- Emergency response technical solution architect
- Risk and continuity management specialist
- Urban and municipal planner
- Urban resilience planner

## Who Should Take This Certificate?

- Recent university graduates from business management programs who would like to enhance their data analysis skill set to be more competitive in the job market
- Technically trained individuals who are looking to gain knowledge and skills to pivot into a career in disaster and emergency management

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Lead, interact, and work within the context of emergency management settings and within the law during disasters and emergencies
- Assess threats and realities and in response, author and implement plans for incident management mitigation, recovery and business continuity for first and second responders, emergency managers, and their organizations
- Engage in practical emergency management scenarios, including incident management command centres and operations
- Operationalize emergency management organizational mechanisms in every stage of emergency responsiveness
- Use international methodologies for measuring, describing, and assessing emergency management activities, concepts, policies, missions, operations, and goals

## Required Courses

- ☐ CSCI 230 Emergency Management Practice
- ☐ CSCI 232 Incident and Operations Management
- ☐ CSCI 234 Analysis of Critical Incidents
- ☐ CSCI 243 Continuity and Risk Management

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status

# Energy Management and Conservation

Important Note: The Certificate in Energy Management and Conservation will not be accepting any new registrants. This certificate has been discontinued effective Winter 2022. Students formally registered in the certificate prior to November 2, 2021 must complete the program requirements in effect at the time they registered.

For curriculum details, please refer to the archived calendar for your year of registration. For more information, please contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

## Required Courses

- ❑ CTEC 241 Energy Innovation
- ❑ CTEC 264 Trends in Smart Grid
- ❑ CTEC 269 Trends in Energy Conservation
- ❑ CTEC 282 Public Policy in Energy

# English Literature and Popular Culture

Build a foundation in diverse literary forms, from Shakespeare to popular culture. Hone critical analysis skills and the ability to write organized, sustained, and well-reasoned arguments, all while developing your own creative writing style. This certificate allows you to tailor your studies to your own literary interests and dip your toe into the world of academia with degree-credit courses.

## Industry and Careers

A wide range of professions and industries require the foundational skills of critical thinking, problem-solving, research, and writing that the study of English literature provides. Those who have acquired these creative, analytical, and communication skills are better able to shift across a changing employment landscape as well as upward within their profession.

## Who Should Take This Certificate?

- Individuals who are interested in exploring degree-credit courses in English literature and popular culture before formally applying to university
- Individuals who are looking to strengthen their application to a full-time undergraduate degree program
- Individuals employed or seeking jobs in fields that require creative knowledge and writing skills (for example, publishing, public relations, advertising, government, film, or digital communications).
- Teachers who wish to strengthen their knowledge to help enhance their curriculum

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Utilize a newfound, strong knowledge in historic and contemporary literature and culture to help you experience, analyze, and create literary and cultural works

The one required course explores how different forms of literature shape our world. You can then choose five electives from the Literature/Entertainment Stream or the Reading/Writing Culture Stream to explore your specific areas of interest, including:

- Pop literature: young adult fiction, pop songs, and graphic novels
- Fairy tales, folklore, and fantasies
- Science fiction
- Gothic horror
- Visual cultures: photography, painting, and film
- Shakespeare and theatrical performance
- And more!

## Required Courses

- CENG 110 Literatures Across Borders

## Electives (select 5)

- CENG 112 Zap, Pow, Bang: Pop Lit
- CENG 200 Writing as a Cultural Act
- CENG 208 Introduction to Non-Fiction
- CENG 222 Fairy Tales and Fantasies
- CENG 230 Creativity, Writing, and Everyday Life
- CENG 503 Science Fiction
- CENG 505 Creative Writing
- CENG 510 Gothic Horror
- CENG 511 The Art of Writing Life
- CENG 610 The Language of Love, Sex and Gender
- CENG 706 Shakespeare and Performance

## Certificate Requirements

- 1 required course
- 5 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits (including English)
  - With a minimum average of 70 percent

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Entering Foreign Markets

Venturing into foreign markets is an attractive option for businesses to reach new consumers, generate additional streams of revenue, lower production costs, and diversify business risk. Yet, it can be a complicated journey. Political, economic, and cultural factors can add unexpected complexity and unpredictability that negatively impacts expansion efforts. Companies need people with the knowledge and skills to assess international markets, understand the complexities, navigate the unpredictability, and determine appropriate strategies for entry. Our Certificate in Entering Foreign Markets can help you gain the knowledge and skills to effectively communicate marketing ideas and business concepts in a cross-cultural environment.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- global markets research and analysis
- international marketing and communications
- international business development

## Who Should Take This Certificate?

- Graduates of non-business related fields who want to gain some foundational knowledge in international business
- Professionals who want specialized skills in evaluating foreign markets for entry
- Advertising and communications professionals who need skills in effective marketing across borders
- New graduates who want to complement their degree with a certificate related to international business

## What Will You Learn?

After completing this certificate, you will be able to:

- effectively communicate marketing ideas and business concepts in a cross-cultural environment
- define and understand the basic functions of management
- demonstrate an understanding of the theory and application of the “four Ps of marketing” model
- leverage primary and secondary research of marketing metrics to inform decision-making
- formulate and implement effective cross-border marketing strategies that resonate with diverse audiences
- identify and analyze diverse types of risks for business, including political risk
- demonstrate specialized knowledge of the business environment in a specific global region of interest to you

## Required Courses

- ☐ CGMS 200 Introduction to Global Management
- ☐ CGMS 522 International Marketing
- ☐ CMKT 100 Principles of Marketing

## Electives (select 1)

- ☐ CGMS 690 The North American Business Environment
- ☐ CGMS 691 The Asian Business Environment
- ☐ CGMS 692 The European Business Environment
- ☐ CGMS 695 The Middle Eastern Business Environment

## Certificate Requirements

- 3 required courses
- 1 elective
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With six Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Entrepreneurship and Small Business

Do you have a business idea that you want to get off the ground? Do you already own a small business and need help taking it to the next level? This certificate gives you the entrepreneurial skills to succeed in an increasingly competitive marketplace. The more you know about identifying opportunities, developing a business plan, and scaling your idea, the more successful your business can become – and the Certificate in Entrepreneurship and Small Business can help you get there.

## Industry and Careers

Entrepreneurial opportunities are available in every sector of the economy to people with any type of educational and professional background. From athletes to architects, graphic designers to engineers, healthcare to IT professionals – our certificate helps you transform a business concept into a thoughtful plan of action.

## Who Should Take This Certificate?

- Individuals aiming to launch, or have recently launched, a small business and need skills such as developing business and marketing plans and identifying market opportunities
- Business owners that you want to scale or improve in terms of profitability or processes
- Managers, in a public, private, or nonprofit organization, wanting to effectively promote innovative product development and marketing as a workplace intrapreneur

## What Will You Learn?

After completing this certificate, you will be able to:

- assess your own entrepreneurial potential and managerial skills
- identify opportunities and analyze best-fit markets for entry
- develop your business idea into an actionable business plan
- organize, promote, and finance a business, including bootstrap financing and government funding programs
- assess risk and opportunity in buying an existing business or franchise
- learn management strategies to deal with common business issues such as cash flow, high growth rates, outsourcing, and corporate governance

## Required Courses

- ☐ CENT 500 New Venture Startup
- ☐ CENT 505 Small-Business Management
- ☐ CENT 526 Entrepreneurial Behaviour and Strategy
- ☐ CENT 601 Identifying Opportunities

## Electives (select 2)

You must consult with the academic coordinator. With the submission of an approved Continuing Education Certificate Exemption (Substitution/Directive) Form signed by the academic coordinator, you will complete 2 courses relevant to your entrepreneurial and small business interests (as indicated in your business plan developed in CENT 500).

## Certificate Requirements

- 4 required courses
- 2 electives\*
- Cumulative grade point average (GPA) 1.67+

\*You must consult with the academic coordinator. With the submission of an approved Continuing Education Certificate Exemption (Substitution/Directive) Form signed by the academic coordinator, you will complete 2 courses relevant to your entrepreneurial and small business interests (as indicated in your business plan developed in CENT 500).

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With six Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.



# Ethics

The study of ethics is incredibly practical to daily life application, both professional and private. This certificate is designed to provide you with relevant, university-level education and the ability to apply the principles of ethics whether you work in the private or public sector. You'll learn how to defend and monitor ethical decision-making in your organization, develop a knowledge and practice in applied ethics, as well as learn to recognize, counsel, and train in analyzing and resolving ethical dilemmas.

## Industry and Careers

This certificate can lead to career paths in:

- Employment equity
- Policy development

This certificate has specific streams in environment, medical fields, legal, human rights, business ethics, and philosophical ethics. These streams allow you to focus on your specific area of interest and tailor them to your career aspirations.

## Who Should Take This Certificate?

- University graduates who wish to distinguish themselves in their chosen field or focus their research interests in ethics
- Professionals looking to play a more significant role in their organizations

## What Will You Learn?

After completing this certificate, you will be able to:

- Critically analyze approaches to ethics
- Understand the theoretical underpinnings of ethics
- Develop writing skills for clear presentation and defence of ethical policies and procedures
- Communicate in a more effective and persuasive manner

## Required Courses

- ☐ CPH 200 Ethics Capstone Course

## Electives - Group A (select 2)

- ☐ CPHL 302 Ethics and Health Care
- ☐ CPHL 307 Business Ethics
- ☐ CPHL 400 Human Rights and Justice
- ☐ CPHL 449 Philosophy of Punishment
- ☐ CPHL 500 Philosophy of the Natural Environment
- ☐ CPHL 503 Ancient and Modern Ethics
- ☐ CPHL 509 Bioethics
- ☐ CPHL 525 Environmental Ethics
- ☐ CPHL 530 Media Ethics
- ☐ CPHL 603 Fundamentals of Ethics
- ☐ CPHL 612 Philosophy of Law
- ☐ CPHL 614 Philosophy of Human Rights

## Certificate Requirements

- 1 required course
- 5 electives\*
- Cumulative grade point average (GPA) 1.67+

\*You must take 2 selections from Electives – Group A and 3 selections from Electives – Group B (that you haven't already taken in Electives – Group A).

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With six Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

## Electives - Group B

(select 3 not previously taken in Electives - Group A)

- CCRM 200 Criminal Law
- CCRM 322 Ethics in Criminal Justice
- CECN 321 Introduction to Law and Economics
- CECN 502 Economics of Energy and Natural Resources
- CECN 510 Environmental Economics
- CENG 621 Women's Texts, Global Contexts
- CGMS 802 Ethics and Regulation of Int'l Bus
- CHST 602 Propaganda!
- CINT 905 Conflict Resolution in Community Services
- CLAW 122 Business Law
- CLAW 525 The Law of the Marketplace
- CLAW 529 Employment and Labour Law
- CLAW 603 Advanced Business Law
- CMHR 600 Diversity and Inclusion in the Workplace
- CMHR 640 Leadership
- CODG 130 Legal and Ethical Issues in GIS and Digital Data
- CPHL 302 Ethics and Health Care
- CPHL 307 Business Ethics
- CPHL 400 Human Rights and Justice
- CPHL 401 Philosophy and Mass Culture
- CPHL 500 Philosophy of the Natural Environment
- CPHL 503 Ancient and Modern Ethics
- CPHL 507 Ethics and Disability
- CPHL 509 Bioethics
- CPHL 525 Environmental Ethics
- CPHL 530 Media Ethics
- CPHL 602 Health Policy: Ethics and Justice
- CPHL 603 Fundamentals of Ethics
- CPHL 612 Philosophy of Law
- CPHL 614 Philosophy of Human Rights
- CPHL 621 Non-Western Philosophy
- CPHL 921 Intellectual Property and Technology
- CPOG 424 Human Rights and Global Politics
- CPPA 301 Administrative Law
- CPSY 124 Social Psychology
- CPSY 300 Psychology and Law
- CPSY 518 Environmental Psychology
- CPSY 706 Positive Psychology
- CPSY 802 Death, Dying and Bereavement
- CPSY 808 Community Psychology
- CSOC 609 Women and Human Rights
- CSOC 705 Law, Justice, and Abolition

# Facility and Property Management

Every organization leases or owns their real estate and needs someone with the right training and background to manage this important asset for them. This fully online certificate will help set you up for career success in this in-demand profession. It combines direct facility and property management skills with the broader business and management knowledge needed to thrive in the profession. Facility and property managers provide productive, safe, and comfortable work environments for their organization's employees. Equip yourself with the most important skills and knowledge necessary for a rewarding career in facility and property management.

## Industry and Careers

This certificate can lead to public sector career paths in:

- Courthouses
- Federal or provincial government
- Hospitals
- Municipalities
- School boards
- Universities or colleges

In the private sector, you could work for:

- Charities
- High-tech companies
- Hotels or resorts
- Insurance companies
- Legal firms
- Manufacturers
- Retail companies

## Who Should Take This Certificate?

- Professionals working in a related field such as architecture, engineering, or a building trade and want to move into the facility or property management profession
- Individuals interested in a career change and need a foundation to get into the facility or property management profession
- Office managers, building coordinators, technicians, leasing managers, custodians/janitors, and others who want to move up the ladder in their existing organizations
- Existing facility and property managers in small organizations who want a designation that will help them transition their career into larger portfolios
- Individuals interested in a career change and need a foundation to get into the facility or property management profession

## Required Courses: 39-Hour Courses (select 6)

Two 19.5-hour courses may be completed as the equivalent of one 39-hour course.

- CDFM 102 Facility Management Fundamentals
- CDFM 103 Project Planning, Design, and Management
- CDFM 104 Building Operations and Maintenance
- CDFM 105 Space Planning and Management
- CDFM 106 Leadership, Strategy, Business
- CDFM 107 Recruiting and Managing Employees and Procuring Contractors

## 19.5-Hour Courses

Two 19.5-hour courses may be completed as the equivalent of one 39-hour course.

- CDFM 110 Leasing and Lease Administration
- CDFM 111 Capital and Asset Management
- CDFM 112 Risk, OHS, Regulations, and the Law
- CDFM 113 Sustainability in Facilities
- CDFM 114 Real Estate Planning and Development

## Certificate Requirements

- 6 required courses
- Two 19.5-hour courses are considered equivalent to one 39-hour course
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Successful completion of a minimum of two-year post-secondary program

OR

- Mature student status with related professional experience and education

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

## What Will You Learn?

After completing this certificate, you will be able to:

- Manage the staff and contractors required to deliver services, including procuring and hiring them
- Understand your legal responsibilities and the risks, regulations, and laws that apply in facilities
- Manage your organization's space, including planning office space and managing moves, relocations, and minor construction
- Recognize the impact of facilities on the environment and how to reduce that impact through sustainable initiatives.
- Understand the systems and basic technical and operational principles involved with managing a building
- Work with other fields and departments to deliver your responsibilities and provide guidance to others related to your field of expertise

# Fashion Innovation

Fashion is in a state of disruption. For a successful career in this industry, it's crucial to understand innovations and how they can impact the industry. Fashion brands are looking to hire innovative talent who can connect with consumers in unique and unexpected ways and help their company make critical business decisions in response to the impacts of technology, social media, and progressive consumer values. With our Certificate in Fashion Innovation, prime yourself with the in-demand knowledge and competencies to thrive in the fashion industry now and in the years ahead.

## Industry and Careers

This certificate can help you build the skills needed to become employed in the following areas:

- Trend forecasting
- Merchandising, buying and product management
- DTC, marketplace and digital selling
- Events management
- Fashion media
- Styling
- Wholesale sales and brand management

## Who Should Take This Certificate?

- Those looking for career advancement in the fashion industry.
- People who have a passion for fashion and want to complement their existing education or professional experience in the following areas:
  - Marketing/event planning
  - Business management/entrepreneurship
  - Design management
  - Research and analytics
  - Brand building and public relations
  - User experience (UX) or user interface (UI)
- Those interested in Toronto Metropolitan University's School of Fashion undergraduate program, but unsure if they want to apply for the full program

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Understand the fashion landscape and business of fashion as it aligns with core consumer/corporate values, including sustainability, equality, diversity, gender fluidity, radical inclusion, and community.
- Design and implement meaningful digital fashion experiences and in-person events that drive customer engagement and enhance brand loyalty.
- Know how to market your personal brand to win - and hold - focus in an oversaturated marketplace.
- Analyze data sets to help inform marketing and sales strategies as they apply to supply chain, consumer analytics, and trend forecasting.
- Develop a portfolio that showcases knowledge and understanding of the fashion industry today.

## Required Courses

- ❑ CDFI 100 Events and Digital Experiences
- ❑ CDFI 200 Visually Speaking
- ❑ CDFI 300 Fashion Research and Analytics: An Introduction
- ❑ CDFI 400 Fashion Innovation Project
- ❑ CFSN 105 Fashion Systems I
- ❑ CFSN 223 Fashion Theory

## Certificate Requirements

- 6 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With six Grade 12 U or M credits (including English)

OR

- Continuous learners with relevant professional experience

# Film Studies

Build a solid foundation in the principles and techniques of filmmaking and developing screen-based content. You may take one or more courses or workshops or choose to pursue the full certificate program. Our Certificate in Film Studies is an excellent starting point if you want to pursue a career in film, television, and digital screen content development.

Looking to reduce your summer course load? Many electives are offered throughout the Fall 2022 and Winter 2023 terms. Develop your skills in a specific area like screenwriting, scenography, or sound design, by taking one or more courses from our fall and winter offerings.

## Industry and Careers

This certificate program is designed to provide a strong practical foundation in technical and business skills as they relate to film production.

It will provide you with an excellent opportunity to build your professional portfolio. Completing the certificate may help you attain entry-level positions within Canada's \$2 billion film and television industry.

## Who Should Take This Certificate?

You may be interested if you:

- work in the film industry and want to improve your qualifications
- are new to the industry and want to better understand all aspects of production
- work in other fields and want to make a career change to enter the film industry or develop content
- work in allied fields and want to develop film production and screen media
- have a related education in theory, history, and criticism of film and want to make films or develop screen media production.

## What Will You Learn?

This program is a great starting point if you want to pursue a career in the film industry or satisfy your curiosity about film and film production.

Courses range from an introduction to basic filmmaking to specialized courses such as:

- cinematography and lighting design
- directing screen performance
- film and digital production methods and techniques
- fundamentals of directing, editing, shooting and producing
- production design
- screenwriting
- sound design, location and post audio production techniques
- the business of developing, producing, and marketing films

## Required Courses

- ❑ CMPF 106 Film Production: Silent Film
- ❑ CMPF 206 Film Production: Sound Film
- ❑ CMPF 107 Intro to Cinematography
- ❑ CMPF 207 Introduction to Editing and Sound
- ❑ CMPF 422 Film Production
- ❑ CMPF 423 Film Technology III
- ❑ CMPF 322 Film Production
- ❑ CMPF 301 Business of Film

## Electives (select 2)

- ❑ CDMP 125 Fiction Screenwriting
- ❑ CDMP 231 Short Filmmaking: On Location
- ❑ CDMP 700 Advanced Screenwriting
- ❑ CFPN 323 Sound Design for Digital Media I
- ❑ CFPN 501 Scenography I: Art Direction
- ❑ CFPN 502 Directing Screen Performance - Basic Principles
- ❑ CFPN 531 Cinematography and Lighting Design I
- ❑ CFPN 601 Scenography II - Production Design

## Certificate Requirements

- 8 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With six Grade 12 U or M credits
  - With a minimum average of 60 percent

OR

- Mature student status with relevant professional experience

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Financial Mathematics Modeling and Predictive Analytics

Are you a professional with a technical background looking to gain expertise in stochastic modeling (financial model that is used to help make investment decisions)? This certificate will help you reach a level of mathematical and computational sophistication to understand and implement powerful financial models.

You will also attain financial mathematics proficiency in the areas of stochastic processes and probability, statistics, and computation as well as gain an understanding of the highly complex operations of financial markets. If you have a background in economics, mathematics, science, engineering, or finance, this program can help you advance or change your career.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Auditor
- Economist
- Financial data analyst
- Financial investment consultant
- Fund managers
- Model developer
- Quantitative analyst
- Risk assessment analyst
- Risk manager

## Who Should Take This Certificate?

- Technically trained professionals who have a background in mathematics, economics, science, engineering, or finance, and are seeking career advancement, portability, and longevity\*

\*Note: an interview/placement assessment with the academic coordinator is required for entry into this program.

## What Will You Learn?

After completing this certificate, you will be able to:

- Perform modeling and computation for financial products, risk analysis, and portfolio optimization
- Determine the value of financial derivatives and complex investments
- Apply advanced mathematical techniques to analyze and model solutions to real-life financial and economic problems in professional industries such as the financial markets and the energy sector
- Apply the following tools:
  - stochastic process and probability
  - Statistics
  - computation, simulation, and implementation of models

## Required Courses

- ❑ CMTH 500 Introduction to Stochastic Processes
- ❑ CMTH 600 Computational Methods In Mathematics
- ❑ CMTH 700 Financial Mathematics I
- ❑ CMTH 800 Financial Mathematics II

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Mature student status and evidence of university-level coursework in mathematics, economics, and/or finance, or equivalent (to be determined by the academic coordinator)

OR

- Mature student status and other relevant qualifications or relevant industry experience (to be determined by the academic coordinator)

## Admission Interview/Placement Assessment

An interview/placement assessment is required for this program. Please contact the Academic Coordinator, Sebastian Ferrando, at [ferrando@torontomu.ca](mailto:ferrando@torontomu.ca) and Anne-Marie Brinsmead, Program Director, Engineering, Architecture, and Science, at [a2brinsm@torontomu.ca](mailto:a2brinsm@torontomu.ca).

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Financial Planning

The Certificate in Financial Planning will not be accepting any new registrants. This certificate has been discontinued effective Fall 2021. Students formally registered in the certificate prior to July 2, 2021 must complete the program requirements in effect at the time they registered.

For more information, please contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

If this certificate interests you, you may want to check out these related certificates:

- Accounting – Finance
- Advanced Accounting
- Business Management
- Economics and Finance

## Required Courses

- ❑ CACC 522 Taxation for Managers and Financial Planners
- ❑ CFIN 501 Investment Analysis
- ❑ CFIN 502 Personal Financial Planning
- ❑ CFIN 512 Risk Management and Insurance
- ❑ CFIN 612 Retirement and Estate Planning
- ❑ CFIN 812 Advanced Personal Financial Planning



# Food Security

Food insecurity is a serious problem – in Canada and on a global scale – that requires passionate, qualified individuals to develop plans for community food security, urban food security, and sustainable food systems. Our fully online Certificate in Food Security can help you fulfil the rapidly growing demand for professionals with a knowledge and skill set in food security.

This certificate is a post-degree program and includes degree-credit and graduate degree-credit courses, so it can be used as a stepping stone from undergraduate studies to entry into master's and PhD programs in food security or related studies.

## Industry and Careers

This certificate can lead to career paths in various roles. Here are some examples:

- City social worker dealing with poverty and food insecurity issues
- Community development officer
- Director of a nonprofit organization
- Program leader for a food program/food bank
- Program leader for a regional health authority
- Research associate for food insecurity
- Urban farm manager

## Who Should Take This Certificate?

- Working professionals with experience related to food security (public health, social work, agriculture, etc.) who wish to broaden their knowledge and skill set to expand their career opportunities
- Degree graduates looking for a stepping stone from undergraduate studies to a master's or PhD program in food security or related studies
- Individuals who are passionate about the subject who would like to transition to careers in this field

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Apply appropriate research and evaluation methods for assessing food security
- Plan and undertake assessments of household and community food security
- Determine the prevalence of hunger and food insecurity in a population
- Design collaborative processes for building household and community food security
- Apply current economic thinking to strengthening food security
- Initiate the development of food policy and programs for a right to food
- Develop urban food production initiatives to bolster urban food systems
- Identify the requirements for creating sustainable food systems based on social justice

## Required Courses

You may only select one of CFNP 250 or CFNY 404.

- CFNP 250 Markets, Food Systems/Food Policy
- CFNY 403 Food Security Concepts and Principles
- CFNY 404 Food Policy and Programs for Food Security
- CFNY 405 Applied Research Methods and Evaluation

## Electives (select 3)

You may only select one of CFND 401 or CSOC 808.

You may only select one of CFNF 100 or CVFS 401.

You may only select one of CFNN 100 or CFNN 111.

- CFND 401 Social and Cultural Dimensions of Food
- CFNF 100 Families and Health
- CFNN 100 Nutrition and Health
- CFNN 111 Nutrition for your Health
- CFNY 400 Selected Topics in Food Security
- CFNY 407 Community Development and Food Security
- CFNY 408 Urban Food Security
- CFNY 409 Gender and Food Security
- CFNY 510 Indigenous Food Systems in Canada
- CINT 912 Community Development:  
International Field Experience
- CSOC 808 Sociology of Food and Eating
- CVFN 410 Understanding Urban Agriculture
- CVFN 411 Dimensions of Urban Agriculture
- CVFN 412 Practicing Urban Agriculture
- CVFN 413 Urban Agriculture Policy-Making
- CVFS 401 Contemporary Family Issues

## Certificate Requirements

- 3 required courses
- 3 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

- An undergraduate degree
- OR
- 5 years of professional experience in a field relevant to food security work
- OR
- A 3-year Baccalaureate study with a clear academic standing (at least a C average or GPA of 1.67)

### Admission Interview/Placement Assessment

If you wish to apply to register for the Certificate in Food Security, contact the Academic Coordinator, Reg Noble, who will assess whether you are eligible and answer any questions you might have about the program. If you're interested in taking individual courses, Toronto Metropolitan University's general eligibility rules apply.

# Foundations of International Management

In the current global business environment, employers need people who understand how the global economy, political events, cultural norms, and social institutions can impact a business and the industry within which it operates.

This certificate will help you gain the necessary skills and cultural understanding to work effectively in today's global business environment. You will learn to apply theory in real world case studies, simulations, and projects to demonstrate your understanding of how business is conducted in key geographic regions, taking into account the major cultural, political, and economic factors that shape approaches to business management internationally.

If you're using this as a stepping stone in your education, this certificate includes all prerequisites for the Certificate in Advanced International Trade Management and offers students the opportunity to apply the degree-credit courses as transfer credits to a Bachelor of Commerce program at Toronto Metropolitan University.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Business analyst
- Information officer
- Management consultant
- Nonprofit manager
- Project manager

## Who Should Take This Certificate?

- University graduates with a degree in a related non-business field, such as political science or languages, who want to enhance their employability at multinational organizations
- Individuals who are interested in exploring degree-credit business courses with an international focus who are not ready to commit to a four-year degree program
- Individuals who are looking to strengthen their application to a full-time undergraduate degree program
- Professionals working in a government agency related to trade, or an international non-profit organization, and would benefit from foundational knowledge in international management
- Individuals looking for a pathway to advanced skill development, such as the Certificate in Advanced International Trade Management

## What Will You Learn?

After completing this certificate, you will be able to:

- Practice agile thinking and strategic decision-making to compete effectively in a changing global business environment
- Define and understand the basic functions of management
- Describe the production and operations management process in the transformation of goods and services from inputs to outputs
- Apply mathematics in support of managerial decisions in various business functions

## Required Courses

- ❑ CGMS 200 Introduction to Global Management
- ❑ CGMS 400 The Global Business Environment
- ❑ CGMS 401 Operations Management
- ❑ CQMS 110 Applied Mathematics for Business

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With six Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Full Stack Developer

Do you want to get started in one of the most in-demand job fields in the market? The Canadian labour force is experiencing a shortage of tech talent at the same time that employers are in immediate need of them.\* To help close the skills gap, employers are looking for upskilled job seekers in full stack developer and similar roles. With our fully online Certificate in Full Stack Developer that can be completed in one year or less, edge out the competition and get the career and industry mentorship to accelerate your success.

Are you short on time but still looking to upgrade your technical skills? We also offer a Course Series in Full Stack Developer where you can apply your completed courses towards a certificate should you wish in the future.

## Career-Ready Support Offered

While enrolled in the Certificate in Full Stack Developer, you will receive a variety of support, including:

- **Virtual mentor services:** the virtual mentor is available free of charge for 1-on-1 Zoom meetings and for consultations by email about the coursework, assignments, final projects, and for career advising.
- **Employer networking support:** participating employers will provide informal career and networking support through LinkedIn to certificate candidates and graduates.
- **Career support:** full stack developer job search and career advising sessions will be offered throughout your courses.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Consultant (finance, healthcare, government, IT, among other industries)
- Start up and small-to-medium business owner/manager
- Web apps developer
- Website developer
- Web services developer

## Who Should Take This Certificate?

Individuals looking to make a career pivot by adding specialized skill sets for moving up in their careers

- High school diploma holders and university and college undergraduate degree recipients
- New Canadians looking for Canadian credentials to help them enter the job market
- Employers in small, medium and large sized businesses who need to send their staff to upskill in full stack cloud developer coding and scripting capacities in potential candidates

This certificate is also applicable to working professionals who are:

- Aspiring coders, web, and software developers
- Looking to upskill and require new technical skills to stay current in their jobs
- Working in a career that requires a computer science or STEM university-level credential
- Returning to the workforce or preparing to switch careers and need a university credential to demonstrate readiness for today's technical professional roles in a range of fields

## Required Courses

- CKCS 145 Full Stack Developer
- CKCS 149 Python Programming
- CCMN 279 Introduction to Professional Communication
- CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) 1.67+

The four-course Certificate is flexible in that no courses have prerequisites; continuous learners may take the courses in any order and in combination, or "fast track" their learning by taking all four courses concurrently in the same semester.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on my.torontomu (MyServiceHub) within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent

OR

- Mature student status

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Construct fully functional websites and mobile applications, from end-to-end, by using various languages and tools
- Front-end development and production: create and customize responsive web pages using a variety of languages (SQL, JavaScript) and full stack developers' tools (Git, GitHub, Unix Shell)
- Back-end development and deployment: design a dynamic database/data store for retrieval of data using SQL and embed SQL statements in Python code that is supporting the middleware.
- Effectively leverage middleware to achieve web development project goals: architect the middleware in Python with support libraries, such as Flask from Pallets Project
- Perform Beta testing for full stack website related product improvement: leverage tools, libraries, apps and various software to perform a number of tiered, technical activities required to deliver a polished end-to-end website or mobile application
- Perform and deploy both Agile and hybrid project management processes and functions
- Effectively leverage verbal, written, and visual presentation skills to communicate ideas and recommendations to internal and external stakeholders
- Work collaboratively and virtually with colleagues on complex projects

# Fundamentals of Interior Design

Hone your design thinking skills to better communicate design intent within the interior design industry and the field of spatial design. The program will also introduce you to the traditional and contemporary skill sets used in the development of interior decor and space planning.

Courses increase in scope as you move through the certificate, building upon what you learn. Many courses are taught in a setting encouraging student interaction and discussion, with instructors offering a supportive environment for you to test out your design ideas and strategies.

## Industry and Careers

Many of our learners have gone on to find work in the interior industry, including in:

- Film and set design
- Furniture design
- Product design manufacturing
- Real estate
- Sales
- Staging

Many also choose to continue in their existing careers with an enhanced communications skill set that is useful when discussing spatial and design-related work.

Note: Certified interior designers must pass the NCIDQ exam, which is administered by the Council for Interior Design Qualification (CIDQ). Completing this certificate will not enable you to write the NCIDQ exam or represent yourself as a certified interior designer. This certificate is separate from Toronto Metropolitan University's Bachelor of Interior Design (BID) program.

## Who Should Take This Certificate?

You may be interested in taking this certificate if you:

- Professionals who want to enhance your communication skills to work with designers and those in the allied construction fields
- Professionals who work in real estate, renovations, and new build projects who want to hone their design thinking skills to move up in their careers
- Individuals who are looking to kickstart their careers in:
  - Decor
  - Set design
  - The interior industry (including furniture, building materials, lighting, floor and wall covering suppliers, and the related sales and manufacturing of the products used and selected by designers)
  - Facilities planning
  - Space planning

## Required Courses

- CDID 150 Design Theory
- CDID 151 Interior Design I: Drafting
- CDID 152 Interior Design I: Space Planning
- CIRC 112 Introduction to Digital Communication

## Electives (select 3)

- CDID 153 Interior Materials and Finishes
- CDID 155 Design Dynamics I: Portfolio 1
- CDID 157 Kitchen and Bathroom Design
- CIRC 113 Introduction to Visual Communication
- CIRH 101 History of Interior Design 1850 - Present

## Certificate Requirements

- 4 required courses
- 3 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits (including English and Mathematics)
  - With a minimum average of 60 percent

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

## What Will You Learn?

You will be introduced to contemporary ideas of design. Through a combination of lectures and hands-on demonstrations, you will build a foundation in space planning and the design process.

The seven courses reinforce many sought-after skills, including:

- Effective presentations
- Working with colleagues in a studio setting
- Developing a proposal for a design problem
- Your instructors will help you improve your abilities in research and communication, including:
  - Rapid sketching ability
  - Integrating analog and digital processes
  - Concept development
  - Design skills that are transferable across many disciplines

# Fundraising Management

With over 170,000 charities across Canada, fundraising has become one of the most important growth areas for nonprofit organizations. Fundraising careers have grown over the last decade and will continue to grow for the foreseeable future. Well-trained and informed fundraisers are key to building bridges between charities and donors. This certificate program is designed to help you understand fundraising tools and techniques, while developing your leadership and management skills.

Through this five-course program, you will gain expertise in innovative fundraising methods, nonprofit marketing and solicitations, and donor recognition. You will also learn about how to thank donors so that they continue to give generously. Become a highly skilled fundraiser, so you can help organizations surpass their financial goals and create a community of loyal supporters.

## Industry and Careers

Our graduates are in high demand, and many work in local, national, and international nonprofits. Here are just a few of the positions our alumni hold today:

- Advancement officer
- Development officer
- Director of philanthropy/development
- Manager of giving
- President and CEO
- Senior development officer
- Vice president of development

## Who Should Take This Certificate?

- Individuals who are emerging fundraising professionals looking to take the next career step
- Individuals looking to make the leap into fundraising from an entirely different industry
- Individuals that are passionate about raising funds for healthcare, health and wellness, or arts and culture, or increasing resources for education, sustainability, poverty reduction, or social justice, and want to turn that into a career

## What Will You Learn?

After completing this certificate, you will be able to:

- Develop and implement strategies to successfully and ethically operate a fundraising program
- Identify and inform solutions to ethical issues in the charitable sector
- Analyze data and information to guide your fund development process and raise more money
- Develop annual giving, donor communication, and fundraising marketing materials
- Examine and adjust practices to emerging issues and donor-centered fundraising trends influencing today's charities
- Apply sound financial management practices to real-life situations
- Evaluate strategic fundraising plans and identify the critical elements of a well-configured database

## Required Courses

- ❑ CINT 916 Introduction to Fundraising
- ❑ CVFM 201 Operations of Fundraising
- ❑ CVFM 202 Donor Centered Fundraising
- ❑ CVFM 205 Data Analytics for Fundraising
- ❑ CVFM 304 Fundraising Strategies & Practices

## Certificate Requirements

- 5 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

OR

- Mature student status



# Graphic Communications

Our world is highly visual. Every day we come into contact with hundreds of printed and digital graphics — from printed billboards, to interactive websites, to unique packaging holding your coffee. In our Certificate in Graphic Communications, you will learn a variety of sought-after transferable skills for many fields, turning your bright ideas into creative concepts that inform, engage, and inspire. Exercise your creative right brain and technical left brain to bring your important work to life. Work through the certificate at your own pace – in as quickly as two semesters – and get real industry experience through practicum or project-based opportunities. We will teach you the skills to help you cut through the noise, stand out, and get noticed.

## Industry and Careers

The opportunities in the graphic communications industry are diverse, in both region and role, and appeal to a wide range of interests. There are design and creative opportunities, technical machinery and computer skills-oriented jobs, as well as business and managerial roles.

This certificate can lead to career paths in various roles. Here are some examples:

- Accessibility specialist
- Graphics specialist
- Page layout artist
- Print project coordinator
- Sustainability analyst

## Who Should Take This Certificate?

- Individuals considering a career change into the graphic communications industry
- Individuals who are applying for Toronto Metropolitan University's Bachelor of Technology in Graphic Communications Management degree
- Individuals who are looking to deepen their graphic communications knowledge to move up in their field

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Prepare layouts, files, and proofs for printed and digital output, as well as print product and post-press
- Use industry-standard hardware and software to integrate printed communication with online mediums
- Demonstrate an understanding of the impact of branding, display graphics, direct marketing materials, books, magazines, and consumer packaging
- Develop creative ideation strategies, working from creative briefs, design, and layout, using industry standard software (Adobe Creative Cloud)
- Through electives, gain tools and skills in typography, sustainability, accessibility, magazine publishing, or Adobe Photoshop

## Required Courses

- ❑ CGCM 110 Introduction to Graphic Communications
- ❑ CGCM 120 Graphic Communications Processes 1
- ❑ CGCM 130 Design and Layout

## Electives (select 3)

- ❑ CGCM 210 Consumer Packaging
- ❑ CGCM 230 Typography
- ❑ CGCM 260 Digital Premedia Workflows
- ❑ CGCM 720 Magazine Production and Publishing
- ❑ CGCM 738 Photoshopped! The Art of Image Retouching
- ❑ CGCM 740 Accessibility for Graphic Communications
- ❑ CGCM 746 Sustainability in Print and Packaging

## Certificate Requirements

- 3 required courses
- 3 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits
  - With a minimum grade of 60 percent

OR

- Mature student status with relevant professional experience

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Health Informatics

Health informatics is a specialized industry experiencing rapid change and demand that needs professionals who have balanced exposure to IT, healthcare, and management fundamentals. The core courses will provide students with the foundational concepts to prepare individuals with the academic qualifications for CPHIMS-CA Certification through Digital Health Canada. Our many elective options allow students to expand their knowledge in areas of healthcare management, health information management, information technology management, data privacy, security and analytics.

## Industry and Careers

This certificate can lead to career paths in various roles. Here are some examples:

- Analytics manager
- Clinical informatics analyst
- Clinical informatics specialist
- Decision support analyst
- Health data analyst
- Health informatics analyst
- Medical informatics analyst
- Quality improvement specialist

## Who Should Take This Certificate?

- Healthcare professionals who wish to formalize and expand their knowledge of industry-specific uses of information technology in order to progress in their career
- Healthcare professionals that are seeking the academic training to meet the eligibility requirements to sit for the CPHIMS-CA Certification
- IT professionals who are interested in applying their technical skills within the health sector
- Internationally educated professionals with a background in IT or the health sector who seek a better understanding of healthcare and health information management in the Canadian context

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Understand how information technology is applied in healthcare services, including electronic health records (EHR), eHealth, healthcare software applications, and healthcare data
- Apply fundamentals of human interaction with computers including mental models, multimedia user interface, network-based interactions, and visual design principles
- Demonstrate familiarity with healthcare coding terminologies, interoperability between diverse and distributed systems, and electronic data interchange standards
- Compare and contrast the various health systems operating within Canada and models for healthcare funding and planning
- Understand ethical issues as related to health information management
- Evaluate aspects of care provision, including provider-client relationships and integrated client-centred care

## Required Courses

- CHIM 305 Introduction to Health Informatics
- CHIM 306 Healthcare Interoperability
- CHSM 301 The Healthcare Systems
- CHSM 305 The Management Cycle

## Electives (select 3)

If you do not have a background in health information, you should complete CHIM 303.

You should select CMHR 405 if you wish to pursue CMHR 650, as CHSM 437 does not provide a prerequisite for CMHR 650.

- CHIM 301 Healthcare Information Analysis
- CHIM 303 Intro to Health Coding Classification
- CHIM 307 Human-Computer Interfaces in Healthcare
- CHIM 404 Introduction to Health Economics
- CHIM 408 Statistics for Health Services Managers
- CHSM 437 Human Resources Management in Healthcare
- CIND 119 Introduction to Big Data
- CIND 123 Data Analytics: Basic Methods
- CITM 207 Computer-Enabled Problem Solving
- CITM 301 IT Infrastructure
- CITM 820 Information Systems Security and Privacy
- CLAW 401 Information Access and Privacy Protection
- CLAW 402 Health Information Access and Privacy
- CMHR 405 Organizational Behaviour
- CMHR 523 Human Resources Management
- CMHR 640 Leadership
- CMHR 650 Management of Change
- CQMS 210 Applied Statistics for Business
- CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 4 required courses
- 3 electives\*
- Cumulative grade point average (GPA) 1.67+

\*If you do not have a background in health information, you should complete CHIM 303. You should select CMHR 405 if you wish to pursue CMHR 650, as CHSM 437 does not provide a prerequisite for CMHR 650.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant work experience
- With minimum of 1 year's related professional experience in the health or information technology sectors

### Admission Interview/Placement Assessment

You must complete a pre-approval application and receive an approval code before registering in your certificate (it's best to have your registration in place before you enrol in for your first course).

### Already a TMU student or have a Google email account?

Complete our Certificate Approval Code Request form and attach your required documentation.

### Not yet a TMU student or don't have a Google email account?

Complete our Certificate Approval Code Request (Non-Google Users) form and submit your required documentation.

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Health Services Management

Healthcare administration is one of the fastest growing occupations in today's job market. Our Certificate in Health Services Management will assist you with determining the most suitable healthcare management environment for you, including hospitals, long term care, community care, health clinics, dental, or medical offices. This certificate will help give you an indication of what area of management you would be suited for in a medical environment such as hospitals, clinics, dental, and medical offices.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Executive director
- Healthcare manager
- Mental health lead
- Operations manager
- Patient safety consultant
- Quality improvement manager
- Screening manager

## Who Should Take This Certificate?

- Current and potential health care managers who are looking to increase their knowledge and skills in significant aspects of health service provision to help them move up in their careers
- Individuals looking to study in the part-time degree completion program in Health Services Management. (Many of the courses in the Health Services Management certificate program are degree credit courses and qualify for exemption.)

## What Will You Learn?

The introductory Healthcare Systems course will provide you with an understanding of:

- Key foundational knowledge about how healthcare is delivered
- The responsibilities of provinces and the federal government in the allocation of healthcare services, funds and coverage
- How health information is collected and used toward decision making in healthcare.

The introductory course the Management Cycle will provide you with an understanding of:

- Key management principles, perspectives and functions of planning, organizing, leading, controlling and budgeting within healthcare. Additional core courses will provide students with an understanding of: Essential management information focused on human resources, financial management and law within healthcare.
- Students can select from a variety of streams to further their learning in project management, health information management, long term care, and research.

## Required Courses

- ❑ CHSM 301 The Healthcare Systems
- ❑ CHSM 305 The Management Cycle
- ❑ CHSM 407 Healthcare Financial Management
- ❑ CHSM 437 Human Resources Management in Healthcare
- ❑ CLAW 326 Law for Health Managers

## Electives (select 2)

- ❑ CACC 100 Introductory Financial Accounting
- ❑ CCMN 279 Introduction to Professional Communication
- ❑ CHIM 301 Healthcare Information Analysis
- ❑ CHIM 303 Intro to Health Coding Classification
- ❑ CHIM 305 Introduction to Health Informatics
- ❑ CHIM 404 Introduction to Health Economics
- ❑ CHIM 408 Statistics for Health Services Managers
- ❑ CHSM 307 Principles of Long Term Care Service Del.
- ❑ CHSM 308 Project Management - Long Term Care
- ❑ CHSM 309 Trends in Long Term Care Service Delivery
- ❑ CHSM 310 Institutional Structure
- ❑ CHSM 330 Managerial Epidemiology for Healthcare
- ❑ CHSM 408 Program Planning and Evaluation
- ❑ CHSM 417 Research Methodology

## Certificate Requirements

- 5 required courses
- 2 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

OR

- A community college diploma in a related health services field

OR

- Mature student status

### Admission Interview/Placement Assessment

You must complete a pre-approval application and receive an approval code before registering in your certificate (it's best to have your registration in place before you enrol in for your first course).

### Already a TMU student or have a Google email account?

Complete our Certificate Approval Code Request form and attach your required documentation.

### Not yet a TMU student or don't have a Google email account?

Complete our Certificate Approval Code Request (Non-Google Users) form and submit your required documentation.

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Health Studies

The Certificate in Health Studies comprises specifically selected courses from other health-related Chang School certificate programs, such as Health Informatics, Health Services Management, Ethics, Psychology, and Aging and Gerontology. It provides a diverse set of courses that can fill gaps in your knowledge and skill set. If you are looking for depth in a particular area of study, you may instead choose to take the appropriate other health-related certificate. The Health Studies certificate will provide flexibility to choose courses that meet your professional development needs while allowing the opportunity to earn a certificate.

Through five elective courses in specialized streams of Health Informatics, Health Services Management, Health Ethics, Gerontology, and Psychology, learners are free to choose their own selection to equip them with specific knowledge pertinent to their personal goals or professional interests.

## Industry and Careers

The Certificate in Health Studies can be used for individuals looking to transition into a health related sector with no prior experience in the field. This Certificate can be used to fill gaps in students' knowledge and skill sets around health specific content required for future educational endeavors. Students taking this Certificate will be able to garner specialized knowledge from a variety of health related disciplines. The Health Studies Certificate will provide students with the flexibility to advance their knowledge in related health fields that can advance their professional development needs and provide the opportunity to earn a Certificate.

## Who Should Take This Certificate?

Those interested in learning more about health and the intersectional relationship between health and healthcare management, health information management, health ethics, gerontology, psychology, interdisciplinary studies and communications. Students can select from a variety of health related streams to specialize their learning.

## What Will You Learn?

Completion of the Health Studies certificate will provide students with an understanding of the health impacts on special populations, specific sectors and services designed to support healthy living.

## Required Courses

- ❑ CHSM 301 The Healthcare Systems

## Electives (select 5)

You may only select one of CCMN 279 or CCMN 314.

You may only select one of CPHL 302 or CPHL 509.

You may only select one of CPSY 102 or CPSY 105.

- ❑ CCMN 279 Introduction to Professional Communication
- ❑ CCMN 314 Professional Presentations
- ❑ CHIM 301 Healthcare Information Analysis
- ❑ CHIM 303 Intro to Health Coding Classification
- ❑ CHIM 305 Introduction to Health Informatics
- ❑ CHIM 306 Healthcare Interoperability
- ❑ CHIM 307 Human-Computer Interfaces in Healthcare
- ❑ CHIM 408 Statistics for Health Services Managers
- ❑ CHSM 305 The Management Cycle
- ❑ CHSM 330 Managerial Epidemiology for Healthcare
- ❑ CHSM 437 Human Resources Management in Healthcare
- ❑ CINT 904 Health Promotion and Community Development
- ❑ CINT 930 Aging: From Cells to Society
- ❑ CINT 935 Ethical/Legal Frameworks in Aging
- ❑ CINT 945 Technology and Aging Populations
- ❑ CLAW 402 Health Information Access and Privacy
- ❑ CPHL 302 Ethics and Health Care
- ❑ CPHL 509 Bioethics
- ❑ CPHL 602 Health Policy: Ethics and Justice
- ❑ CPSY 102 Introduction to Psychology I
- ❑ CPSY 105 Perspectives in Psychology
- ❑ CPSY 325 Psychological Disorders
- ❑ CPSY 605 Psychology of Health and Health Care
- ❑ CPSY 607 Drugs and Human Behaviour
- ❑ CPSY 802 Death, Dying and Bereavement
- ❑ CPSY 805 Adjustment, Stress and Coping
- ❑ CPSY 808 Community Psychology
- ❑ CTEC 210 Fundamentals of Project Management

## Certificate Requirements

- 1 required course
- 5 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- A community college diploma in a related health services field

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Human Resources Management

Pivot your career to a meaningful field full of opportunities: human resources. HR professionals and their role in recruitment, training, and motivation are a critical part of any functioning organization. Whether you're working in business and need further education in HR to transition your career, or you're looking to take your existing HR skill set to new heights, our Certificate in Human Resources Management will set you up for success.

If you're looking for further HR accreditation, you can also take courses that qualify for exemptions in the Certified Human Resources Professional (CHRP) designation offered by the Human Resources Professionals Association. Our graduates complete their certificates confident that they can assume a variety of HR functions in need in every industry sector.

## Industry and Careers

The transferability of skills among employers and industries is a major benefit of working as an HR professional.

This certificate can lead to career paths in various fields. Here are some examples:

- Change management
- Compensation and benefits
- Diversity and inclusion
- Health and safety
- HR consulting
- Labour relations
- Learning and development
- Organization development
- Talent management

## Who Should Take This Certificate?

- HR professionals who wish to upgrade their skills for a promotion or to obtain the CHRP designation
- Individuals not working in HR but who aim to join the field
- Individuals working in a business role who require further education to pivot to a specialty in HR

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Manage a diverse workforce
- Strategically recruit, retain, and promote employees
- Train and develop employees
- Foster an inclusive and ethical work environment
- Create a workplace that is compliant with current health and safety standards

## Required Courses

- ❑ CMHR 405 Organizational Behaviour
- ❑ CMHR 523 Human Resources Management

## Electives (select 4)

- ❑ CLAW 529 Employment and Labour Law
- ❑ CMHR 522 Union Management Relations
- ❑ CMHR 600 Diversity and Inclusion in the Workplace
- ❑ CMHR 623 Recruitment and Selection
- ❑ CMHR 671 Human Resources Information Systems
- ❑ CMHR 711 Occupational Health and Safety
- ❑ CMHR 733 Training and Development
- ❑ CMHR 749 Compensation Management
- ❑ CMHR 849 Human Resources Planning

## Certificate Requirements

- 2 required courses
- 4 electives
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.



# Image Arts (with specializations in Film Studies or Photography Studies)

Important Note: The Certificate in Image Arts will not be accepting any new registrants. This certificate has been discontinued effective Winter 2022. Students formally registered in the certificate prior to November 2, 2021 must complete the program requirements in effect at the time they registered. For curriculum details, please refer to the archived calendar for your year of registration. For more information, please contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

If this certificate interests you, you may want to check out our Certificates in Digital Art Production, Photography Studies and Film Studies.

## Required Courses

- CMPC 101 Visual Studies I
- CMPC 103 Reframing Art History
- CMPC 201 Visual Art: Concepts and Theories
- CMPC 203 Art in the Modern World

## Specialization in Film Studies

This certificate offers specializations in either Film Studies or Photography Studies. Complete the following courses to achieve the Specialization in Film Studies.

- CDMP 129 Motion Picture Production I
- CMPF 107 Intro to Cinematography

## Specialization in Photography Studies

This certificate offers specializations in either Film Studies or Photography Studies. Complete the following courses to achieve the Specialization in Photography Studies.

- CDFP 328 Photography Production I
- CDFP 329 Photography Production II
- CDFP 333 Photography and Digital Imaging
- CDFP 358 Photography and the Screen

# Indigenous Child and Youth Engagement

Indigenous community workers can have a significant impact on the lives of the Indigenous children and youth they support and also have a positive effect on their entire community. Indigenous community workers interested in post-secondary education and upskilling may not have access to these learning opportunities, especially while they're working to create meaningful change in their communities.

The Certificate in Indigenous Child and Youth Engagement provides a bridging of both those worlds – connecting education to direct employment in your own home community. When you enrol in the certificate courses, you'll be able to participate in post-secondary education and still continue your current work and activities in the community allowing you to stay connected to your community, family, and culture. Plus, you can take what you've learned and apply it in real time to your practice.

## Industry and Careers

This certificate can help you build the skills you need to pursue opportunities in the following areas and jobs:

- Community-based youth and family work
- Community outreach
- Family support worker
- Youth justice worker School-based child and youth work
- Child and youth counsellors

This certificate can also help an Indigenous CYC worker on the pathway to a degree program within the School of Child and Youth Care at Toronto Metropolitan University.

## Who Should Take This Certificate?

- Indigenous child and youth workers who are currently employed or volunteering in youth work with an Indigenous-led organization.

## What Will You Learn?

- Explore life-space youth work practice and gain perspectives on healing and therapeutic experiences for young people.
- Understand the design, implementation, and evaluation of youth-centered community-based programs.
- Use a range of culturally appropriate strategies to engage young people in Indigenous contexts.
- Translate ideas and approaches from your learnings and apply them directly to your practice within your own community.
- This entire certificate is taught through an Indigenous lens and designed to be relevant to Indigenous communities.

## Required Courses

- CCYC 405 Therapeutic Foundations
- CCYC 406 Therapeutic Life-Space

## Required Experiential Courses

- CVCY 300 Experiential Learning 1
- CVCY 400 Experiential Learning 2

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Indigenous continuous learners with relevant professional experience

OR

- Indigenous learners with an Ontario Secondary School Diploma (OSSD) or equivalent
  - With six Grade 12 U or M credits (including English)
  - With a minimum average of 60 percent

If you're interested in this certificate but unsure about eligibility, please email Nicole Ineese-Nash, Academic Coordinator, at [nicole.ineesenash@torontomu.ca](mailto:nicole.ineesenash@torontomu.ca).

# Indigenous Knowledges and Experiences

The impact of Canadian laws, policies, and practices on Indigenous Peoples and communities in Canada is a critically important part of our history and current culture. The lives of Indigenous Peoples continue to be affected by challenges in areas such as healthcare, social services, employment, and education. How do we bring about meaningful change? Build real-world experience through this unique, award-winning program that will help you be part of the way forward.

## Career Pathways

This certificate can help you pursue job opportunities or advance your career in the following areas:

- Community workplaces and professional disciplines that engage with Indigenous communities, agencies, and people
- Public or private sector roles in fields including social work, health sciences, education, policy, law, geography, human resources, community leadership, and more

## Who Should Take This Certificate?

If you want to gain knowledge about key issues such as Indigenous health and well-being, governance, literature, community relations, and land use in Canada, as well as the skills to work in or advance your career in these areas, this certificate is designed for you. It is intended for both Indigenous and non-Indigenous learners.

It is also ideal if you:

- Work in or want to advance your career in fields and professional disciplines that engage with Indigenous communities and agencies, including social work, health sciences, education, policy, law, geography, human resources, or community leadership
- Want to work in occupations that address, or should address, Indigenous concerns in public, private, and not-for-profit sector organizations

Don't have post-secondary education? You can pursue this university-level certificate with a secondary school diploma. View the Admission Criteria tab for more details.

## What Will You Learn?

Gain new knowledge and insights by exploring Indigenous lived experiences and perspectives. Learn how to:

- Build and apply your critical awareness of yourself in relation to Indigenous Peoples, experiences, and worldviews
- Assess and understand the relationship between Indigenous Peoples and the Canadian government
- Synthesize and communicate how Indigenous Peoples have been impacted by laws, policies, and practices in the health, social services, human resources, and other sectors
- Execute projects within community agencies and organizations
- Develop a foundational understanding of Indigenous approaches to professional development.

## Required Courses

- CINT 922 Introduction to Indigenous Worldviews
- CINT 923 Canada's Story: An Indigenous Perspective

## Electives (select 2)

### Indigenous Childhood Focus

- CCLD 450 Indigenous Early Learning
- CCYC 905 An Indigenous Perspective on CYC
- CMWF 108 Aboriginal Childbearing

### Indigenous Art & Literature Focus

- CENG 203 The Literature of Indigenous Peoples
- CENG 511 The Art of Writing Life
- CNPF 574 Aboriginal Visual Culture in Canada

### Indigenous Health and Wellbeing Focus

- CFNY 510 Indigenous Food Systems in Canada
- CSWP 933 Indigenous Health and Well Being

### Indigenous Politics Focus

- CINT 910 Indigenous Peoples, Pol and Reconciliation
- CPPA 124 Indigenous Politics and Governance
- CSWP 925 Strong Helpers' Teachings

### Experiential Learning Opportunity Focus

- CVSW 932 Indigenous Knowledges in Practice

## Certificate Requirements

- 2 required courses\*
- 2 electives
- Cumulative grade point average (GPA) 1.67+

\*If you are an undergraduate student who has completed SWP 435, you may apply for a course substitution towards CINT 922. However, if you complete INT 922/CINT 922, you may not apply for a course substitution towards SWP 435.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits (including English)
  - With a minimum average of 70 percent

OR

- Mature student status

Note: If you do not meet the above stated admission criteria, you may seek advice and assistance from Spanning the Gaps – Access to Post-Secondary Education or from Toronto Metropolitan Aboriginal Student Services.

# Information Systems Management

Virtually every type of business today relies on information technology. Whether banking online, ordering a pizza, monitoring patients in a hospital, or publishing a newspaper, organizations must develop systems that serve their customers and help them succeed.

Computers, the Internet, wireless communications, databases – all are forms of information technology that are used to collect, analyze, and share information. Information systems management examines how this technology can be used effectively in an ever-changing business context.

This certificate stands alone as an introduction to the IT management field, but it also provides a smooth transition either to another more specialized certificate or to the Business Technology Management degree program.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- App developer
- Database administrator
- Data scientist
- Information security analyst
- IT manager
- Librarian
- Search engine optimization specialist
- Search marketing strategist

## Who Should Take This Certificate?

- Individuals looking to get into the IT management field
- Individuals looking to transition to a more specialized certificate or to the Business Technology Management degree program. (The number of eligible courses that can be used towards the degree will depend on the curriculum in effect at the time of admission to the degree program.)

## What Will You Learn?

This certificate introduces business information systems, data representation and processing, and data management systems, as well as the key concepts, techniques, and methodologies relevant to developing information systems (IS), and the IT infrastructure.

Students will learn the fundamentals of today's IT management, from data presentation and data processing to data communication and network security.

## Required Courses

You may only select one of CITM 100 or CITM 102.

- CITM 100 Foundations of Information Systems
- CITM 102 Business Information Systems I
- CITM 207 Computer-Enabled Problem Solving
- CITM 301 IT Infrastructure
- CITM 305 Systems Analysis and Design
- CITM 500 Data and Information Management

## Electives (select 1)

- CITM 200 Fundamentals of Programming
- CITM 315 Server Administration
- CITM 350 Concepts of e-Business
- CITM 550 Advanced e-Business

## Certificate Requirements

- 5 required courses
- 1 elective
- Cumulative grade point average (GPA) 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Introduction to Community Services

Have you ever wanted to make a difference in your community but aren't sure where to start? In today's changing society, the role of community services has never been more important. Our Certificate in Introduction to Community Services will provide you with the general knowledge and skills required for the field. This full-online certificate can be done at your own pace and is flexible with your schedule so you don't have to worry about choosing between work and school.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Adult community resource facilitator
- Behaviour support worker
- Crisis intervention worker
- Case or intake worker
- Community service or support worker
- Developmental support worker
- Drop in or shelter worker
- Family service worker
- Health support worker
- Home or residential support worker
- Probation office/community youth worker

## Who Should Take This Certificate?

This certificate will be beneficial for you if you:

- Recent graduates in the faculties of arts and community services who are looking to work in the community services sector (e.g. psychology, sociology, and child and youth worker).
- Individuals with experience in the community services sector locally or internationally, but seek additional training.
- Individuals looking to change careers and develop new skill sets in the community services sector.

## What Will You Learn?

After completing this certificate, you will be able to:

- Work in the front line, policy, advocacy, and as an educator to support the health and social needs of individuals, groups, and communities
- Build strong communities using a holistic approach across a range of interdisciplinary fields within the community services sector, including food security, aging and gerontology, and community engagement.
- Collaborate to meet community needs by seeking novel and life-changing solutions to social problems faced in diverse community-based settings.

## Required Courses

- ☐ CINT 920 Community Collaborations

## Feed Security Stream (select 3)

- ☐ CFNY 403 Food Security Concepts and Principles
- ☐ CFNY 408 Urban Food Security
- ☐ CFNY 510 Indigenous Food Systems in Canada

## Aging & Gerontology Stream (select 3)

- ☐ CINT 901 Gerontology: Critical Issues and Future Trends
- ☐ CINT 930 Aging: From Cells to Society
- ☐ CINT 945 Technology and Aging Populations

## Community Engagement Stream (select 3)

Select 2 electives from this stream and 1 elective from another stream or a general elective.

- ☐ CSWP 934 Community Engagement Foundations
- ☐ CSWP 936 Community Engagement Practices

## General Elective

Select any 3 electives across any stream or general electives.

- ☐ CINT 902 Disability Issues
- ☐ CINT 904 Health Promotion and Community Development
- ☐ CINT 905 Conflict Resolution in Community Services
- ☐ CINT 907 Team Work for Community Services
- ☐ CVFS 401 Contemporary Family Issues
- ☐ CPLE 795 Local Economic Development Fundamentals

## Certificate Requirements

- One required course
- Three electives
- Cumulative grade point average (GPA) of 1.67+

## Admission Criteria

Recommended:

- OSSD with six Grade 12 U or M credits (including English), with a minimum average of 60 percent, or equivalent

OR

- mature student status with relevant work experience

Undergraduate students wishing to pursue a continuing education certificate program should be aware of possible restrictions; please refer to Curriculum Advising for complete details.

# Landscape Design for Climate Resilience

Are you interested in creating sustainable landscape design projects that help preserve built and natural landscapes? Our Certificate in Landscape Design and Climate Resilience provides the educational requirements for the Certified Landscape Designer (CLD) accreditation program offered by the Canadian Nursery and Landscape Association through provincial landscape industry organizations.

The certificate, which automatically gives you membership with Landscape Ontario, can also be your first step to setting up your own business. As a student member of Landscape Ontario, you can attend member-only events, including monthly meetings of Landscape Ontario as well as receive discounts on some Landscape Ontario events.

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Grow your expertise in this in-demand field. Learn to handle landscape design challenges with real-life solutions that are resilient, ecologically based, and socially inclusive.

## Industry and Careers

- Completion of this certificate can lead to roles within the following sectors:
- Nonprofit nature conservancy agencies
- Private sector: international and national construction and condominium companies, and landscaping businesses of all sizes
- Public sector: government departments at the federal, provincial, state, municipal and local levels

This certificate can lead to a career in various roles. Here are some examples:

- Industrial commercial landscape architectural technologist
- Landscape designer
- Landscape sustainability manager
- Landscape technician
- Landscaper
- Landscaping supervisor
- Nursery and grounds coordinator

## Who Should Take This Certificate?

- Individuals who want to gain the core educational requirements needed to become a Certified Landscape Designer (CLD) through provincial landscape industry organizations
- Individuals with a non-landscape undergraduate degree who want to use this program as a stepping stone to a master's program in landscape architecture
- Architects, interior designers, or other environmental design professionals who are interested in expanding the scope of their professional work

## Required Courses

- ☐ CKLA 310 Landscape Construction, Materials and Methods
- ☐ CKLA 320 Plant Materials
- ☐ CKLA 330 Landscape Design Studio

## Electives (select 1)

- ☐ CKLA 400 Ecology and Sustainable Landscapes
- ☐ CKLA 420 Art and Management of Planting Design
- ☐ CKLA 450 Landscape Restoration

## Certificate Requirements

- 3 required courses
- 1 elective
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- A post-secondary undergraduate education (university or college) in a relevant field of study (including programs related to architecture and/or environmental sciences)

OR

- Mature student status with relevant work experience

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Assess and use digital design software (such as SketchUp Suite/LayOut, Dyna-Scape, Vectorworks, Adobe Photoshop, Adobe Illustrator, and Autodesk Civil 3D) to produce different types of landscape drawings, including functional diagrams, concept drawings, master plans, detailed design development, and working drawings
- Incorporate plant ecology knowledge into the development of planting design for climate resilience
- Develop grading and drainage designs to address runoff on urban sites related to climate change
- Generate landscape implementation and management strategies to enhance landscape resilience and sustainability
- Produce societally inclusive and resilient landscapes by integrating cultural and ecological landscape restoration techniques
- Enhance landscape inclusivity by integrating Indigenous teachings and perspectives into landscape design



# Leadership in Organizations

Important Note: The Certificate in Leadership in Organizations will not be accepting any new registrants. This certificate has been discontinued effective Winter 2022. Students formally registered in the certificate prior to Fall 2021 must complete the program requirements in effect at the time they registered. For curriculum details, please refer to the archived calendar for your year of registration. For more information, please contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

If this certificate interests you, you may want to check out our Certificate in Human Resources Management.

## Required Courses

- ❑ CMHR 405 Organizational Behaviour
- ❑ CMHR 640 Leadership

## Electives (select 4)

- ❑ CMHR 600 Diversity and Inclusion in the Workplace
- ❑ CMHR 650 Management of Change
- ❑ CMHR 700 Cross-Cultural Dimensions of Organizational Behaviour
- ❑ CMHR 721 Negotiation and Conflict Resolution
- ❑ CMHR 741 Managing Interpersonal Dynamics and Teams
- ❑ CMHR 841 Organization Theory and Design
- ❑ CMHR 850 Coaching, Facilitation and Internal Consulting

## Certificate Requirements

- 2 required courses
- 4 electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant work experience

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Level 1 Public Administration and Governance

Are you looking for career advancement or increased employability in the public sector? This certificate will help you gain the specialized knowledge and skills you need to build your career in the service. It's offered fully online so you can work through it on a part-time basis and is flexible to your busy schedule. The certificate blends theory and practice, with involvement from academic faculty and public service practitioners to help enrich your experience and boost your professional network. By completing this program, you will fulfil Level 1 of Toronto Metropolitan's BA (Honours) in Public Administration and Governance.

## Industry and Careers

This certificate can lead to career paths in the following areas:

- Community-based organizations that have administrative interactions with the federal, provincial, or municipal governments.
- International governmental organizations
- Interest/pressure groups
- Non-governmental organizations
- Policy unit of a federal, provincial, or municipal government department
- Political aide to an elected official
- Private sector companies, particularly ones that have extensive interactions with domestic or foreign governments, or are engaged in public research
- Voluntary or nonprofit sector organizations

## Who Should Take This Certificate?

- Students who intend to pursue Toronto Metropolitan's BA (Honours) in Public Administration and Governance
- Working public sector professionals looking to gain career advancement
- Newly graduated high school students who are interested in seeking a career in the public service

## What Will You Learn?

After completing this certificate, you will be able to:

- Utilize your new understanding of the organizations and operations in the public sector
- Employ your analytic, administrative, communication, and management skills for career advancement in the public sector
- Engage in policy-making and policy analysis in the public sector
- Recognize the political forces that shape public administration and policy

## Required Courses

- CPPA 101 Cdn Public Administration I: Institutions
- CPPA 102 Cdn Public Administration II: Processes
- CPPA 125 Rights, Equity and the State

## Required Group 1 (select 2)

- CPPA 120 Canadian Politics and Government
- CPPA 121 Ontario Politics and Government
- CPPA 122 Local Politics and Government
- CPPA 124 Indigenous Politics and Governance

## Lower Liberal Studies Elective Table A (select 1)

Liberal Studies courses are indicated by "LL" for Lower Level and "UL" for Upper Level. Consult the Undergraduate Calendar for the complete list of Liberal Studies courses. Once you have chosen your course, return to The Chang School website to search for its availability.

- CGEN LLS One one-term Lower Level Liberal Studies Elective from Table A

## Open Electives (select 2 courses)

Consult the Undergraduate Calendar, for a complete list of appropriate courses. Once you have chosen your course, return to The Chang School website to search for its availability.

- CGEN PRE Two Open Electives

## Certificate Requirements

- 3 required courses
- 2 courses from Required Group 1
- 1 lower-level Liberal Studies Elective from Table A
- 2 Open Elective courses
- Cumulative grade point average (GPA) of 1.67+

Note: If you wish to obtain your Level 1 Certificate in Public Administration and Governance, you must apply through the Office of Undergraduate Admissions for admission to the Public Administration and Governance BA (Honours) program. Do not use the standard continuing education certificate application. Upon completing this certificate and the Level 2 Certificate in Public Administration and Governance, you may continue your studies to earn a BA (Honours) in Public Administration and Governance from Toronto Metropolitan University.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits (ENG4U/EAE4U is the preferred English)
- With a minimum grade of 60 percent (Subject to competition, candidates may be required to present averages/grades above the minimum.)

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Level 2 Public Administration and Governance

If you have already completed the Level 1 Certificate in Public Administration and Governance, this Level 2 certificate is the perfect next step in your academic and career development.

This certificate will help you gain the specialized knowledge and skills you need to advance your career in the public sector. It's offered fully online so you can work through it on a part-time basis and is flexible to your busy schedule. By completing this program, you will fulfil Level 2 of Toronto Metropolitan's BA (Honours) in Public Administration and Governance.

## Industry and Careers

This certificate can lead to career paths in the following areas:

- Community-based organizations that have administrative interactions with the federal, provincial, or municipal governments.
- International governmental organizations
- Interest/pressure groups
- Non-governmental organizations
- Policy unit of a federal, provincial, or municipal government department
- Political aide to an elected official
- Private sector companies, particularly ones that have extensive interactions with domestic or foreign governments, or are engaged in public research
- Voluntary or nonprofit sector organizations

## Who Should Take This Certificate?

- Students who intend to pursue Toronto Metropolitan's BA (Honours) in Public Administration and Governance
- Working public sector professionals looking to gain career advancement
- Newly graduated high school students who are interested in seeking a career in the public service

## What Will You Learn?

After completing this certificate, you will be able to:

- Analyze the framework of public policy
- Explore the relationship between government and labour, the ideological basis for administrative institutions, and financial management
- Utilize your newly developed administrative and communication skills

## Required Courses

- CPPA 211 Public Policy

## Required Group 1 (select 3)

Choose 3 courses not previously taken in the Certificate in Level 1 Public Administration and Governance

- CPPA 120 Canadian Politics and Government
- CPPA 121 Ontario Politics and Government
- CPPA 122 Local Politics and Government
- CPPA 124 Indigenous Politics and Governance
- CPPA 235 Theories of the State
- CPPA 303 Public Budget Policy/Politics
- CPPA 319 Politics of Work and Labour

## Lower Liberal Studies Electives Table A (select 1)

Liberal Studies courses are indicated by "LL" for Lower Level and "UL" for Upper Level. Consult the Undergraduate Calendar for the complete list of Liberal Studies courses. Once you have chosen your course, return to The Chang School website to search for its availability.

- CGEN LLS One one-term Lower Level Liberal Studies Elective from Table A

## Core Elective Economics Course (select 1)

- CECN 101 Principles of Microeconomics
- CECN 104 Introductory Microeconomics
- CECN 110 The Economy and Society
- CECN 201 Principles of Macroeconomics
- CECN 204 Introductory Macroeconomics
- CECN 210 Understanding Economics
- CECN 320 Introduction to Financial Economics

## Open Electives (select 2 courses)

Consult the Undergraduate Calendar, for a complete list of appropriate courses. Once you have chosen your course, return to The Chang School website to search for its availability.

- CGEN PRE Two Open Electives

## Certificate Requirements

- 1 required course
- 3 courses from Required Group 1 (not previously taken in the Certificate in Level 1 Public Administration and Governance)
- 1 lower-level Liberal Studies Elective from Table A
- 1 Core Electives Economics Course
- 2 Open Elective courses
- Cumulative grade point average (GPA) of 1.67+

Note: If you wish to obtain your Level 1 Certificate in Public Administration and Governance or the Level 2 Certificate in Public Administration and Governance, you must apply through the Office of Undergraduate Admissions for admission to the Public Administration and Governance BA (Honours) program. Do not use the standard continuing education certificate application. Upon completing this certificate and the Level 1 Certificate in Public Administration and Governance, you may continue your studies to earn a BA (Honours) in Public Administration and Governance from Toronto Metropolitan University.

## Admission Criteria

Recommended:

- Level 1 Certificate in Public Administration and Governance

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Lighting Design

The right lighting design can elevate your mood, create a dramatic atmosphere, or provide a safe and healthy workspace. The lighting industry is undergoing dynamic changes due to legislative acts that limit energy budgets for new construction and retrofiting. There is an increasing need for buildings that are both environmentally responsible and ergonomically sound. Our Certificate in Lighting Design includes the opportunity to get real industry experience through a project-based course guided by an expert lighting designer.

## Industry and Careers

- Lighting agent/representative
- Lighting designer
- Manufacturer agent

## Who Should Take This Certificate?

If you want to enhance your knowledge and skills in the art and science of lighting design, this certificate is designed for you. Our students come from a wide range of backgrounds, including:

- Architecture or landscape architecture
- Business
- Engineering
- Fashion
- Interior design
- Theatre design and production
- Radio and television arts

## What Will You Learn?

Through your courses – including studio classes – you will investigate and develop your understanding of these key topics:

- Light sources and how they relate to the lighting design process
- Photometric calculations to analyze design applications
- Energy efficiency and management techniques
- Architectural daylight approaches
- Social and environmental aspects of lighting

## Required Courses

- ❑ CDID 500 Fundamentals in Lighting
- ❑ CDID 505 Lighting Photometric Software
- ❑ CDID 520 Lighting Controls & Energy Management
- ❑ CDID 540 Daylighting Design & Techniques
- ❑ CDID 560 Intermediate Lighting Design

## Electives (select 1)

- ❑ CDID 552 Entertainment Lighting Design
- ❑ CDID 553 Lighting Design Practicum

## Certificate Requirements

- 5 required courses
- 1 electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- An undergraduate degree

OR

- Mature student status with related professional experience and education

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Local Economic Development

Are you interested in working to improve a community's economic health? A career in local economic development (LED) combines business administration and development as well as public administration skills with technical skills like planning, engineering, project management, airport development, real estate, marketing, and more.

This four-course, fully online certificate is designed for entry-level, experienced, and advanced economic development professionals. It will prepare you to successfully address the current and emerging area of LED in the Canadian context. You may also apply courses towards the educational requirements for your Certified Economic Developer (EcD) certification.

## Industry and Careers

The knowledge you gain in this program will assist you in pursuing additional studies or in applying your expertise to roles such as:

- BIA professional
- Business development director
- Community development and innovation director
- Economic development analyst
- Economic development and planning manager
- Economic development and tourism director
- Policy advisor for federal, provincial, or municipal government
- Program administrator
- Social enterprise consultant
- Tourism manager

## Who Should Take This Certificate?

This certificate is for entry-level, experienced, and advanced LED professionals, including:

- Current undergraduate and recent graduate students in urban and regional planning
- Individuals who want to pursue a career in LED
- Practitioners working in government, community agencies, and municipalities who would like to improve their education, skills, and career opportunities
- Municipal politicians, those working in non-governmental organizations (NGO), and residential/industrial commercial realtors

## What Will You Learn?

This certificate provides skill development opportunities in creativity and innovation, critical thinking and problem solving, and collaboration and flexibility, allowing you to be able to respond to current LED challenges.

After completing this certificate, you will be able to do the following:

- Apply in-depth knowledge of the economic development process
- Navigate governance as it relates to the LED structure
- Execute operations inclusive of mentoring, create partnerships, and create alliances through networking
- Conduct tactical and strategic municipal planning and build strategies
- Utilize solid communication skills to deliver presentations, media relations, and communications planning
- Create and present marketing/sales plans
- Interpret financial statements and budgets, analyze risks, and create business plans

## Required Courses

- ❑ CPLE 795 Local Economic Development Fundamentals
- ❑ CPLE 995 Ecn Development and Business Improvement
- ❑ CVUP 155 LED Applied Research Project
- ❑ CVUP 160 Capstone Project in LED

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits (including English)
  - With a minimum average of 60 percent

OR

- An undergraduate degree

OR

- A college diploma

OR

- Mature student status with combination of relevant work and life experience

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Mental Health and Addictions

Grow your knowledge in mental health and addictions and learn more about assessment, treatment, and self-help strategies within individual, group, family, and community contexts. Not only will our degree-credit courses help you build a foundation in psychology but you will gain new skills to add to your career toolkit to help you level up.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Psychologist
- Social worker
- Child and youth worker
- Mental health and addictions counsellor
- Mental health advocate
- Hospital administrator
- Clinical coordinator
- Counselling administrator

## Who Should Take This Certificate?

- Individuals who require knowledge of mental health and addictions to enhance their work and better understand the circumstances of clients, employees, colleagues in their places of employment and volunteerism
- Students who would like to use the degree-credit courses towards completion of their undergraduate degree

## What Will You Learn?

Two introductory courses will provide you with a foundation in psychology by examining the basic principles and applications to everyday experience.

You will then focus on the psychology of addictions and disorders. Some of the disorders you will explore include: depressive disorders, anxiety disorders, schizophrenia, personality disorders, and eating disorders.

## Required Courses

- CPSY 102 Introduction to Psychology I
- CPSY 202 Introduction to Psychology II
- CPSY 215 Psychology of Addictions
- CPSY 325 Psychological Disorders

## Electives - Group A (select 2 or 3)

You may only select 1 of CPSY 214 or CPSY 607. If you choose to take 2 courses from this category, you will need to complete 4 courses from Electives – Group B to fulfill the certificate requirements; if you take 3 courses, you will need to complete 3 courses from Electives – Group B.

- CPSY 214 Psychopharmacology
- CPSY 324 Biological Psychology
- CPSY 335 Clinical Psychology
- CPSY 607 Drugs and Human Behaviour

## Electives - Group B (select 3 or 4)

- CPSY 300 Psychology and Law
- CPSY 302 Child Development
- CPSY 412 Human Brain Circuitry
- CPSY 602 Developmental Psychopathology
- CPSY 605 Psychology of Health and Health Care
- CPSY 620 Psychology of Immigration
- CPSY 621 Psychology of Human Sexuality
- CPSY 682 Sleep
- CPSY 802 Death, Dying and Bereavement
- CPSY 805 Adjustment, Stress and Coping
- CPSY 806 Behaviour Modification
- CPSY 808 Community Psychology



## Certificate Requirements

- 4 required courses
- 6 electives\*
- Cumulative grade point average (GPA) of 1.67+

\*Select 2 (or 3) selections from Electives – Group A and 3 (or 4) courses from Electives – Group B.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with 3 years of professional experience in business, community service, or industry

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Music: Global and Cultural Contexts

Explore musical creation in all its rich diversity. Learn about complex music from around the globe – from ancient times to the modern age. Hone your skills in critical thinking, analysis, and writing. Study the ways music reflects and responds to shifting cultural, social, political, and historical environments. If you are interested in the study and practice of music for professional growth, academic progress, or personal enrichment, this program is for you. With flexible, online courses you can fit them into your busy schedule.

## Industry and Careers

This certificate can lead to professional music-related pursuits, including in:

- Arts and cultural organizations
- Early childhood music education
- Fundraising, outreach, and event planning
- Not-for-profit organizations
- Psychology and anthropology

## Who Should Take This Certificate?

- Individuals who want to pursue academic study in the creative arts at the undergraduate level
- Recent university graduates who may have a degree in early childhood education, psychology, anthropology, or business and want to start a career in music
- Individuals looking to enhance their life through the study of music and understand music in its cultural context

## What Will You Learn?

After completing this certificate, you will be able to:

- Survey specific music cultures from around the world, popular music genres and artists, and Western European music
- Employ a musical vocabulary and aural skills
- Conduct theoretical analyses of musical compositions
- Utilize skills in critical thinking, oral and written communication, and research
- Articulate the relationship between music and culture in the popular realm
- Critique social and political structures through the lens of popular music studies literature
- Understand how cultures are reflected in their music

## Required Courses

You can select either CMUS 101 or CMUS 106 as your required course, or take both. If you choose to take both, you only need to complete 4 electives to fulfill the certificate requirements

- CMUS 101 Intro to World and Early European Music
- CMUS 106 The Architecture of Music

## Electives

- CMUS 201 Introduction to Classical Music
- CMUS 211 Music Cultures of the City
- CMUS 220 Global Popular Music
- CMUS 501 Music of World Cultures
- CMUS 520 Women in Popular Music
- CMUS 503 Social Issues in Popular Music
- CMUS 505 The History of Pop Music
- CRTA 180 Music and Film

## Certificate Requirements

- 1 required courses\*
- 5 electives
- Cumulative grade point average (GPA) of 1.67+

\*You can select either CMUS 101 or CMUS 106 as your required course, or take both. If you choose to take both, you only need to complete four electives to fulfill the certificate requirements.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits, including English
  - With a minimum grade of 70 percent

OR

- Mature student status with relevant work experience

# Nonprofit and Voluntary Sector Management

The nonprofit and voluntary sector is an exciting and dynamic force enacting positive change in Canada's quality of life. Nonprofits and charities engage residents and develop communities, providing programs and services, and contributing to an ongoing wave of change and innovation for the greater good. The Certificate in Nonprofit and Voluntary Sector Management will equip you with a comprehensive and practical understanding of the key areas of the sector and ways to navigate this ever-changing field. Whether you are interested in beginning a career in nonprofit and voluntary organizations or you are transitioning from another sector, our dynamic and interdisciplinary program offers opportunities at all levels of this diverse and fast-growing sector.

## Industry and Careers

The opportunities offered by the nonprofit and voluntary sector are wide and diverse, from larger scale operations like the International Red Cross to local nonprofits working with youth in their communities. Graduates of the certificate may find career opportunities in local, national, and international nonprofits, charitable organizations, government, and more.

This certificate can lead to career paths in the following specializations:

- Administration
- Advocacy and government relations
- Communications
- Leadership and management
- Marketing and fund development
- Program development and delivery
- Research and policy
- Volunteer management

## Who Should Take This Certificate?

- Experienced workers in the nonprofit sector who seek to deepen and broaden their knowledge and learn specific skills they haven't learned on the job – for example, leadership or management
- Individuals who are interested in transitioning into the charitable sector from the business or public sector
- Undergraduate students who are interested in completing degree-credit courses or a minor in the nonprofit sector
- Individuals who are interested in developing relationships and partnerships with nonprofit organizations from a base in the public, institutional, or private sectors.

## What Will You Learn?

The program's interdisciplinary curriculum pools knowledge from Toronto Metropolitan University's Faculty of Arts and the Ted Rogers School of Management. Customize your learning with courses that offer an engaging blend of theory and practice. After completing this certificate, you will be well versed in key areas of nonprofit and voluntary sector management:

- Leadership
- Financial management
- Evaluation
- Diversity
- International NGOs
- Marketing
- Strategic planning
- Organizational management and change
- Issues in the sector

## Required Courses

You may only select one of CINF 902 or CINF 915.

- CINF 900 Understanding the Nonprofit Sector
- CINF 901 Effective Nonprofit Organizations
- CINF 902 Evaluation for Nonprofits
- CINF 915 Financial Management for Nonprofits
- CINF 920 Critical Issues in the Nonprofit Sector

## Electives (select 4 not previously taken in Required Courses)

- CINF 902 Evaluation for Nonprofits
- CINF 910 Strategic Planning for Nonprofits
- CINF 911 Advocacy and Gov't Relations: Nonprofits
- CINF 912 Marketing for Nonprofits
- CINF 913 Leadership in Nonprofits
- CINF 914 Diversity in Nonprofits
- CINF 915 Financial Management for Nonprofits
- CINF 916 Nonprofits on the Global Stage

## Certificate Requirements

- 4 required courses
- 4 electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

Note: All courses in the certificate are undergraduate level credit courses.

All courses in this certificate are offered online and in class.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status

# Nursing and Interprofessional Healthcare Leadership and Management

Looking to leverage your experience as a healthcare professional into a higher powered position? In a rapidly changing landscape in the wake of the COVID-19 pandemic, leadership and management positions can offer new opportunities to those working in the healthcare sector. From social services to public health, all levels of the healthcare field are in need of leaders and innovators to effect change — and this could be you. With a unique specialization for registered nurses and other healthcare professionals, this fully online certificate combines practical and professional knowledge to help you transition smoothly into leadership and management roles.

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Important Note: The Certificate in Nursing and Interprofessional Healthcare Leadership and Management will not be accepting any new registrants. This certificate has been discontinued effective Winter 2023. Students formally registered in the certificate prior to Fall 2022 must complete the program requirements in effect at the time they registered. For curriculum details, please refer to the archived calendar for your year of registration. For more information, please contact [ce@torontomu.ca](mailto:ce@torontomu.ca).

If this certificate interests you, you may want to check out our Certificate in Health Services Management.

## Industry and Careers

Designed specifically for healthcare professionals and Registered Nurses, this certificate will not only enhance your existing skill set but upgrade your credentials to help put you on a track to leadership roles across hospitals, long-term care facilities, and social services.

Set yourself apart with your knowledge of management theories across all levels of organization:

- Education, public health, community support, poverty alleviation, patient outcomes, and a firm understanding of healthcare systems

## Who Should Take This Certificate?

- Members of a regulated health discipline with a minimum of an undergraduate degree
- Registered Nurses (RNs)
- Undergraduate students with a degree in health services management

## What Will You Learn?

Customize your learning experience to match your professional goals and choose from a range of electives, from community conflict resolution skills to computer management. Utilizing the LEADS framework, students will apply core components of nursing leadership and management. With best practice guidelines for Developing and Sustaining Nursing Leadership by the Registered Nurses' Association of Ontario (RNAO), students will:

Lead self  
Engage others  
Achieve results  
Develop coalitions  
Systems transformation

## Required Courses

- CVNU 360 Advanced Leadership and Management
- CVNU 370 Change and Innovation

## Electives (select 2)

Other electives may be selected with consultation and permission of the Academic Lead. e.g. CMHR 850: Coaching, Facilitation, and Internal Consulting; other Human Resources courses such as Recruitment and Selection, Training and development, Compensation, HR Planning, Occupational Health and Safety, Union Relations or other newly developed courses.

- CINT 900 Program Planning and Evaluation Strategies
- CTEC 210 Fundamentals of Project Management
- CHSM 301 The Healthcare Systems
- CHSM 307 Principles of Long Term Care Service Del.
- CINT 901 Gerontology: Critical Issues and Future Trends
- CINT 904 Health Promotion and Community Development
- CINT 905 Conflict Resolution in Community Services
- CINT 907 Team Work for Community Services
- CVNU 322 Computer and Information Management in Nursing
- CVNU 325 Nursing Informatics and Patient Safety

## Certificate Requirements

- 2 required courses
- 2 electives\*
- Cumulative grade point average (GPA) of 1.67+

\*Electives are divided into two groups, allowing you to focus on specialized skills. Select courses from program planning and evaluation and/or leadership and management electives.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

To qualify for registration into the certificate, you must meet one of the following criteria:

- be a member of a regulated health discipline with a minimum of an undergraduate degree
- undergraduate (or equivalent) degree in health services management
- registered practical nurse (RPN) license (recommended completion of two prior undergraduate courses with a C and written assignments)

## Admission Application

Students who may need to refresh their baccalaureate leadership and management foundational knowledge and skills may be advised to consider taking one of the following prior to registering in the certificate program:

- CNUR 831 Leadership Development for Practice  
(for baccalaureate RNs only)
- CHSM 306 Management Leadership and Decision-Making
- CKPM 211 Leadership in Project Management
- CMHR 405 Organizational Behaviour and Interpersonal Skills

# Occupational Health and Safety

Get “recession-proof” skills for jobs in industries like construction, manufacturing, and healthcare with our Certificate in Occupational Health and Safety. Now more than ever, employers need skilled professionals to ensure their workplaces are safe and healthy. Our certificate will help you become an expert in evaluating and managing workplace hazards as well as developing and implementing health and safety programs.

## Industry and Careers

This certificate can support your career growth in a range of industries like hospitals/healthcare providers, mining, forestry, construction, transportation and more.

This certificate can lead to a career in roles such as:

- Health and Safety Assistant
- OHS Administrator
- OHS Coordinator
- Health and Safety Officer

## Who Should Take This Certificate?

- Individuals who need to fulfill an occupational health and safety (OHS) function as part of your current role
- Individuals looking for a new job/skills that are always in demand
- Occupational health and safety professionals who are looking for career advancement and to meet the Canadian Registered Safety Professional requirements.

## What Will You Learn?

After completing this certificate, you will be able to:

- Navigate OHS legislation
- OHS management system basics
- Writing OHS summary reports
- Conduct hazard recognition and assessment, and provide solutions for controls
- Meet the educational requirements to write the Canadian Registered Safety Technician exam
- Meet the educational requirements to write the Canadian Registered Safety Professional exam

After completing this certificate, you must complete the other two certificates (Certificate in Advanced Safety Management and Certificate in Occupational Health and Safety Leadership) to meet the educational requirements to write the Canadian Registered Safety Professional exam.

## Required Courses

- ☐ CCMN 114 Short Management Reports
- ☐ CMHR 405 Organizational Behaviour
- ☐ COHS 208 Occupational Health and Safety Law
- ☐ COHS 314 Physical Agents
- ☐ COHS 508 Occupational Health and Safety
- ☐ COHS 608 Hazard Recognition and Control
- ☐ COHS 811 OHSE Management Systems

## Electives (select 1)

- ☐ CINT 904 Health Promotion and Community Development
- ☐ CPPA 101 Cdn Public Administration I: Institutions

## Certificate Requirements

- 7 required courses
- 1 elective
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With six Grade 12 U or M credits

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Occupational Health and Safety Leadership

Prepare yourself for leadership roles, responsibilities, and management in the field of occupational health and safety (OHS). Learn from industry experts to enhance your OHS knowledge and learn to lead from a management perspective. The courses in this program focus on project management, leadership, ethics, and disability management to prepare you to become an OHS leader.

By completing this program after the Certificate in Occupational Health and Safety and the Certificate in Advanced Safety Management, you will meet the educational requirements to write the Board of Canadian Registered Safety Professionals (BCRSP) exam to become a Canadian Registered Safety Professional (CRSP). This is one of the few certificate programs in Ontario that meets CRSP educational requirements.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Compliance officer
- OHS director
- OHS officer
- Vice president, health and safety
- Disability management professional
- OHS manager
- Risk manager

According to the Board of Canadian Registered Safety Professionals (BCRSP), becoming a Canadian Registered Safety Professional (CRSP) can help you:

- increase your earning potential
- enhance your employability and mobility
- enhance your professional credibility

## Who Should Take This Certificate?

This program is for individuals who have completed the Certificate in Occupational Health and Safety and/or the Certificate in Advanced Safety Management and want to take their OHS career to the next level.

If your goal is to work as a leader in the OHS field, or if you're already working in a leadership position and want to formalize your education and build on your skills, this certificate is for you.

## What Will You Learn?

After completing this certificate, you will be able to:

- lead best practice in OHS planning and management
- address integrated disability management
- navigate government legislation and regulations
- implement fundamentals of project management
- apply OHS business perspectives
- understand ethical leadership
- interpret OHS return on investment, cost, and savings

Courses are drawn from Toronto Metropolitan University's Bachelor of Applied Science in Occupational and Public Health (BASc). Courses completed as part of this certificate may be recognized towards the completion of the BASc. Offered through the School of Occupational and Public Health, the BASc is the only degree-level program of its kind in Canada.

## Required Courses

- ☐ COHS 477 Disability Management
- ☐ COHS 840 OHS Leadership and Ethics
- ☐ CTEC 210 Fundamentals of Project Management

## Electives (select 1)

- ☐ CINT 960 Leadership Framework for Community
- ☐ CMHR 640 Leadership

## Certificate Requirements

- 3 required courses
- 1 elective
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

- Certificate in Occupational Health and Safety
- OR
- Certificate in Advanced Safety Management
- OR
- Equivalent

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.



# Photography Studies

Photography is an important medium of communication in industry, sales and advertising, government, education, media, and the arts. The demand for properly trained and qualified photographers continues to grow. The rise of digital photography technology has lowered traditional barriers to entry, creating new business opportunities for entrepreneurs. Our Certificate in Photography Studies can help you make a career change, establish your own photography business, improve your chances for jobs in photography-related fields, or prepare you to apply for a degree program in photography.

This certificate will help you advance or change your career while developing the technical knowledge and skills to provide hands-on innovation through robotics and embedded systems products and devices.

## Industry and Careers

Photography is an important medium of communication in:

- Arts
- Industry
- Sales and advertising
- Education
- Media
- Government

Use this program to:

- Build your professional portfolio
- Gain the technical foundation to start your own business in photography for:
  - Architecture
  - Contemporary photographic art
  - Human figure
  - Portrait
  - Commercial products
  - Fashion
  - Photojournalism
  - Weddings

## Who Should Take This Certificate?

- Professional photographers looking to build their skill sets to improve job chances in photography-related fields and upgrade their current level of photography expertise
- Individuals looking to retrain or make a career change into photography
- Individuals preparing for a photography degree program at an advanced level

You can enrol in individual courses to gain specific skills, or take the whole certificate program to develop a greater depth of photography knowledge.

## What Will You Learn?

Learn about the technical side of photography including:

- Bookmaking
- Business skills for photographers
- Digital printing workshop Large format
- Human figure
- Photoshop techniques
- Silver-based printing
- Focus on photography production and create a number of portfolios to change or advance your career
- Explore specialties including fashion, portrait, wedding, editorial, and more

## Required Courses

- ☐ CDFP 328 Photography Production I
- ☐ CDFP 329 Photography Production II
- ☐ CDFP 391 History of Photography I

## Electives: 39-Hour Courses (select 5)

Two 19.5-hour courses may be completed as the equivalent of one 39-hour course.

- ☐ CDFP 320 Analog Photography
- ☐ CDFP 322 Photography for Ad Agencies
- ☐ CDFP 332 Digital Printing
- ☐ CDFP 333 Photography and Digital Imaging
- ☐ CDFP 353 From Still to Motion
- ☐ CDFP 358 Photography and the Screen
- ☐ CDFP 367 Photoshop for Photographers
- ☐ CDFP 378 20th Century Photography
- ☐ CDFP 381 Advanced Fashion Photography
- ☐ CDFP 382 Advanced Portrait Photography
- ☐ CDFP 389 Studio Lighting I
- ☐ CDFP 390 Studio Lighting II
- ☐ CDFP 392 Documentary Photography
- ☐ CDFP 398 History of Photography II
- ☐ CDFP 403 Creative Wedding Photography
- ☐ CDFP 404 Magazine/Editorial Photography
- ☐ CDFP 405 Architectural Photography
- ☐ CDFP 415 Studio Lighting III
- ☐ CDFP 905 Contemporary Photographic Art
- ☐ CDFP 918 Photojournalism
- ☐ CFPN 532 Advanced Studio Lighting
- ☐ CFPN 536 Media Business Practices
- ☐ CFPN 539 The Human Figure

## Electives: 19.5-Hour Courses

Two 19.5-hour courses may be completed as the equivalent of one 39-hour course.

- ☐ CDFP 312 Art Direction for Ad Agencies
- ☐ CDFP 414 Traditional Photography
- ☐ CDFP 432 Digital Printing Workshop
- ☐ CDFP 907 Using a 4X5 View Camera



## Certificate Requirements

- 3 required courses
- 5 39-hour electives
- 2 19.5-hour courses are considered equivalent to 1 39-hour course
- Cumulative grade point average (GPA) of 1.67+

You must complete the certificate within five years of registering in the Certificate in Photography Studies program.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits (including English)
  - With a minimum average of 60 percent

OR

- Mature student status with professional experience

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Practical Data Science and Machine Learning

Our world is driven by data. Professionals with skills in practical data science and machine learning are a highly valuable asset, in demand to help organizations solve business problems, make better evidence-based decisions, and predict the latest trends. Our fully online certificate program will teach you how to program queries in Python, and how to use machine learning and artificial intelligence (AI) platforms to implement the most up-to-date technical and analytic approaches, applications, big data tools, and software for querying data. Become the data storyteller employers are looking for!

Note: This certificate will require 4-6 hours per week of dedicated time to study, including completing virtual data analytics activities and attending the weekly Zoom sessions.

This four-course Certificate in Practical Data Science and Machine Learning builds on the quantitative background from the Certificate in Data Analytics, Big Data and Predictive Analytics or previous industry experience (or equivalent).

## Career-Ready Support Offered

While enrolled in the Certificate in Data Analytics, Big Data, and Predictive Analytics (or Certificate in Practical Data Science and Machine Learning), you will receive a variety of supports, including:

- Virtual mentor services: the virtual mentor is available free of charge upon request to certificate registrants taking courses for 1-on-1 Zoom meetings and for consultations by email about the coursework, assignments, final projects, and for career advising.
- Alumni networking support: participating alumni will provide informal career and networking support through LinkedIn to certificate candidates and graduates.
- Career support: data science job search and career advising will be offered during the final capstone course: CIND 860 - Advanced Data Analytics Project.
- Synchronous weekly online sessions: in these Zoom sessions, the teaching team addresses learners' questions and strengthens their hands-on, data analytics working knowledge for future jobs in the field.
- Educator support: in addition to the lecture videos and slides as well as an ungraded self-assessment quiz, instructors and teaching assistants provide support for your hands-on practice virtual lab activities.
- Tutor: learners will be assigned a tutor to help with assignments and lab materials by pre-scheduled virtual appointments.
- Discussion forums: the teaching team will monitor discussion forums where learners can share their experiences and exchange ideas with each other.

## Industry and Careers

Professionals with highly developed skills in data science and machine learning are in demand. This certificate can lead to career paths in various roles. Here are some examples:

- Automation director
- Big data consultant
- Chief data officer
- Data analyst
- Human-computer interaction (AI) expert
- Human-technology integration specialist
- Big data analyst
- Big data engineer
- Chief productivity officer
- Data scientist
- Operations developer (DevOps)
- Operations manager

## Required Courses

- ❑ CIND 719 Big Data Analytics Tools
- ❑ CIND 840 Practical Approaches in Machine Learning
- ❑ CIND 850 Practical Deep Learning
- ❑ CIND 860 Advanced Data Analytics Project

## Certificate Requirements

- 4 required courses
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

Hold The Chang School's Data Analytics, Big Data, and Predictive Analytics certificate or equivalent.

OR

Mature student status and other relevant qualifications or relevant industry experience (to be determined by the Program Director).

If you are an undergraduate student, you should be aware of possible restrictions. Check Curriculum Advising for complete details.

## Who Should Take This Certificate?

- Professionals with experience in Python, machine learning, and predictive analytics who want to expand their expertise
- Individuals who have already taken our Certificate in Data Analytics, Big Data and Predictive Analytics and want to learn the essential components that are intrinsic to practical data science and machine learning

## What Will You Learn?

After completing this certificate, you will be able to do the following:

- Construct big data analytics algorithms and use machine learning algorithms to solve real-world problems
- Use the Linux file system effectively (Bash commands, regular expressions), work with the Hadoop platform, write complex queries on big data using Apache Hive, and write scripts and analyze data using Apache Spark
- Use relevant and visualization R packages or Python libraries to address a problem
- Build and design predictive models to represent domains under study, and build ensemble learning models to aim for higher accuracy
- Differentiate between supervised and unsupervised machine learning algorithms based on research questions
- Apply, train, and evaluate different deep learning models based on specific tasks
- Replicate state-of-the-art studies and highlight the similarities and differences between the actual and replicated work in terms of applied datasets, approaches, tools, and outcomes

# Privacy, Access, and Information Management

In today's rapidly evolving digital economy, individual privacy and the security of personal information have never been more important. High-profile breaches, heightened surveillance, increased access to data – these all present new and serious challenges for organizations and contribute to an increased demand for skilled privacy professionals. Our Certificate in Privacy, Access, and Information Management prepares you to address the complexity of these issues. This certificate will help you acquire the knowledge and expertise needed to gain employment in this in-demand career specialization.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Privacy officer
- Privacy analyst
- Information and records management specialist
- Data and trust officer
- Information privacy technologist
- Freedom of information coordinator
- Privacy and compliance manager
- Access to information analyst

## Who Should Take This Certificate?

- Recent degree graduates looking for an in-demand career specialization.
- Working professionals who want to pivot into a privacy-based role within an existing organization or change careers and go into privacy, but do not have the qualifications.
- Professionals who have recently been hired to work on privacy and access issues and who need training.

## What Will You Learn?

In this certificate program, you will learn how to:

- Leverage technology as the driving force for future policy issues
- Plan and schedule the project in a group setting using the critical path method (CPM)
- Identify, plan, and manage project risk and quality using analytical tools and methods
- Implement financial controls to accounting, budgeting, and cost management systems
- Organize self-managing teams to build products in agile and mobile project environments

## Required Courses

- ☐ CLAW 401 Information Access and Privacy Protection
- ☐ CZIT 427 Data and Info. Mgmt for Privacy
- ☐ CZLW 327 Privacy By Design
- ☐ CZLW 527 Applying Privacy and Access

## Electives (select 2)

- ☐ CDPR 100 Public Relations Principles
- ☐ CHIM 305 Introduction to Health Informatics
- ☐ CITM 301 IT Infrastructure
- ☐ CITM 820 Information Systems Security and Privacy
- ☐ CLAW 122 Business Law
- ☐ CLAW 402 Health Information Access and Privacy
- ☐ CMHR 405 Organizational Behaviour
- ☐ CMHR 650 Management of Change
- ☐ CPPA 403 e-Government

## Certificate Requirements

- 4 required courses
- 2 electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits (including English)
  - With a minimum average of 60 percent

OR

- Mature student status

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Proficiency in French

French language skills can lead to success in business or as part of a university degree. Hiring bilingual employees is advantageous for businesses for a number of reasons, including being able to meet an increasing demand for a multilingual workforce, reaching international markets easier, offering more holistic customer service, and fostering a more diverse environment. Whether you want to learn French for personal or business reasons, this certificate will help you build the speaking and writing skills that meet your goals and add an in-demand skill to your resume.

## Industry and Careers

Knowledge of French can widen your career opportunities in fields where bilingualism may be required or desired.

French language skills can lead to success in business or as part of a university degree. Having a second language can help you get a job interview, offer of employment, promotion or even a pay rise, in addition to having the required skills for the role and being a fit for the organization you're applying to.

## Who Should Take This Certificate?

Individuals and professionals that want to become proficient in spoken and written French.

## What Will You Learn?

In this certificate program, you will learn:

- French grammar and vocabulary, from beginner to advanced level
- French cultural readings and short fictional texts
- A communicative approach, with an emphasis on oral proficiency and on reading, writing, and understanding French

## Lower and Intermediate Level Courses

- ❑ CFRE 201 Introductory French II
- ❑ CFRE 301 Intermediate French I
- ❑ CFRE 401 Intermediate French II
- ❑ CFRE 402 French Conversation and Pronunciation

## Advanced Level Courses

- ❑ CFRE 501 Speaking and Writing French I
- ❑ CFRE 502 Communication and Business French
- ❑ CFRE 505 French Language and Culture
- ❑ CFRE 507 English-French Translation I
- ❑ CFRE 508 Intro to 20th C French Literature I
- ❑ CFRE 509 Franco-Canadian Literature I
- ❑ CFRE 510 Effective Writing
- ❑ CFRE 515 Introduction to Business French
- ❑ CFRE 601 Speaking and Writing French II
- ❑ CFRE 602 Business French in Practice
- ❑ CFRE 605 Francophone Language and Culture
- ❑ CFRE 607 English-French Translation II
- ❑ CFRE 608 Intro to 20th C French Literature II
- ❑ CFRE 609 Franco-Canadian Literature II
- ❑ CFRE 610 Cultural Context of Writing
- ❑ CFRE 701 French for Today
- ❑ CFRE 704 Intro to Franco-Canadian Culture I
- ❑ CFRE 706 The Life and Times of the French Language
- ❑ CFRE 707 Introduction to French-English Translation
- ❑ CFRE 801 French and New Media
- ❑ CFRE 803 French Theatre: 20th C and Contemporary
- ❑ CFRE 804 Intro to Franco-Canadian Culture II
- ❑ CFRE 805 French Language Teaching Methodologies
- ❑ CFRE 903 The Francophone Short Story

## Certificate Requirements

- 6 courses\*
- Cumulative grade point average (GPA) 1.67+

\*If you enter the certificate at a proficiency level below CFRE 501, you must successfully complete 6 courses. However, if granted advanced placement (through the placement assessment), you only need to complete 4 advanced level courses (CFRE 501 or higher) to fulfill the certificate requirements.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Successful completion of Introductory French I (CFRE 101)
- With a minimum grade of C+

OR

- Admission by placement assessment

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Proficiency in Spanish

Expand your career opportunities by becoming proficient in Spanish, one of the most spoken languages globally. This certificate will teach you how to confidently converse and write in Spanish. While colleges and other universities offer primarily conversational Spanish, our certificate provides relevant degree-credit courses in small classroom settings.

If you're looking for hands-on learning, some of our advanced courses include an experiential learning component where learners are partnered with GTA Hispanic businesses/ community centres and learn how to speak to native speakers. Boost your resume and increase your professional qualifications in a local and international business setting.

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## Industry and Careers

Proficiency in Spanish can widen your career opportunities, locally and internally, and expand your professional contact network.

Being able to use Spanish for day-to-day written and verbal communication can be incredibly valuable in professional settings like business, translation, tourism, and teaching.

## Who Should Take This Certificate?

- Individuals and professionals that want to become proficient in spoken and written Spanish
- Older adults looking to learn a new language, build community, and maintain and/or improve their cognitive functions

## What Will You Learn?

After completing this certificate, you will be able to:

- Actively and confidently engage in performing different communicative skills both oral and written
- Employ a greater understanding and awareness of Hispanic cultures and the diverse peoples who speak Spanish

## Required Courses

- CSPN 201 Introductory Spanish II
- CSPN 301 Intermediate Spanish I
- CSPN 401 Intermediate Spanish II
- CSPN 501 Advanced Spanish I
- CSPN 601 Advanced Spanish II

## Electives (select 1)

- CSPN 402 Spanish Conversation and Pronunciation
- CSPN 510 Spanish for Native Speakers
- CSPN 515 Introduction to Business Spanish
- CSPN 610 Spanish Composition for Native Speakers
- CSPN 702 Communication in Business Spanish
- CSPN 704 Latin American Culture I
- CSPN 705 The Boom in Latin American Literature
- CSPN 707 Spanish-English Translation
- CSPN 708 Contemporary Spanish Fiction
- CSPN 710 History of the Spanish Language
- CSPN 804 Latin American Culture II
- CSPN 810 Cultural Context of Writing

## Certificate Requirements

- 5 required courses\*
- 1 electives
- Cumulative grade point average (GPA) of 1.67+

\*You may be exempted from completing the required courses if you completed 4 courses at a higher level than CSPN 401. If granted advanced placement (through the placement and assessment interview with the academic coordinator), you only need to complete 4 advanced level courses (CSPN 402 or higher) to fulfill the certificate requirements.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Successful completion of Introductory Spanish I (CSPN 101)
- With a minimum grade of C+

OR

- Admission by placement assessment and interview

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.



# Project Management

## Become a successful project manager.

Project management is a crucial role that ensures projects go according to plan, guiding and overseeing teammates through a project, managing changes and risks to help keep the project on task. You can use our project management courses to meet PMI's educational requirements and prepare for the Certified Associate in Project Management (CAPM)<sup>®</sup> and Project Management Professional (PMP)<sup>®</sup> certifications.

## Industry and Careers

- Finance
- Technology/IT/Software
- Energy
- Manufacturing
- Construction
- Education
- Government/Not-for-profit
- Healthcare

## Who Should Take This Certificate?

- Working professionals who want to transition into project management
- Professionals working in project management who are interested in writing the exam for PMI's Certified Associate in Project Management (CAPM)<sup>®</sup> or Project Management Professional (PMP)<sup>®</sup> credential
- Recent degree graduates who want to be more competitive in the marketplace as a new graduate

## What Will You Learn?

After completing this certificate, you will be able to:

- Recognize the concepts and basic functions of the project management body of knowledge
- Plan and schedule the project in a group setting using the critical path method (CPM)
- Identify, plan, and manage project risk and quality using analytical tools and methods
- Implement financial controls to accounting, budgeting, and cost management systems
- Organize self-managing teams to build products in agile and mobile project environments

## Required Introductory Course (select 1)

If you plan to pursue the ITM degree, you should take CITM 750 (as CTEC 210 cannot be used towards the ITM degree).

- CITM 750 IS Project Management
- CTEC 210 Fundamentals of Project Management

## Required Core Courses

- CKPM 203 Planning and Scheduling
- CKPM 209 Project Risk and Quality Management
- CKPM 211 Leadership in Project Management
- CKPM 212 Project Cost and Procurement Management

## Project Management Steam (select 3)

Complete 3 the following courses to achieve the Project Management Stream.

- CCMN 114 Short Management Reports
- CHSM 308 Project Management - Long Term Care
- CINT 905 Conflict Resolution in Community Services
- CKPM 217 Agile Project Management
- CMHR 405 Organizational Behaviour

## Architecture, Engineering, and Construction Stream

Complete the following courses to achieve the Architecture, Engineering, and Construction Stream. In addition to the courses below, select 1 course from the Elective category.

- CKPM 213 Management of Projects in the AEC
- CKPM 214 Project Development and Control

## Business and Information Management Stream

Complete the following courses to achieve the Business and Information Management Stream. In addition to the courses below, select 1 course from the Elective category.

- CITM 305 Systems Analysis and Design
- CITM 410 Business Process Design

## Community and Health Services Management Stream (select 2)

Complete 2 of the following courses to achieve the Community and Health Services Management Stream. In addition to the courses below, select 1 course from the Elective category.

- CHSM 301 The Healthcare Systems
- CHSM 305 The Management Cycle
- CHSM 307 Principles of Long Term Care Service Del.

## Certificate Requirements

- 5 required courses
- selected stream\*
- 1 39-hour elective†
  - Two 19.5-hour courses are considered equivalent to one 39-hour course
- Cumulative grade point average (GPA) of 1.67+

\*This certificate offers streams in Project Management; Architecture, Engineering, and Construction; Business and Information Management; and Community and Health Services Management. You must fulfil the requirements of one of these four areas as listed.

†The elective category only applies to the Architecture, Engineering, and Construction; Business and Information Management; and Community and Health Services Management streams. If you are in the Project Management Stream, you do not need to complete this category.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With six Grade 12 U or M credits

OR

- Mature student status with relevant professional experience

## Electives: 39-Hour Courses (select 1)

This category only applies to the Architecture, Engineering, and Construction; Business and Information Management; and Community and Health Services Management streams. If you are in the Project Management Stream, you do not need to complete this category. Two 19.5-hour courses may be completed as the equivalent of one 39-hour course.

- CCMN 114 Short Management Reports
- CDCE 305 Intro to Intercultural Communication
- CDCE 306 Managing Workplace Relationships
- CDCE 307 Working with Culturally Diverse Clients
- CDCE 308 Cross Cultural Teamwork
- CHSM 308 Project Management - Long Term Care
- CINT 905 Conflict Resolution in Community Services
- CKPM 216 Project Management Internship
- CKPM 217 Agile Project Management
- CKPM 218 Enterprise Project Management
- CKPM 219 Mobile Project Management
- CKPM 220 Rescuing Failing Projects
- CKPM 221 From Technical to Managerial
- CMHR 405 Organizational Behaviour

# Project Management for Technical Professionals

Are you looking to increase your career advancement or employability into project management roles? This flexible certificate program will prepare professionals with technical backgrounds to become employed in middle-level management (MLM) project management positions. Gain the skills, knowledge, and expertise to help catapult your career and prepare you to write the Project Management Professional® examination offered by the Project Management Institute.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Development manager
- Project control officer
- Project coordinator
- Project leader
- Project manager
- Team leader
- Technical lead

## Who Should Take This Certificate?

- Professionals with technical backgrounds in information technology, engineering, science, finance, and other similar fields.
- Internationally educated professionals with an undergraduate degree and a minimum of two years of professional experience in one of above fields.
- Individuals who want to prepare for the Project Management Professional (PMP)® examination.

## What Will You Learn?

After completing this certificate, you will be able to:

- Describe the concepts and basic functions of the project management body of knowledge
- Manage project scope, quality, time, cost, risk, procurement, resources, and communication
- Assemble self-managing teams to build products while responding to ever-changing requirements
- Prepare a project schedule, and install and operate a planning and scheduling system
- Utilize solid leadership and other soft skills and apply them to project situations
- Refine your analytical, writing, presentation, and problem-solving skills

## Required Courses

- ☐ CTEC 210 Fundamentals of Project Management
- ☐ CKPM 217 Agile Project Management

## Electives - Group A (select 3)

- ☐ CKPM 123 Strategic Project Mgt (Tech Prof)
- ☐ CKPM 203 Planning and Scheduling
- ☐ CKPM 211 Leadership in Project Management
- ☐ CKPM 212 Project Cost and Procurement Management
- ☐ CKPM 216 Project Management Internship
- ☐ CKPM 220 Rescuing Failing Projects
- ☐ CKPM 456 Enterprise Project Mgt (Tech Prof)

## Electives - Group B (select 1)

- ☐ CCMN 114 Short Management Reports
- ☐ CCMN 432 Communication in the Engineering Professions
- ☐ CDCE 400 Exploring Leadership Skills
- ☐ CMHR 405 Organizational Behaviour
- ☐ CMHR 650 Management of Change

## Certificate Requirements

- 2 required courses
- 4 electives\*
- Cumulative grade point average (GPA) of 1.67+

\*Select 3 courses from Electives – Group A and 1 course from Electives – Group B

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

Internationally Educated Professionals

- An undergraduate degree and a minimum of two years of professional experience in a related field
- Be an accepted and registered participant in the Gateway for International Professionals' Middle-level Managers (MLM) with Technical Background Bridging Program
- Be a legal resident of Ontario at the time of application, and be eligible to work in Canada
- Have resided in Canada for no more than 10 years
- Be an internationally educated professional in a suitable technical discipline
- Demonstrate English language proficiency through any of Toronto Metropolitan University's approved English language proficiency test scores

OR

All Other Applicants\*

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

\*If you do not have these requirements, you will be considered on an individual basis, taking into account your work-related experience and maturity.

### Admission Application

An admission application is required for this program. A pre-approval process will be conducted by the program manager, including an orientation/information session, a one-on-one interview, and a language assessment.

For more information, contact [mlm@torontomu.ca](mailto:mlm@torontomu.ca).

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Psychology

Dip your toe into the academic world of psychology without making a full commitment to an undergraduate program. In the Certificate in Psychology, you will acquire a strong foundation on which to pursue post-secondary studies. Plus our degree-credit courses can potentially be applied toward an undergraduate degree program.

## Industry and Careers

This certificate can lead to career paths in various roles. Here are some examples:

- Child and youth worker
- Clinical coordinator
- Community worker
- Counsellor
- Gerontologist
- Healthcare administrator
- Psychologist
- Social worker
- Therapist

## Who Should Take This Certificate?

- Students who would like to use the degree-credit courses toward an undergraduate degree in psychology
- Individuals who are looking for an academic introduction to the field of psychology

## What Will You Learn?

You will learn the methods, concepts, theories, and applications of psychology. You will examine basic principles of psychology and how to apply them to everyday experiences, learn about statistical concepts, analyze research data, and work closely with a faculty member through an independent study to produce a comprehensive paper in a selected area.

Through your choice of electives, you can concentrate on a specific area. Here are some examples:

- Psychological principles of growth and development
- Abnormal aspects of human behaviour
- Explanations of personality and its development
- The study of social behaviour
- Applications of psychology in organizations

## Required Courses

You may only select one of CPSY 102 or CPSY 105.

- CPSY 102 Introduction to Psychology I
- CPSY 105 Perspectives in Psychology
- CPSY 202 Introduction to Psychology II
- CPSY 411 Research Methods and Statistics I
- CPSY 612 Independent Study

## Electives (select 4)

- CPSY 214 Psychopharmacology
- CPSY 215 Psychology of Addictions
- CPSY 300 Psychology and Law
- CPSY 302 Child Development
- CPSY 304 Psychology of Gender
- CPSY 308 Psychology of Thinking
- CPSY 324 Biological Psychology
- CPSY 325 Psychological Disorders
- CPSY 335 Clinical Psychology
- CPSY 402 Adult Development
- CPSY 412 Human Brain Circuitry
- CPSY 504 Social Psychology
- CPSY 505 Personality Theory
- CPSY 518 Environmental Psychology
- CPSY 602 Developmental Psychopathology
- CPSY 606 Abnormal Psychology
- CPSY 607 Drugs and Human Behaviour
- CPSY 614 Psychology of Sport
- CPSY 620 Psychology of Immigration
- CPSY 621 Psychology of Human Sexuality
- CPSY 706 Positive Psychology
- CPSY 707 Models of Stress and Adaptation
- CPSY 802 Death, Dying and Bereavement
- CPSY 805 Adjustment, Stress and Coping
- CPSY 806 Behaviour Modification
- CPSY 807 Psychology of Prejudice
- CPSY 808 Community Psychology
- CPSY 941 Cross Cultural Psychology

## Certificate Requirements

- 4 required courses
- 4 electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- 3 years of professional experience in business, community service, or industry

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Public Administration and Leadership

Governments need employees who know how societies and economies work and who care about delivering quality service and advice. They are also seeking people who are potential leaders and who will guide colleagues by their example and expertise. To meet this demand, The Chang School and Toronto Metropolitan University's Department of Politics and Public Administration have developed this certificate for individuals who already have a degree from a recognized university.

## Industry and Careers

According to Statistics Canada, public sector employment comprises approximately 20 percent of total employment in Canada.

Here are a few possible career categories for graduates of this certificate:

- Community-based organizations that have administrative interactions with the federal, provincial, or municipal governments
- International governmental organizations (like the United Nations [UN], Organization for Economic Co-operation and Development [OECD], World Bank)
- Offices of an elected official (for example, as a political aide)
- Non-governmental organizations (NGO)
- Policy units of a federal, provincial, or municipal government department
- Private sector companies, particularly ones that have extensive interactions with domestic or foreign governments, or that are engaged in public research

## Who Should Take This Certificate?

- Individuals who already have an undergraduate degree and wish to deepen their understanding of key aspects of public sector management and leadership
- Individuals looking to pursue graduate studies in public administration
- Individuals working in government or the nonprofit sector who want to build their skills to move up in their career

You can enrol in individual courses to gain specific skills, or take the whole certificate program to develop a greater depth of photography knowledge.

## What Will You Learn?

In completing this certificate you will know how to:

- Recognize key issues in today's rapidly evolving public sector
- Participate in the Canadian public policy-making process
- Interpret contemporary social, economic, and environmental policy
- Apply public sector leadership
- Analyze the statutory and regulatory basis of Canadian public administration
- Rate and evaluate programs
- Work within budgetary processes
- Design effective accountability
- Rank the types of partnerships between government and other agents in the delivery of public goods
- Assess the quality of intergovernmental affairs
- Recognize and select the most appropriate instruments for policy and program delivery

## Required Courses

- ☐ CPPA 211 Public Policy
- ☐ CPPA 404 Issues in Public Administration
- ☐ CPPA 501 Public Sector Leadership

## Electives (select 3)

- ☐ CPPA 301 Administrative Law
- ☐ CPPA 303 Public Budget Policy/Politics
- ☐ CPPA 335 Theories of Bureaucracy
- ☐ CPPA 401 Collaborative Governance
- ☐ CPPA 402 Program Planning and Evaluation
- ☐ CPPA 403 e-Government
- ☐ CPPA 411 Advanced Public Policy
- ☐ CPPA 414 Comparative Public Policy
- ☐ CPPA 425 Intergovernmental Relations
- ☐ CPPA 490 Public Administration Themes

## Certificate Requirements

- 3 required courses
- 3 electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

- An undergraduate degree

Note: If you have no background in politics or public administration and/or no experience in the public sector, you may be required to complete a preparatory course (usually either CPPA 102 or CPPA 120) prior to admission in the certificate.

### Admission Application

To apply for approval to register in the Certificate in Public Administration and Leadership, please complete and submit this online program pre-approval form. Once you have completed and submitted this online form, a representative from The Chang School will contact you to provide next steps.

Note: You will also be required to submit academic transcripts to Dr. Patrice Dutil, Academic Coordinator. Instructions for submitting your transcripts are in the Education section of the pre-approval form.

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.



# Public Relations

The digital revolution and social media have dramatically impacted the public relations (PR) industry. To reflect this change and fulfill employers' needs, the certificate curriculum has been fully redeveloped. The required courses have been revised with the most up-to-date content, including influencer relations, SEO, and analytics.

You will learn directly from practicing senior PR practitioners and benefit from their professional experience in PR strategy, working with and influencing executives, effective writing and speaking techniques, and much more.

If you're looking for opportunities to connect with industry professionals and network in an online world, then this certificate can help you get your foot in the door.

This certificate is mostly asynchronous, so you can go at your own pace and continue to work while you learn. There are also synchronous options available so you can connect one-on-one with an instructor and fellow learners.

## Industry and Careers

This certificate can help you build skills that may help you move into job roles related to:

- Community relations
- Content creation
- Crisis management
- Financial communications
- Media relations
- Reputation management
- Social media
- Spokesperson

## Who Should Take This Certificate?

- Newly graduated diploma and degree individuals who are working a full or part-time job and need flexible learning to fit into their schedule
- Recent graduates of a diploma and/or degree program who need to kick start their career in public relations
- Individuals working in the PR/communications industry looking to solidify their place in a PR/communications role or are looking for a promotion
- Individuals who are mid-career and are looking to change their career completely and reposition themselves in a PR/communications role

## Required Courses

- ❑ CDPR 200 Public Relations Foundations
- ❑ CDPR 204 Planning, Programming and Budgeting
- ❑ CDPR 205 Communications Research and Campaign ROI
- ❑ CDPR 206 Media Relations
- ❑ CDPR 208 Social Media in Public Relations
- ❑ CDPR 211 Strategic Storytelling
- ❑ CDPR 300 Public Relations Capstone

## Electives: 19.5-Hour Courses (select 2)

- ❑ CDPR 210 Reputation Management
- ❑ CDPR 213 Internal Communications Management
- ❑ CDPR 216 Public Relations Ethics
- ❑ CDPR 217 Crisis Communication

## Certificate Requirements

- 7 required courses
- Two 19.5-hour electives
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- An undergraduate degree

OR

- A 3-year community college diploma

OR

- Mature student status with a high school diploma and 4 years of progressive work experience in public relations practice, or in a business, professional, or technical field

## What Will You Learn?

Our fully online Certificate in Public Relations will help you hone your practical, analytical, and theoretical skills to prepare you for a career in public relations.

The Certificate in Public Relations can also help you prepare to write the Canadian Public Relations Society (CPRS) and International Association of Business Communicators (IABC) accreditation examinations (eligible after five years of professional experience).

Through a wide range of courses offered online, you will gain experience and instruction in how to:

- apply strategic PR management concepts and principles in a number of organizational settings
- establish and build relationships with senior management and other program sponsors
- research and evaluate PR programs
- critically analyze PR issues
- design, implement, and manage internal and external PR programs
- write for a wide range of internal and external audiences
- make effective public and business presentations
- manage an organization's relations with a wide variety of stakeholder groups

# Publishing

Publishing is all about access: access to industry professionals, industry knowledge, and job opportunities. Our Certificate in Publishing is not only the largest professional training program for the publishing industry in Canada, but it opens doors for our continuous learners to enter the industry and provides them the tools they need to navigate and succeed. Our graduates go on to thrive in book publishing and related sectors, like corporate, non-profit, and government communications.

## Industry and Careers

This certificate could lead to a career in:

- Book publishing: including trade, educational, scholarly, and reference publishing
- Literary magazine and journal publishing
- Publishing in corporate, non-profit, and government communications

In roles such as:

- Business (acquisitions, contracts, rights)
- Editorial
- Sales
- Marketing and publicity
- Production and design

## Who Should Take This Certificate?

This certificate program will teach you the skills and knowledge you need to succeed in the publishing industry.

You may be interested if you:

- Want to enter the publishing industry and are looking for a quick path to career-specific training
- Work in the publishing industry or in areas where publishing skills are required
- Are considering a career change

## What Will You Learn?

You can take a full range of online courses covering the latest in print and digital publishing, including overviews of industry sectors and skills-based training in editing, production and design, sales, marketing and publicity, literary rights and the business of book publishing, and digital publishing.

This certificate program is fully online, which gives you the flexibility to take classes anytime, anywhere, and at your own pace.

Plus, enrolled learners have access to job postings and paid internship opportunities for a year after taking their last course in the program.

## Required Courses

- CDPB 100 Publishing Overview: Trade
- CDPB 200 Publishing Overview: Education

## Electives: 39-Hour Courses (select 6)

Two 19.5-hour courses may be completed as the equivalent of one 39-hour course.

- CDPB 101 The Business of Book Publishing
- CDPB 102 Copy and Stylistic Editing I
- CDPB 103 Production for Books, Journals, and Reports
- CDPB 104 Introduction to Book Design
- CDPB 105 Sales and Marketing for Book Publishers
- CDPB 110 Publicity for Book Publishers
- CDPB 201 Literary Rights Management
- CDPB 202 Substantive and Stylistic Editing
- CDPB 212 Visual Skills for Publishing
- CDPB 222 Copy and Stylistic Editing II
- CDPB 312 Practical Grammar and Punctuation
- CDPB 803 Digital Publishing and Production

## Electives: 19.5-Hour Courses

Two 19.5-hour courses may be completed as the equivalent of one 39-hour course.

- CDPB 280 Audiobook Publishing and Production
- CDPB 285 Accessible Publishing and Production
- CDPB 300 Children's Classics in the 21st C
- CDPB 301 Publishing for Children
- CDPB 302 Government Reports
- CDPB 304 Scholarly and Reference Publishing
- CDPB 306 Trade Books: Fiction
- CDPB 309 Editing Books for Children and Teens
- CDPB 310 Proofreading for Books, Journals, and Reports
- CDPB 311 Indexing for Books, Journals, and Reports
- CDPB 313 Mktg Books for Children and Teens
- CDPB 315 Editing Recipes and Cookbooks

## Certificate Requirements

- 2 required courses
- Six 39-hour electives
  - Two 19.5-hour courses are considered equivalent to one 39-hour course
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

- Undergraduate degree
- OR
- Mature student status with related professional experience and education

If you are an undergraduate student in your final year, please contact the academic coordinators at [publish@torontomu.ca](mailto:publish@torontomu.ca).

# Retail Management

Kickstart or advance your career in retail – the largest employment sector in Canada. Operating a successful retail business is becoming a greater challenge than ever before. As a retail professional, you must apply your skills and knowledge to analyze changing demographics, build relationships with customers as well as suppliers, and oversee the integration of a global supply chain, in addition to identifying new trends. Our Certificate in Retail Management is tailored to the unique and growing needs of the retail industry, including strategic thinking, advanced communication skills, organizational development, and market planning.

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Allocation analysis
- Category management
- Customer relations management
- Ecommerce
- Merchandise planning
- Pricing analysis
- Retail buying
- Store operations
- Visual merchandising

## Who Should Take This Certificate?

- Retail employees seeking professional development or career advancement
- Working professionals seeking a career change
- Canadian newcomers seeking entry in domestic retail organizations
- Managers of small retail operations seeking enhanced entrepreneurial skills
- High school graduates who want to eventually pursue the BComm degree in Retail Management

## What Will You Learn?

After completing this certificate, you will be able to:

- Assess key profit drivers and broad marketing/operational strategies
- Understand consumer behaviour and what defines brand value
- Apply customer relationship management (CRM) tools and best practices
- Analyze productivity issues from multiple perspectives
- Develop skills in assessing costs and profitability tied to:
  - inventory planning
  - management
  - promotions
  - consumer insights

## Required Courses

- ❑ CRMG 200 Intro to Retail and Services Management
- ❑ CRMG 302 Retail Consumer Insight

## Electives (select 4)

- ❑ CENT 500 New Venture Startup
- ❑ CGMS 200 Introduction to Global Management
- ❑ CMHR 405 Organizational Behaviour
- ❑ CMHR 523 Human Resources Management
- ❑ CMKT 100 Principles of Marketing
- ❑ CRMG 301 Retail Operations Management
- ❑ CRMG 303 Managing the Retail Workplace
- ❑ CRMG 400 Merchandise Buying and Planning I
- ❑ CRMG 434 Intro to Logistics and Supply Chain Mgmt
- ❑ CRMG 452 Visual Merchandising and Space Planning
- ❑ CRMG 806 Retailer Perspectives on Category Management
- ❑ CRMG 902 Franchising
- ❑ CRMG 907 Relationship Marketing
- ❑ CRMG 909 Merchandise Buying and Planning II
- ❑ CRMG 910 Omni-Channel Retailing
- ❑ CRMG 911 Retail Sales Management
- ❑ CRMG 916 Managing B2B Channels
- ❑ CRMG 919 Visualizing Data for Decisions

## Certificate Requirements

- 2 required courses\*
- 4 electives
- Cumulative grade point average (GPA) of 1.67+

\*If you demonstrate the requisite combination of education and work experience, you may apply to the academic coordinator to waive CRMG 200. If granted a waiver, you will need to complete 5 electives (instead of 4) to fulfill the certificate requirements.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
  - With 6 Grade 12 U or M credits

AND one of the following:

- Mature student status
- A recent undergraduate degree or college diploma
- A minimum of 1 year related professional experience in the retail industry

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Robotics and Embedded Systems

Industrial robotics, personal and service robots, and factory automation systems are becoming increasingly important to the economy as automation expands across the private and public sectors, which means there are plenty of career opportunities in this field.

This certificate will help you advance or change your career while developing the technical knowledge and skills to provide hands-on innovation through robotics and embedded systems products and devices.

## Industry and Careers

According to Global Affairs Canada, the robotics ecosystem in Canada is far-reaching and has applications in the following industries:

- Aerospace
- Automotive
- Defense and security
- Electronics
- Healthcare

This certificate can lead to career paths in roles such as:

- Automation engineer
- Communications and networking professional
- Control systems technologist
- C programming software specialist
- Embedded systems software device development professional
- Human-computer interaction specialist
- Machine-human interaction specialist
- Roboticians
- Robotics engineers
- Technologist

## Who Should Take This Certificate?

This certificate is intended for professionals with experience with computer programming – in any language – and/or who have hands-on technical industry experience.

Individuals who are seeking to enter the following professional fields:

- Consumer electronics
- Green technology products
- Robotics
- Manufacturing automated machinery
- Medical Devices
- Telecommunications products

## What Will You Learn?

After completing this certificate, you will be able to:

- Build mobile robotic devices and program embedded systems for product and automated device development
- Use your newly gained skills in microprocessor-based control systems, systems-on-chip (SoC) design, and device software development
- Program mobile robotic devices
- Implement systems design in mobile robots and robotic devices

Tools in use include the following:

- C, C++, or Python
- Customized robotics kits

## Required Courses

- ❑ CKRE 110 Digital Logic and Hardware Architecture
- ❑ CKRE 120 Programming Robotics Systems
- ❑ CKRE 130 Embedded Systems Hardware Architecture and Implementation
- ❑ CKRE 140 Real-Time Embedded Systems Programming
- ❑ CKRE 150 Emerging Issues in Robotics and Embedded Systems
- ❑ CSCI 130 Mobile Robotic Devices Embedded Systems

## Certificate Requirements

- 6 required courses
- Cumulative grade point average (GPA) of 1.67+

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Mature student status with evidence of relevant college or university level coursework, or equivalent

OR

- Mature student status relevant industrial or professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Social Sciences and Humanities Foundations

Strengthen your application for a full-time undergraduate degree with the Certificate in Social Sciences and Humanities Foundations. From the degree-credit courses, you will gain a sense of what studying social sciences and humanities in university is like, without having to fully commit to a degree program. Once you're ready to move forward in your academic journey, many of the courses can be transferred as credits to college and university degree programs. Invest in yourself and develop university-level skills, such as critical thinking, problem-solving, research, and writing with this flexible certificate program.

## Industry and Careers

A wide range of professions and industries require the foundational skills of critical thinking, problem-solving, research, and writing that the social sciences and humanities provide. Those who have acquired these creative, analytical, and communication skills are better able to shift across a changing employment landscape as well as upward within their profession.

## Who Should Take This Certificate?

- Individuals who are interested in exploring degree-credit courses in social sciences and humanities before formally applying to university
- Individuals who are looking to strengthen their application to a full-time undergraduate degree program

## What Will You Learn?

The certificate courses are drawn from the first-year foundation of Toronto Metropolitan University's Faculty of Arts undergraduate programs.

The required courses will help you develop and enhance your skills in critical thinking, problem-solving, research, writing, and presenting your ideas.

Elective courses cover a wide range of topics in the social sciences and humanities, allowing you to explore specific areas that interest you that you may want to pursue academically or professionally.

## Required Courses

- CSSH 105 Critical Thinking I
- CSSH 205 Academic Writing and Research

## Electives - Group A: Humanities (select 2)

Students may select a course in Arabic (CARB), American Sign Language (CASL), Chinese (CCHN), French (CFRE), or Spanish (CSPN) as part of this category. However, an online placement test is required; visit the Department's website for details.

- CACS 100 Ideas That Shape the World I
- CACS 210 Ideas that Shape the World: Antiquity
- CENG 110 Literatures Across Borders
- CENG 208 Introduction to Non-Fiction
- CHIS 104 Ten Days That Shook The World
- CHIS 105 Inventing Popular Culture
- CHIS 106 Technology, Warfare and Social Change
- CHIS 107 Colonization, Colonialism and Independence
- CPHL 101 Plato and the Roots of Western Philosophy
- CPHL 201 Problems in Philosophy
- CPHL 333 Philosophy of Human Nature
- CPHL 366 Existentialism and Art and Culture

## Electives - Group B: Social Science (select 2)

- CCRM 100 Introduction to Canadian Criminal Justice
- CCRM 102 Introduction to Criminology
- CECN 104 Introductory Microeconomics
- CECN 204 Introductory Macroeconomics
- CEUS 102 Environment and Sustainability
- CEUS 202 Sustaining the City's Environments
- CGEO 131 Energy, Earth and Ecosystems
- CGEO 151 Location, Location, Location
- CPOG 100 People, Power and Politics
- CPOG 110 Power and Influence in Canadian Politics
- CPPA 101 Cdn Public Administration I: Institutions
- CPPA 102 Cdn Public Administration II: Processes
- CPSY 102 Introduction to Psychology I
- CPSY 202 Introduction to Psychology II
- CSOC 105 Introduction to Sociology
- CSOC 107 Sociology of the Everyday
- CSSH 100 Inquiry and Problem-Solving
- CSSH 102 Learning and Development Strategies
- CSSH 301 Research Design and Qualitative Methods



## Certificate Requirements

- 2 required courses: CSSH 105 and CSSH 205
- 4 electives: Two in Group A - Humanities and two in Group B - Social Sciences\*
- Cumulative grade point average (GPA) of 1.67+

\*Students may select a course in Arabic (CARB), American Sign Language (CASL), Chinese (CCHN), French (CFRE), or Spanish (CSPN) as part of the Electives - Humanities category. However, an online placement test is required; visit the Department's website for details.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Recommended:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status

Note: If you do not meet the above stated admission criteria, you must complete CENG 110 (from Electives - Group A: Humanities) as one of your four electives.

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Strategic Marketing Management

The marketing industry is undergoing a rapid transformation. New technologies are changing how companies identify, target, and interact with consumers. Companies are ethically and, in some cases, legally bound to societal trends towards corporate social responsibility, social marketing, and sustainability. These ongoing changes demand highly-skilled creative, strategic and analytical thinkers.

Our Certificate in Strategic Marketing Management helps you understand the latest technologies and advancements in marketing through hands-on, practical learning. Choose our general stream to build a range of fundamental marketing skills, or focus on a particular area of interest by taking electives from our specialized streams:

- Marketing innovation
- Marketing research
- Social media
- Sports marketing

## Industry and Careers

This certificate can lead to career paths in roles such as:

- Account manager
- Brand manager
- Content marketing specialist
- Customer insights analyst
- Digital marketing manager
- Customer insights analyst
- Marketing data analyst
- Social media strategist

## Who Should Take This Certificate?

- Graduates looking to complement their degree or diploma with marketing skills to give them a competitive edge as they start their careers
- Marketing professionals that are seeking career advancement by gaining expertise in a specific area and upgrading their skills in the age of analytics
- Working professionals wanting to make a career change, seeking entry into the industry by learning the fundamentals of marketing

## What Will You Learn?

In this certificate program, you will learn how to:

- Understand the fundamentals of marketing, including theories, principles, and concepts of market behaviour
- Interpret and satisfy customer expectations by creating, developing, managing, and delivering products and services
- Apply quantitative and qualitative analyses to measure the success of marketing initiatives
- Engage state-of-the-art contemporary supply and demand marketing metrics and analytic tools, such as marketing research, share of mind, margins and profits, product, Salesforce, and channel management
- Use the case method – integrating marketing theory and marketing metrics – as a model for critically analyzing situations and developing evidence-based, ethical decision-making skills
- Create and evaluate integrated marketing plans that may include product/brand management, marketing research, advertising, public relations, media buying, and/or digital marketing

## Required Courses

- ❑ CMKT 100 Principles of Marketing
- ❑ CMKT 300 Marketing Metrics and Analysis

## Electives (select 4 or 5)

- ❑ CGMS 522 International Marketing
- ❑ CITM 350 Concepts of e-Business
- ❑ CMKT 400 Understanding Consumers and the New Media
- ❑ CMKT 500 Marketing Research
- ❑ CMKT 504 Effective Persuasion
- ❑ CMKT 510 Innovations in Marketing
- ❑ CMKT 535 Integrated Marketing Communications
- ❑ CMKT 600 Integrated Case Analysis
- ❑ CMKT 700 Business Intelligence/Decision Modeling
- ❑ CMKT 702 Advanced Marketing Management
- ❑ CMKT 723 Services Marketing
- ❑ CMKT 730 Assessing/Managing Market Opportunities
- ❑ CMKT 731 Competitive Intelligence
- ❑ CMKT 828 Sport Marketing Concepts and Strategy
- ❑ CMKT 829 International Sport Marketing
- ❑ CMKT 850 Applied Research Project

## Certificate Requirements

- 2 required courses\*
- CMKT 100
- CMKT 300
- Any 4 electives
- Cumulative grade point average (GPA) of 1.67+

\*If you demonstrate the requisite combination of education and work experience, you may apply to the academic coordinator to waive CMKT 100. If granted a waiver, you will need to complete 5 electives (instead of 4) to fulfill the certificate requirements.

To graduate, you must successfully complete, within your official time span, the requirements from the year you registered in the program. For more information, refer to Time Span in our Glossary of Terms. If certificate requirements change and courses are no longer available, you may request Course Substitutions/Directives. You must apply to graduate on MyServiceHub within the appropriate application deadlines (refer to Important Dates). Visit Graduation for details.

## Admission Criteria

Required:

- Ontario Secondary School Diploma (OSSD) or equivalent
- With 6 Grade 12 U or M credits

OR

- Mature student status with relevant professional experience in business

If you are an undergraduate student, you should be aware of possible certificate restrictions. Check Curriculum Advising for complete details.

# Urban Agriculture

Urban agriculture is not only a growing field, but a necessary one. As people continue to move into cities, there will be an added need for professionals with urban agriculture training to lead the sustainability path in building resilient city regions. If you're looking for a career to help create positive change in your community, our Certificate in Urban Agriculture will help you get there. This four-course, fully-online certificate equips you with the knowledge, skills, and practical experience to address food system challenges in local and global contexts.

## Industry and Careers

This certificate can help you grow your career in a range of industries like urban planning, environmental studies, public health, international development and more.

This certificate can lead to career paths in roles such as:

- Municipal Planner or Policymaker
- Coordinator or Project Manager in Urban Agriculture, Plant Innovation, or Rooftop/Community Gardens
- Public Gardens Or Field Production Staff
- Coordinator or Project Manager or Consultant in Ecological Planning
- Consultant In Sustainable Development
- Project Manager in a Local Authority, Urban Planning or Environmental Department, or Development Agency

## Who Should Take This Certificate?

- Students and recent graduates with relevant degrees (e.g. nutrition and food, urban planning, sociology, architecture, etc.) wishing to gain a specialization in urban agriculture.
- Individuals with experience in the urban agriculture sector, seeking additional training or expanded understanding of the overall scope of the field, including business entrepreneurs, ecological, urban and health planners, municipal planners, environmental advocates, development officers, urban food growers, staff of parks, and other city departments.

## What Will You Learn?

After completing this certificate, you will be able to:

- Through your choice of electives, you can concentrate on an area of focus like:
  - Analyze the relationships between urban agriculture and multiple dimensions of urban management, including health and nutrition, social and cultural development, local economic development, and environmental management
  - Identify how urban agriculture can advance food security, food sovereignty, and environmental sustainability through planning and policy
  - Apply participatory and gender-sensitive concepts, tools, and processes, such as situation analysis, action planning, and policy design with diverse urban agriculture stakeholders
  - The study of social behaviour
  - Applications of psychology in organizations

## Required Courses

- ☐ CVFN 410 Understanding Urban Agriculture

## Required Electives (select 3)

- ☐ CVFN 400 Practicum/Project in Urban Agriculture
- ☐ CVFN 411 Dimensions of Urban Agriculture
- ☐ CVFN 412 Practicing Urban Agriculture
- ☐ CVFN 413 Urban Agriculture Policy-Making
- ☐ CVFN 420 Green/Natural Infrastructure

## Certificate Requirements

- 1 required course
- 3 required electives
- Cumulative grade point average (GPA) of 1.67+

## Admission Criteria

Recommended:

- OSSD with six Grade 12 U or M credits (including English), with a minimum average of 60 percent, or equivalent

OR

- Mature student status with relevant work experience