CERTIFICATE PROGRAMS

The G. Raymond Chang School of Continuing Education offers 88 career-oriented certificate programs in various areas of interest.

We continue to collaborate with our academic partners across the University to update our current programming and develop new certificates that respond to emerging industry trends. This year, we're launching two brand new certificate programs – Caribbean Studies (page 28) and Data Analytics, Big Data, and Predictive Analytics (page 33).

Registered certificate program students are entitled to priority enrollment for all Chang School courses. For complete details on the advantages of early registration, application procedures, and deadline dates, visit **www.ryerson.ca/ce/certreg**.

CERTIFICATE PROGRAMS

*New certificate program launched for the 2014–2015 academic year.

†The Faculty of Engineering and Architectural Science at Ryerson University has developed the Internationally Educated Engineers Qualification Bridging (IEEQB) Program specifically for internationally educated engineers to provide them with an opportunity to meet the academic requirements for professional engineering licensure in Ontario. For more information, visit **www.ryerson.ca/feas/programs/ieeqb**.

ABORIGINAL KNOWLEDGES AND EXPERIENCES

This certificate provides a broad orientation to Aboriginal experiences in Canada and how Aboriginal peoples have been impacted by laws, policies, and practices in the health, social services, human resources, and other sectors. Aboriginal and non-Aboriginal students, regardless of their academic or professional background, have the opportunity to learn about Aboriginal lived experiences through curriculum from Aboriginal perspectives taught by Aboriginal scholars and experienced community teachers.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/aboriginal.**

Admission Requirements

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, including a credit in English with a minimum grade of 70 percent; or equivalent; or mature student status.

Individuals who do not meet the above stated admission criteria may seek advice and assistance from the Transitions to Certificate Program with Spanning the Gaps at **www.ryerson.ca/ce/access** or from Ryerson Aboriginal Student Services **www.ryerson.ca/aboriginal**.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CINT 922   Interdisciplinary Studies: Intro to Aboriginal Worldviews
▶ CINT 923   Interdisciplinary Studies: Canada's Story: An Aboriginal Perspective

Electives (select four)

▶ CCLD 450   Early Childhood Studies: Indigenous Early Learning
▶ CCYC 905   Child and Youth Care: An Aboriginal Perspective on CYC
▶ CDFP 573   Photography: Aboriginal Media Culture in Canada
▶ CENG 203   English Literature: The Literature of Native Peoples
▶ CENG 511   English Literature: The Art of Writing Life
▶ CFNY 400   Food Security: Selected Topics in Food Security
▶ CFNY 510   Food Security: Indigenous Food Systems in Canada
▶ CINT 910   Interdisciplinary Studies: First Nations Issues
▶ CMWF 108   Midwifery: Aboriginal Childbearing
▶ CPPA 124   Politics and Public Administration: Indigenous Politics and Governance
▶ CSWP 925   Social Work: Strong Helpers' Teachings
▶ CSWP 933   Social Work: Indigenous Health and Well Being
▶ CVSW 932   Social Work: Aboriginal Knowledges in Practice

Note to registered certificate program students

Required Courses

CVIN 918 and CVIN 919 deleted.

CINT 922 and CINT 923 added.

Electives

CFNY 510 added.

> **Understanding Aboriginal identities can be complex, shaped by historical factors, social and political contexts, individual characteristics, and family dynamics. Learning these dynamics through the certificate will enhance academic success, foster positive environments and relationships.**
>
> Melissa Compton
> Learner, Certificate in Aboriginal Knowledges and Experiences

ACCOUNTING – FINANCE

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This program is designed for those who want a good understanding of the current principles and practices in accounting–finance in Canada.

For those planning a career in the field, this certificate can lead to accreditation from a professional association. For further details, see CA, CGA, and CMA information found in the online version of this certificate at **www.ryerson.ca/ce.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status with experience in business.

Certificate Requirements

The successful completion of eight courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. After completion of the six required courses, students then select a further two courses from the electives. Up to four course credits may be granted on the basis of courses successfully completed at other institutions.

Required Courses

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

Electives (select two)

- ▶ CACC 504   Accounting: Accounting Cases and Concepts I
- ▶ CACC 507   Accounting: Accounting for Managers
- ▶ CACC 521   Accounting: Auditing
- ▶ CACC 522   Accounting: Taxation for Managers and Financial Planners
- ▶ CACC 607   Accounting: Accounting for Small Business
- ▶ CACC 621   Accounting: Internal Auditing
- ▶ CFIN 502   Finance: Personal Financial Planning
- ▶ CITM 102   Information Technology Management: Business Information Systems I
- ▶ CLAW 122   Law: Business Law
- ▶ CQMS 102   Quantitative Methods: Business Statistics I

*Note: Some of the courses in the Accounting – Finance certificate program may qualify for exemption in the Chartered Accountants Education Program, Certified General Accountants Association of Ontario, or the CMA Canada programs. For more details, visit the Chang School website at **www.ryerson.ca/ce/designations**.*

ADVANCED SAFETY MANAGEMENT

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate program in Advanced Safety Management was developed in cooperation with the Ryerson School of Occupational and Public Health. This is a unique offering of safety management courses that are part of the Bachelor of Applied Science degree in the Occupational Health and Safety option within the School of Occupational and Public Health. It is applicable to all types of industries, and is designed for those individuals who have completed Ryerson's Certificate in Occupational Health and Safety, or equivalent, and wish to expand their knowledge base and improve their skills.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/ohs**. For related career information, see Industry Overview.

Admission Criteria

It is recommended that applicants have the following:

Option 1: Successful completion of Ryerson Certificate in Occupational Health and Safety or its equivalent.

OR

Option 2: OSSD with six OAC credits or Grade 12 U or M credits, or equivalent, or mature student status, and five years of professional experience in a field relevant to occupational health and safety, plus successful completion of these courses:

- ▶ COHS 208   Occupational Health: Occupational Health and Safety Law
- ▶ COHS 718   Occupational Health: Systems Management I

Note: Students who successfully apply for admission to the degree program will be permitted advanced standing in the degree program for only those courses that they have successfully completed in either of these two certificate programs. Therefore, students who intend to pursue the degree program should choose Option 1 above.

Certificate Requirements

The successful completion of the eight required courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ COHS 323   Occupational Health: Accident Theory and Analysis
- ▶ COHS 516   Occupational Health: Ergonomics
- ▶ COHS 523   Occupational Health: Safety Evaluation Techniques
- ▶ COHS 623   Occupational Health: Safety Control Methods
- ▶ COHS 723   Occupational Health: Sectoral Applications I
- ▶ COHS 818   Occupational Health: Systems Management II
- ▶ COHS 823   Occupational Health: Sectoral Applications II
- ▶ COHS 833   Occupational Health: Fire Safety Management

ADVANCED SAFETY MANAGEMENT

ADVANCING THE AODA: PRINCIPLES AND PRACTICES OF ACCESSIBILITY

Note: *This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate combines theory with the development and application of skills for students who wish to make contributions to policy and organizational change in areas impacted by the Accessibility for Ontarians with Disabilities Act (AODA). Potential students include those in occupations that address or that should be addressing accessibility issues in public sector, private and not-for-profit sector organizations with obligations under the AODA.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/aodacertificate**.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U, including Grade 12 U or M credits, or equivalent, or mature student status with relevant work experience.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence: CDST 501, CINT 902, or CSWP 921; CDST 506; Electives - Group A (one selection); Electives - Group B (two selections); and CVDS 200 (required capstone course).

Required Courses

Students may select only one of CDST 501, CINT 902, or CSWP 921.

- ▸ CDST 501   Disability Studies: Rethinking Disability
- ▸ CDST 506   Disability Studies: Making Ontario Accessible
- ▸ CINT 902   Interdisciplinary Studies: Disability Issues
- ▸ CSWP 921   Social Work: Disability, Community and Society
- ▸ CVDS 200   Disability Studies: AODA Capstone Synthesis

Electives (select a total of three courses)

Electives - Group A (select one)

Ethics and Social Justice Stream

- ▸ CDST 500   Disability Studies: A History of Madness
- ▸ CDST 504   Disability Studies: Mad People's History
- ▸ CDST 604   Disability Studies: Current Topics in Disability II
- ▸ CDST 725   Disability Studies: The Politics and Practice of Interventions
- ▸ CDST 727   Disability Studies: Leadership for Social Action
- ▸ CPHL 302   Philosophy: Ethics and Health Care
- ▸ CPHL 400   Philosophy: Human Rights and Justice
- ▸ CPHL 507   Philosophy: Ethics and Disability
- ▸ CPHL 509   Philosophy: Bioethics

Organizational Behaviour and Change Management Stream

- ▸ CINP 913   Nonprofit: Leading Through Change
- ▸ CINT 907   Interdisciplinary Studies: Team Work for Community Services
- ▸ CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills
- ▸ CMHR 650   Human Resources: Management of Change

Public Policy and Law Stream

- ▸ CDST 502   Disability Studies: Disability and the State
- ▸ CDST 603   Disability Studies: Disability and The Law
- ▸ CPHL 602   Philosophy: Health Care and Distributive Justice
- ▸ CSWP 402   Social Work: Social Policy and Social Inclusion

Electives - Group B (select two)

Customer Service Stream

- ▸ CCLD 445   Early Childhood Studies: Inclusion and Consultation
- ▸ CDST 726   Disability Studies: Leadership in Human Services
- ▸ CGER 298   Gerontology: Ability, Disability and Aging

Employment Stream

- ▸ CMHR 600   Human Resources: Diversity and Inclusion in the Workplace
- ▸ COHS 477   Occupational Health: Integrated Disability Management
- ▸ CSOC 472   Sociology: At Work in a Changing World

Information and Communication Stream

- ▸ CDST 525   Disability Studies: Rethinking Images of Embodied Difference
- ▸ CDST 614   Disability Studies: Community Access and Technology
- ▸ CINT 921   Interdisciplinary Studies: Writing for Disability Activism

APPLIED DIGITAL GEOGRAPHY AND GIS

Note: *This certificate program may be completed entirely at a distance. Visit the distance education website at www.ryerson.ca/ce/de for further information.*

This certificate program has been developed for professionals currently practising or anticipating careers in government, industry, utilities, planning, municipal services, health, and retailing, who wish to enhance their professional skills in digital geography and geographic information systems (GIS). The certificate is designed to provide both training and education in digital geography.

The program responds to today's need for enhanced computer literacy in the management and analysis of digital spatial data, and the application of that data in decision-making. Digital geography is an area of study that concentrates on the electronic capture, storage, manipulation, and analysis of geographic data. Using location as the "look-up" key, disparate data sets can be linked and related to each other for a whole range of workplace applications. Following initial courses in which principles and concepts of digital geography and fundamental skills in GIS are introduced, the workplace applications are stressed in courses aimed at specific specialties. Higher level courses focus on refining GIS tools and implementation issues.

Students in the program are expected to have a working knowledge of desktop PC Windows environments.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/gis.** For related career information, see Industry Overview.

Academic Coordinator: Joe Aversa, certificates@geography.ryerson.ca.

Admission Criteria

Eligible applicants must have the following: Undergraduate degree or college diploma in an acceptable related field. Applicants must complete an application for pre-approval and be approved before registering for the first course.

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 subject to normal Ryerson 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.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

The introductory core courses are designed to provide the student with a good contextual background in digital databases and the principles of applied digital geography. They form the foundation upon which further courses rest and students must complete both courses before continuing.

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

Electives (select a total of four courses)

Electives – Group A (select one or two)

Five professional applications courses allow the student to focus on an area of interest.

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

Electives – Group B (select two or three)

These courses are designed to provide the student 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   Digital Geography: Legal and Ethical Issues in GIS and Digital Data
- ▶ CODG 131   Digital Geography: Issues and Innovations
- ▶ CODG 132   Digital Geography: Customizing GIS Software: Applications Programming
- ▶ CODG 133   Digital Geography: Map Algebra: Topology and Overlay
- ▶ CODG 135   Digital Geography: Digital Image Processing and Applications
- ▶ CODG 136   Digital Geography: Web Mapping

As the sixth course for certificate completion, students may take one course in the first level of the Advanced Certificate in Applied Digital Geography and GIS (provided the prerequisite is met).

Note: Because most courses have a significant lab component and since there are a limited number of lab stations, enrollment in most courses is limited to 30 registrants.

ADVANCED APPLIED DIGITAL GEOGRAPHY AND GIS

This advanced certificate offers a sequence of courses that combine to form a comprehensive package of principles and practice in advanced-level GIS education and training for GIS professionals. It builds on the courses in the first Certificate in Applied Digital Geography and GIS to provide greater conceptual understanding and technical expertise in this increasingly complex industry.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/gis**. For related career information, see Industry Overview.

Academic Coordinator: Joe Aversa, certificates@geography.ryerson.ca.

Admission Criteria

Eligible applicants must have the following:

Certificate in Applied Digital Geography and GIS or its equivalent. An interview with the academic coordinator is required to facilitate assessment of prior learning. Official documentation of English proficiency may be required if English is not the first language of the applicant. Applicants must complete an application for pre-approval available at **www.ryerson.ca/ce/gis**.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses – First Level (select four or five)

Students may select one course from the Group B Electives in the Certificate in Applied Digital Geography and GIS.

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

Required Courses – Second Level (select one or two)

- ▶ CODG 220   Digital Geography: GIS Implementation
- ▶ CODG 221   Digital Geography: GIS Project

ARCHITECTURAL PRESERVATION AND CONSERVATION

This is a highly technical certificate program consisting of six courses focused on subjects related to building renovation, restoration and rehabilitation, and historical preservation and conservation. The program is designed to provide graduates with specific knowledge and skills in architectural preservation and conservation. While the core courses provide a strong grounding in general issues, the electives allow the students to choose an area of interest or specialization – history, project management, or preservation technologies.

Admission Criteria

It is recommended that applicants have the following:

Graduates of the Ryerson Advanced Certificate in Architecture

Graduates of the Ryerson Advanced Certificate in Architecture are deemed to have met the admissions requirements.

Graduates of North American Architectural Schools

This program is offered at a post-graduate level. To ensure that students have attained a sufficient understanding of the required background in architecture and design, applicants admitted to this program will normally possess a post-secondary undergraduate education (university or college) in a relevant field of study:

▶ architecture
▶ architectural technology
▶ building science*
▶ engineering technology*

Upgrading course may be required for these graduates prior to formal enrollment in the program.

Applicants must demonstrate an understanding of the following, through their undergraduate studies:

▶ architectural theory and design
▶ history of Western architecture
▶ structural engineering
▶ materials and methods of North American cold climate construction
▶ building systems (mechanical and electrical)

Graduates of Non-North American Architectural Schools

Graduates from non-North American architectural schools are required to take the following courses prior to admission:

▶ CKAR 310   Architecture: Materials and Methods

Graduates of Non-Architectural Programs

Applicants without architectural training will be required to take the following upgrading courses in order to be considered for admission:

▶ CKAR 103   Architecture: Architectural Studio – Fundamental
▶ CKAR 201   Architecture: Mechanical and Electrical Systems for Buildings
▶ CKAR 300   Architecture: Architectural Drawing
▶ CKAR 310   Architecture: Materials and Methods

Other Requirements

Applicants are also recommended to have working knowledge of computer operations and computer-aided design/drafting. Advanced standing/challenge credit will be granted to applicants with prior learning in courses equal in content and scope. The University's policies will apply.

Applicants who do not hold a post-secondary undergraduate degree or diploma but who possess an appropriate combination of education and experience in architecture and/or architectural preservation and conservation may be considered for admission on an individual basis.

Certificate Requirements

The successful completion of six courses (four required courses from the core curriculum and of two electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

For further information about the program, please contact the Academic Coordinator, Yew-Thong Leong at 416.979.5000, ext. 6498, or attend a Program Open House.

Required Courses

▶ CKAR 600   Architectural Preservation and Conservation: Architecture Preservation and Conservation Workshop
▶ CKAR 601   Architectural Preservation and Conservation: Building Science for Architectural Preservation and Conservation
▶ CKAR 604   Architectural Preservation and Conservation: Management and Regulatory Framework
▶ CKAR 610   Architectural Preservation and Conservation: Architectural Preservation and Conservation Techniques

Electives (select two)

- ▶ CENT 500   Entrepreneurship: New Venture Startup
- ▶ CKAR 203   Architecture: Specifications and Contractual Documents
- ▶ CKAR 204   Architecture: Cost Estimating and Control
- ▶ CKAR 209   Architecture: Digital Graphics for Architecture and Design
- ▶ CKAR 210   Architecture: Toronto: An Architectural History
- ▶ CKAR 500   Architecture: Sustainable Buildings
- ▶ CKAR 605   Architectural Preservation and Conservation: Comprehensive Seminar/Project
- ▶ CKDA 610   Digital Architecture: Digital Architectural Modelling
- ▶ CKDA 611   Digital Architecture: Digital Architectural Rendering
- ▶ CKLA 400   Landscape Design: Ecology and Sustainable Landscapes
- ▶ CKLA 410   Landscape Design: Horticultural Science
- ▶ CKPM 202   Project Management: Fundamentals of Project Management
- ▶ CKPM 213   Project Management: Management of Projects in the AEC
- ▶ CKPM 214   Project Management: Project Development and Control

Note to registered certificate program students

Candidates may also take up to two courses in Material Analysis and Testing from the Centre for Advanced Building Technologies, George Brown College, as electives. Contact William K. Juranic, Chair, Technology, Centre for Continuous Learning, 416.415.4358, or Chair, Centre for Advanced Building Technologies, 416.415.4388, both at George Brown College. These courses may be considered for Transfer Credit when completed with a grade of B or better, where B equals at least 70 percent. A Letter of Permission is required from the academic coordinator.

Candidates may also take up to two courses in the history of Medieval, Renaissance, Baroque/Rococo, modern, or vernacular/colloquial architecture. Candidates are to consult the academic coordinator for a list of approved courses. A Letter of Permission is required from the academic coordinator.

Electives

CKDA 602 and CKDA 603 deleted.

CKDA 610 and CKDA 611 added.

ARCHITECTURE

This certificate program is designed for those wishing to enter the field of architecture, as well as those already employed in the field and wishing to improve their skills and credentials. With additional courses, this six-course certificate is recognized by the Association of Architectural Technologists of Ontario (AATO) as meeting the educational requirements for membership as a Probationer Technician. Students interested in the AATO should refer to the Professional Designation at **www.ryerson.ca/ce/deignations**.

Admission Criteria

It is recommended that applicants have the following:

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

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. A maximum of three course credits may be granted on the basis of equivalent courses successfully completed at other post-secondary institutions or fully documented work experience. After completing the four required courses, students may select from the elective courses listed.

It is recommended that the required courses be taken in the following order: CKAR 300, CKAR 310, CKAR 205, and CKAR 103.

For further information about the program, please contact the Academic Coordinator, Yew-Thong Leong at 416.979.5000, ext. 6498, or attend a Program Open House.

Certificate in three terms

FALL 1	CKAR 300, CKAR 310
WINTER 1	CKAR 103, CKAR 205
FALL 1	Electives (two)

Certificate in six terms

FALL 1	CKAR 310
WINTER 1	CKAR 205
SPRING/SUMMER 1	Elective
FALL 2	CKAR 300
WINTER 2	CKAR 103
SPRING/SUMMER 2	Elective

Note: Pathways may be combined so that a student begins with one course per term then switches to two courses per term, or vice versa.

Required Courses

- ▶ CKAR 103   Architecture: Architectural Studio – Fundamental
- ▶ CKAR 205   Architecture: Building Codes and Regulations
- ▶ CKAR 300   Architecture: Architectural Drawing
- ▶ CKAR 310   Architecture: Materials and Methods

Electives (select two)

- ▶ CENT 500   Entrepreneurship: New Venture Startup
- ▶ CKAR 203   Architecture: Specifications and Contractual Documents
- ▶ CKAR 204   Architecture: Cost Estimating and Control
- ▶ CKAR 209   Architecture: Digital Graphics for Architecture and Design
- ▶ CKAR 210   Architecture: Toronto: An Architectural History
- ▶ CKAR 500   Architecture: Sustainable Buildings
- ▶ CKAR 605   Architectural Preservation and Conservation: Comprehensive Seminar/Project
- ▶ CKAR 785   Architecture: Building Info Modelling (REVIT)
- ▶ CKDA 610   Digital Architecture: Digital Architectural Modelling
- ▶ CKDA 611   Digital Architecture: Digital Architectural Rendering
- ▶ CKLA 400   Landscape Design: Ecology and Sustainable Landscapes
- ▶ CKLA 410   Landscape Design: Horticultural Science
- ▶ CKPM 202   Project Management: Fundamentals of Project Management
- ▶ CKPM 213   Project Management: Management of Projects in the AEC
- ▶ CKPM 214   Project Management: Project Development and Control

Note to registered certificate program students

Electives

CKDA 602 and CKDA 603 deleted.

CKAR 785, CKDA 610, and CKDA 611 added.

ADVANCED ARCHITECTURE

This advanced certificate will be of particular interest to those actively engaged in the architectural or related fields who are seeking the educational requirements for accreditation as an architectural technologist. It will also be of interest to those holding non-Canadian diplomas who are seeking Canadian qualifications in the architectural field.

Association of Architectural Technologist of Ontario

The Association of Architectural Technologist of Ontario (AATO) recognizes successful completion of the Advanced Certificate in Architecture as fulfilling the academic component of the Probational Technologist membership requirements. For further details, see AATO under Professional Designations at **www.ryerson.ca/ce/deignations**.

Ontario Association for Applied Architectural Sciences

The Ontario Association for Applied Architectural Sciences (OAAAS) recognizes successful completion of the Advanced Certificate in Architecture as fulfilling the academic component of the membership requirements. For further details, see OAAAS under Professional Designations at **www.ryerson.ca/ce/deignations**.

Admission Criteria

It is recommended that applicants have the following:

Successful completion of the Certificate in Architecture or equivalent academic qualifications and work experience.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the advanced certificate. A maximum of three course credits may be granted on the basis of equivalent courses successfully completed at other post-secondary institutions or fully documented work experience.

For further information about the program, please contact the Academic Coordinator, Yew-Thong Leong at 416.979.5000, ext. 6498, or attend a Program Open House.

Required Courses

▶ CCMN 432   Communication: Communication in the Engineering Professions
▶ CKAR 201   Architecture: Mechanical and Electrical Systems for Buildings
▶ CKAR 215   Architecture: Computer-Aided Architectural Drawing
▶ CKAR 601   Architectural Preservation and Conservation: Building Science for Architectural Preservation and Conservation

Electives (select two)

▶ CENT 500   Entrepreneurship: New Venture Startup
▶ CKAR 203   Architecture: Specifications and Contractual Documents
▶ CKAR 204   Architecture: Cost Estimating and Control
▶ CKAR 209   Architecture: Digital Graphics for Architecture and Design
▶ CKAR 210   Architecture: Toronto: An Architectural History
▶ CKAR 500   Architecture: Sustainable Buildings
▶ CKAR 605   Architectural Preservation and Conservation: Comprehensive Seminar/Project
▶ CKAR 785   Architecture: Building Info Modelling (REVIT)
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▶ CKPM 202   Project Management: Fundamentals of Project Management
▶ CKPM 213   Project Management: Management of Projects in the AEC
▶ CKPM 214   Project Management: Project Development and Control

Note to registered certificate program students

Electives

CKDA 602 and CKDA 603 deleted.

CKAR 785, CKDA 610, and CKDA 611 added.

BUSINESS COMMUNICATION

This certificate program will help individuals develop a high level of competence in communication, particularly in business and government organizations. The program focuses on helping students learn how to complete the following:

▶ write letters, memoranda, and reports that are concise, lucid, and effective

▶ plan and deliver informative and persuasive oral presentations without undue stress or stage fright

▶ generate information through library research, database searches, systematic observation, interviews, and surveys

▶ analyze information to yield conclusions that will be understood and recommendations that will be acted upon

▶ use careful organization, headings, and visual aids to produce reports that are impressive to look at and informative to read

▶ interact effectively in small groups and committees

▶ foster an organizational environment which encourages effective communication by all employees

All courses with the exception of CDCM 415 and CDCM 300 are degree program equivalents, and may be taken for credit independently from the certificate.

Admission Criteria

It is recommended that applicants have the following:

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

Certificate Requirements

The successful completion of eight courses (six required courses and two electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate. It is recommended that students begin the program with CCMN 279.

Required Courses

▶ CCMN 279 Communication: Introduction to Professional Communication
▶ CCMN 313 Communication: Organizational Problem Solving and Report Writing
▶ CCMN 314 Communication: Professional Presentations
▶ CCMN 413 Communication: Corporate Communications
▶ CCMN 414 Communication: Interpersonal Communication in Management
▶ CCMN 443 Communication: Contemporary Intercultural Communication

Electives (select two)

▶ CCMN 114 Communication: Short Management Reports
▶ CCMN 315 Communication: Issues in Communication and the Contemporary Workplace
▶ CCMN 447 Communication: Communication and Law
▶ CCMN 448 Communication: Introduction to Visual Communication
▶ CDCM 300 Communication: Communicating in Virtual Environments
▶ CDCM 415 Communication: Promotional Communications
▶ CFRE 502 French: Advanced Business French I

Note to registered certificate program students

Electives

CCMN 114 added.

> **I wanted to improve my work life. I wanted to grow, I wanted to excel. And I knew that in order to do that, I needed to further my education just to give me that competitive edge.**
>
> Peter McGregor,
> Graduate, Certificate in Business Communication

BUSINESS DECISION ANALYSIS

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate program provides an in-depth study of the fundamentals of quantitative management methods. It is designed to develop skills and knowledge necessary for the effective use of the vast amounts of data available today for business analysis and quality control.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (including one in Mathematics), or equivalent, or mature student status with some experience in business.

Certificate Requirements

The successful completion of eight courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Computer Support

Some Quantitative Methods courses rely heavily on computer support. Limited computer facilities are provided by Ryerson. When access to the mainframe is required, students are issued account numbers.

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.

Required Courses

- ► CGMS 200   Global Management: Introduction to Global Management
- ► CITM 102   Information Technology Management: Business Information Systems I
- ► CQMS 102   Quantitative Methods: Business Statistics I
- ► CQMS 202   Quantitative Methods: Business Statistics II

Electives (select four)

Students may select only one of CHTH 102 or CMKT 723.

- ► CCMN 313   Communication: Organizational Problem Solving and Report Writing
- ► CGMS 402   Global Management: Introduction to Managerial Economics
- ► CGMS 422   Global Management: Quality Management
- ► CHTH 102   Hospitality and Tourism: Service and Professionalism
- ► CMKT 500   Marketing: Marketing Research
- ► CMKT 723   Marketing: Marketing in the Service Industry
- ► CQMS 442   Quantitative Methods: Multiple Regression for Business
- ► CQMS 521   Quantitative Methods: Business Optimization

BUSINESS FRENCH AND TRANSLATION

This certificate program is designed mainly for individuals working or intending to work in French in a business environment. The program offers a range of specialized and practical courses permitting students to improve their communication and translation skills, thus adding to their professional qualifications and career opportunities.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/french.**

Admission Criteria

It is recommended that applicants have the following:

Certificate of Proficiency in French from Ryerson, or the completion of CFRE 510 with a minimum grade of C+, or admission by placement assessment and interview.

Certificate Requirements

The Certificate in Business French and Translation is usually granted on completion of six single-term credit courses, with a cumulative grade point average of 1.67 or higher, beginning with CFRE 515 or CFRE 610. A student may be admitted to a higher level by interview, but must successfully complete a minimum of five single-term credit courses, with a cumulative grade point average of 1.67 or higher, to obtain the certificate. A student granted an exemption from taking CFRE 515 or CFRE 610 will need to complete five higher-level courses.

Required Courses (select five)

▶ CFRE 502   French: Advanced Business French I
▶ CFRE 507   French: English-French Translation I
▶ CFRE 602   French: Advanced Business French II
▶ CFRE 607   French: English-French Translation II
▶ CFRE 707   French: Introduction to French-English Translation

Electives (select one)

▶ CFRE 515   French: Introduction to Business French
▶ CFRE 610   French: Effective Writing II
▶ CFRE 706   French: The Life and Times of the French Language

BUSINESS MANAGEMENT

Note: *This certificate program may be completed entirely at a distance. Visit the distance education website at* ***www.ryerson.ca/ce/de*** *for further information.*

This program provides an overall management perspective and all the requirement competencies for those planning a career in business. These programs are ideal for those already employed in business and industry who wish to expand their knowledge of business concepts and practices.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status with experience in business.

Certificate Requirements

The successful completion of eight courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. Up to four course credits may be granted on the basis of courses successfully completed at other institutions.

Required Courses

Students may select one of CACC 100 or CACC 110. Students planning to pursue the Accounting Finance minor must enroll in CACC 110.

Students may select one of CITM 100 or CITM 102. Students planning to pursue the Business Technology major must enroll in CITM 100.

- ▶ CACC 100   Accounting: Introductory Financial Accounting
- ▶ CACC 110   Accounting: Financial Accounting
- ▶ CECN 104   Economics: Introductory Microeconomics
- ▶ CGMS 200   Global Management: Introduction to Global Management
- ▶ CITM 100   Information Technology Management: Foundations of Information Systems
- ▶ CITM 102   Information Technology Management: Business Information Systems I
- ▶ CLAW 122   Law: Business Law
- ▶ CMHR 523   Human Resources: Human Resources Management
- ▶ CMKT 100   Marketing: Principles of Marketing
- ▶ CQMS 102   Quantitative Methods: Business Statistics I

CANADIAN SOCIAL WORK PRACTICE

This certificate program is designed to enhance the employment and academic prospects of internationally educated social work professionals. Offered part-time over a 10-month period (beginning in the Fall term), the program includes courses, mentorship, and work experience. The certificate is open only to internationally educated professionals with social service experience approved through the Internationally Educated Social Work Professionals (IESW) Program admissions process.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/socialwork.**

Admission Criteria

Eligible applicants must have the following:

A social work degree awarded outside of Canada and registration with the Ontario College of Social Workers and Social Service Workers (OCSWSSW) and;

A minimum of one year of paid accumulated employment in the social service field (abroad and/or in Canada)

OR

A social work degree awarded outside of Canada assessed as equivalent to a BSW or an MSW by the Canadian Association of Social Workers (CASW) and;

A minimum of one year of paid accumulated employment in the social service field (abroad and/or in Canada)

OR

A baccalaureate degree awarded outside of Canada (minimum of three years of university study) in the humanities or social sciences, and equivalent to a Canadian degree and;

A minimum of two years' paid accumulated employment in the social service field (abroad and/or in Canada)

In addition, all applicants must have the following:

▶ proof of English proficiency at the required level
▶ proof of Ontario residency
▶ proof of eligibility to work in Canada

Students seeking admission to this program are also required to complete an application form and participate in a pre-assessment. The form can be found on the Internationally Educated Social Work Professionals (IESW) Program website at **www.ryerson.ca/ce/socialwork**.

Certificate Requirements

The successful completion of five courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CVSW 31A/B Canadian Social Work Practice (IESW): Social Work Practice Seminar
▶ CVSW 900 Canadian Social Work Practice (IESW): Foundations of Social Work
▶ CVSW 917 Canadian Social Work Practice (IESW): Special Topics I
▶ CVSW 918 Canadian Social Work Practice (IESW): Special Topics II

Electives (select one)*

▶ CVSW 35A/B Canadian Social Work Practice (IESW): Field Practicum
▶ CVSW 36A/B Canadian Social Work Practice (IESW): Field Practicum for Internationally Educated Social Workers

Note: Students admitted into the program who are already registered with the Ontario College of Social Workers and Social Service Workers (OCSWSSW) or who hold a degree assessed as equivalent by the Canadian Association of Social Workers (CASW) select CVSW 36A/B. Students who do not meet these qualifications must select CVSW 35A/B.

Note to registered certificate program students

Required

CVSW 900 replaces CVSW 130 and CVSW 131.

CVSW 31A/B replaces CSWP 31A/B.

CVSW 918 replaces CSWP 918.

Electives

CVSW 35A/B replaces CSWP 36A/B.

CARIBBEAN STUDIES

This interdisciplinary certificate is designed to enrich students' knowledge of the Caribbean, a key region with increasingly strong socio-cultural ties to Canada. Students will learn about the Caribbean's historic, political, economic, cultural, racial, ethnic, and geographic diversity. This region provides an excellent site for studies of multiculturalism and creolization. Additionally, students will learn about the important Caribbean community in Canada, thereby engaging with issues such as migration, transnationalism, diaspora, racism, and equity.

Academic Coordinator: Dr. Camille Hernandez-Ramdwar, chernand@soc.ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six OAC credits or Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CCRB 100   Caribbean Studies: Introduction to the Caribbean

Electives (select five)

▶ CCRB 500   Caribbean Studies: Families in the Caribbean
▶ CCRB 501   Caribbean Studies: Racism and Caribbean Peoples in Canada
▶ CCRB 502   Caribbean Studies: Cultural Traditions in the Caribbean
▶ CCRB 605   Caribbean Studies: Caribbean Tourism: Impacts and Resistance
▶ CENG 620   English Literature: English Caribbean Literatures and Cultures
▶ CFRS 602   French Studies: French Caribbean Literature and Culture
▶ CHST 222   History: The History of The Caribbean
▶ CSPN 804   Spanish: Introduction to Latin American Culture II
▶ CSPS 502   Spanish Studies: Spanish Caribbean Literature and Culture

COMMUNITY ENGAGEMENT, LEADERSHIP, AND DEVELOPMENT

Note: *Many of the courses in this program are available by distance education; visit the distance education website at* **www.ryerson.ca/ce/de** *for further information.*

This interdisciplinary certificate will be of interest to community practitioners in organizations in the public and nonprofit sectors, across diverse fields of service such as social services, education, labour, health, housing, policing, and transportation. Courses focus on the acquisition of the knowledge and skills required to engage community members effectively in planning, problem solving, and decision-making processes that improve conditions and address issues related to the social, political and/or cultural wellbeing of civic and community life.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/community.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U, including Grade 12 U or M credits, or equivalent, or mature student status with relevant work experience.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

▸ Required Courses: CSWP 934; two or all three of CINP 913, CSWP 935, and/or CSWP 936

▸ Electives: one selection if all four of the Required Courses above have been completed OR two selections if only three of the Required Courses above have been completed

▸ Required Capstone Course: CSWP 937

Required Courses

Students may select two or three of CINP 913, CSWP 935, and/or CSWP 936.

▸ CINP 913   Nonprofit: Leading Through Change
▸ CSWP 934   Social Work: Community Engagement Foundations
▸ CSWP 935   Social Work: Engaging Diverse Communities
▸ CSWP 936   Social Work: Community Engagement Practices
▸ CSWP 937   Social Work: Community Engagement Capstone

Electives (select one or two)

▸ CCMN 313   Communication: Organizational Problem Solving and Report Writing
▸ CCMN 314   Communication: Professional Presentations
▸ CCMN 414   Communication: Interpersonal Communication in Management
▸ CCMN 443   Communication: Contemporary Intercultural Communication

▸ CCRM 322   Criminal Justice and Criminology: Ethics in Criminal Justice
▸ CCRM 402   Criminal Justice and Criminology: Criminal Justice and Social Inequality
▸ CDST 501   Disability Studies: Rethinking Disability
▸ CDST 502   Disability Studies: Disability and the State
▸ CDST 613   Disability Studies: Strategies for Community Building
▸ CFNY 407   Food Security: Community Development and Food Security
▸ CINT 900   Interdisciplinary Studies: Program Planning and Evaluation Strategies
▸ CINT 904   Interdisciplinary Studies: Health Promotion and Community Development
▸ CINT 905   Interdisciplinary Studies: Conflict Resolution in Community Services
▸ CINT 907   Interdisciplinary Studies: Team Work for Community Services
▸ CINT 910   Interdisciplinary Studies: First Nations Issues
▸ CINT 912   Interdisciplinary Studies: Community Development: International Field Experience
▸ CINT 914   Interdisciplinary Studies: Settlement Experiences
▸ CINT 916   Interdisciplinary Studies: Introduction to Fundraising
▸ CINT 917   Interdisciplinary Studies: Community Development
▸ CINT 920   Interdisciplinary Studies: Community Collaborations
▸ CKPM 202   Project Management: Fundamentals of Project Management
▸ CODG 127   Digital Geography: Digital Geography Applications in Community and Social Services
▸ CPHL 334   Philosophy: Ethics in Professional Life
▸ CPLE 745   Planning: Selected Topics in Planning
▸ CPSY 808   Psychology: Community Psychology
▸ CSOC 500   Sociology: Youth and Society
▸ CSOC 609   Sociology: Women and Human Rights
▸ CSOC 705   Sociology: Law and Justice
▸ CSWP 302   Social Work: Social Policy: Welfare and Programs
▸ CSWP 335   Social Work: Power, Resistance and Change
▸ CSWP 402   Social Work: Social Policy and Social Inclusion
▸ CVFS 401   Family Supports: Contemporary Family Issues
▸ CVFS 403   Family Supports: Family Supports Theory and Practice

COMPUTER PROGRAMMING APPLICATIONS

This program is designed for individuals who wish to work as application programmers in software engineering, database technology, and networking or related user support positions. It provides overview systems principles and client/server architecture that will enable individuals to perform system integrations and user help functions. It provides training in the most popular programming languages (Java and C) and the popular operating system (UNIX). The Certificate also permits specialization by students in several application areas: Software Engineering, Database Technology, Networking, Project Management, GIS, and Landscape Design.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six OAC credits or Grade 12 U or M credits, or equivalent, or mature student status, or permission of the academic coordinator.

Certificate Requirements

The certificate will require the successful completion of six courses, with a cumulative grade point average of 1.67 or higher. Up to three course credits may be granted on the basis of courses successfully completed at other post-secondary institutions.

For further information about the program, please contact the Academic Coordinator, Dr. Sadeghian at 416.979.5000, ext. 6961, or attend a Program Open House.

Required Courses

Core Program, Required Courses, All Streams

Students may select only two of CCPS 305, CCPS 393, or CKCS 200.

Students taking the Database Technology Networking or the Software Engineering Stream must take CCPS 305 and CCPS 393.

- ▶ CCPS 109   Computer Science: Computer Science I
- ▶ CCPS 209   Computer Science: Computer Science II
- ▶ CCPS 305   Computer Science: Data Structures and Algorithms
- ▶ CCPS 393   Computer Science: Introduction to C and UNIX
- ▶ CKCS 200   Computer Science: Introduction to Computer Applications

Computational Methods, Required Courses

- ▶ CKCS 210   Computer Science: Mathematical Modeling: Introduction to MATLAB
- ▶ CKCS 220   Computer Science: Mathematical Modeling: Statistical Analysis Utilizing SPSS

Database Technology Stream, Required Courses

- ▶ CCPS 510   Computer Science: Database Systems I
- ▶ CCPS 610   Computer Science: Database Systems II

Geographic Information Systems, Required Courses (select two)

- ▶ CODG 132   Digital Geography: Customizing GIS Software: Applications Programming
- ▶ CODG 136   Digital Geography: Web Mapping
- ▶ CODG 211   Digital Geography: Advanced GIS Programming

Landscape Design (Dynascape), Required Courses

- ▶ CKLA 300   Landscape Design: Landscape Design Communications and Theory
- ▶ CKLA 440   Landscape Design: Digital Landscape Design

Networking Stream, Required Courses

- ▶ CCPS 590   Computer Science: Introduction to Operating Systems
- ▶ CCPS 706   Computer Science: Computer Networks I

Software Engineering Stream, Required Courses

- ▶ CCPS 311   Computer Science: Object Oriented Programming and Design
- ▶ CCPS 613   Computer Science: Human-Computer Interaction

Project Management (MS Project), Required Courses

- ▶ CKPM 202   Project Management: Fundamentals of Project Management
- ▶ CKPM 207   Project Management: Project Management Systems

Supplemental Information

This certificate program provides training in C, C++, and Object-Oriented Programming. It is important to realize that various courses require the successful completion of prerequisite courses. The recommended sequence of courses provides students with the best training and learning experience.

COMPUTER SECURITY AND DIGITAL FORENSICS

Note: *This certificate program may be completed entirely at a distance. Visit the distance education website at* **www.ryerson.ca/ce/de** *for further information.*

This certificate program is designed to develop the core knowledge and functional competencies required to work in the cutting-edge and rapidly evolving fields of computer security and digital forensics. The program will provide students with both the academic background and hands-on experience to effectively oversee white/black box penetration tests, analyze a system to identify vulnerabilities, manage the remediation of security weaknesses, collect digital evidence in a proper forensic manner, and recover lost data after a hardware failure. The legal environment in which computer security and digital forensics practitioners work will also be examined, and students will gain insight into the role and function of expert forensic witnesses. The program encompasses the technicalities of information security and digital forensics, investigative protocols, professional and ethical considerations for practitioners, and relevant court procedures. Graduates should be well positioned to enter into and succeed in this exciting, competitive, and high-demand field.

Computer security and digital forensics specialists play a vital role in the protection of public and private data and the computer systems controlling everything from financial information to critical infrastructure. This certificate will be of interest to individuals just starting their career; career changers seeking to achieve advancement, portability, and longevity goals; managers and end users requiring a more in-depth understanding of computer security and data protection; and long-time practitioners seeking to round out their knowledge and attain a recognized level of academic achievement.

Important Note: Knowledge of TCP/IP is recommended.

Students must have a Windows or Linux computer operating system; the Apple (MAC) operating system is not supported by this course.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/compsec.**

Students interested in preparing to write the Certified Information Systems Security Professional (CISSP) certification exam may wish to explore CXCC 104. Visit **www.ryerson.ca/ce/its** for information about this course.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, including a Grade 12 U course in English and with a minimum grade point average of 70 percent, or equivalent, or mature student status. Note: Knowledge of TCP/IP is recommended.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

- ▶ CKDF 110
- ▶ CKDF 120
- ▶ CKDF 130
- ▶ CKDF 140
- ▶ CZLW 120
- ▶ CKDF 150

Note: Students wishing to take another certificate course concurrently with CZLW 120, or to take two or more certificate courses simultaneously may do so.

Required Courses

Students may only select one of CXCC 110 or CZLW 120.

- ▶ CKDF 110 Computer Security and Digital Forensics: Computer Network Security
- ▶ CKDF 120 Computer Security and Digital Forensics: Computer Cryptography and Digital Steganography
- ▶ CKDF 130 Computer Security and Digital Forensics: Digital Forensics Systems
- ▶ CKDF 140 Computer Security and Digital Forensics: Security Architecture and Design
- ▶ CKDF 150 Computer Security and Digital Forensics: Digital Forensics Investigation
- ▶ CXCC 110 Computer and Network Support: Certified Information Systems Security Professional (CISSP)
- ▶ CZLW 120 Law: Law for Forensics Professionals

Note to registered certificate program students

Required Courses

CXCC 110 added.

CRIMINAL JUSTICE AND CRIMINOLOGY

The Certificate in Criminal Justice and Criminology will provide interdisciplinary knowledge and critical thinking skills with respect to social and criminal justice, including public and private security, policing, the administration of criminal justice, and corrections and community engagement. This program is relevant to administrators and managers in a wide variety of public and private sectors who are seeking career entry, career portability, and career advancement in fields related to criminal justice.

Academic Coordinator: Professor Landau, tlandau@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status with relevant work experience, including policing, corrections, courts, social service agencies, security management services, or regulatory enforcement agencies.

Certificate Requirements

The successful completion of six single-term courses, with a cumulative grade point average of 1.67, is required for the certificate.

Required Courses

▶ CCRM 100   Criminal Justice and Criminology: Introduction to Canadian Criminal Justice
▶ CCRM 102   Criminal Justice and Criminology: Introduction to Criminology

Generalist Stream (select three)

▶ CCRM 200   Criminal Justice and Criminology: Criminal Law
▶ CCRM 202   Criminal Justice and Criminology: Victims and the Criminal Process
▶ CCRM 300   Criminal Justice and Criminology: Policing in Canada
▶ CCRM 304   Criminal Justice and Criminology: Youth Justice in Canada
▶ CCRM 306   Criminal Justice and Criminology: Corrections in Canada
▶ CCRM 308   Criminal Justice and Criminology: Criminal Courts in Canada
▶ CCRM 402   Criminal Justice and Criminology: Criminal Justice and Social Inequality

Electives (select one)

▶ CGEO 581   Geography: GIS, Geographic Data and Mapping
▶ CPHL 449   Philosophy: Philosophy of Punishment
▶ CPHL 612   Philosophy: Philosophy of Law
▶ CPSY 300   Psychology: Psychology and Law
▶ CPSY 602   Psychology: Developmental Psychopathology
▶ CSOC 500   Sociology: Youth and Society
▶ CSOC 502   Sociology: Violence and the Family

Note to registered certificate program students

Electives

CCRM 304 moved to Generalist Stream.

DATA ANALYTICS, BIG DATA, AND PREDICTIVE ANALYTICS

This certificate will provide a strong foundation in analytics, tools, and statistics. It is targeted to individuals who need to use data analytics, big data and predictive analytics to optimize performance at a variety of levels in a wide range of sectors or are employed in a related field such as data warehousing, data management, IT, etc. and need to acquire the necessary credentials for career promotion or other professional enrichment.

Upon successful completion of this certificate, graduates will be prepared to take the Institute for Operations Research and the Management Sciences (INFORMS CAP©) exam to become certified professionals in this burgeoning field. For more information about the CAP© designation, visit Institute for Operations Research and the Management Sciences (INFORMS) at **www.ryerson.ca/ce/deignations**.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/bigdata.**

Admission Criteria

Eligible applicants must have the following:

OSSD with six Grade 12 U credits, including Grade 12 U credits in 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 grade of 70 percent or equivalent academic status

OR

Mature student status with four years of relevant professional experience AND the approval of the academic coordinator.

Note: Applicants should contact Ayse Bener, Academic Coordinator, at ayse.bener@ryerson.ca or attend a Program Open House.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CKCS 110   Computer Science: Data Access and Management
- ▶ CKME 130   Mechanical Engineering: Introduction to Big Data Analytics
- ▶ CKME 132   Mechanical Engineering: Data Analytics: Basic Methods
- ▶ CKME 134   Mechanical Engineering: Big Data Analytics Tools
- ▶ CKME 136   Mechanical Engineering: Data Analytics: Capstone Course
- ▶ CKMT 105   Mathematics: Data Analytics: Advanced Methods

If you're interested in becoming a data scientist, the Certificate in **Data Analytics, Big Data, and Predictive Analytics** will provide relevant, timely, and effective education in the areas of data analytics foundations, basic and advanced analytics methods, and big data analytics tools. Big data implementation and analytics, predictive analytics methods, models, and platforms – and qualified professionals knowledgeable in harnessing them – are in high demand from private and public sector organizations, including from scientific, technology, legal, social, and business.

DEMOGRAPHIC ANALYSIS

Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.

An understanding of demographics and demographic change is of increasing importance for professionals working in a wide variety of occupations in business, government, and not-for-profit sectors. This certificate offers opportunities to take a grounding in the principles and applications of demographic analysis and GIS applications in demography into the study of selected courses, with a concentration on applications used for business, commercial or public sector purposes, immigration and settlement studies and/or the economic impacts of demographic change. The final course will give students an opportunity to engage in "real-world" demographic analysis of issues such as school enrollments and closures, demand and supply of goods and services, retail sales potential, demand and supply of settlement services, social and assisted housing, and traffic in urban areas.

Academic Coordinator: Joe Aversa, certificates@geography.ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (English recommended) with a minimum grade of 70 percent, or equivalent, or mature student status with relevant work experience.

Certificate Requirements

The successful completion of six courses (three required courses and three electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence: CODA 100; CODA 110; Electives (three selections); and CODA 120.

Required Courses

▶ CODA 100   Demographic Analysis: Principles of Demographic Analysis
▶ CODA 110   Demographic Analysis: GIS Applications in Demography
▶ CODA 120   Demographic Analysis: Advanced Demographic Applications

Electives (select three)

▶ CECN 640   Economics: The Economics of Immigration
▶ CGEO 206   Geography: Regions, Nations and the Global Community
▶ CGEO 301   Geography: Marketing Geography
▶ CGEO 419   Geography: Retailing, GIS and Geodemographics
▶ CGEO 505   Geography: Regional Analysis of Canada
▶ CGEO 691   Geography: Canadian Immigration: Patterns and Place
▶ CGEO 803   Geography: Recreation and Tourism Analysis
▶ CINT 913   Interdisciplinary Studies: Issues of Migration
▶ CINT 914   Interdisciplinary Studies: Settlement Experiences
▶ CINT 915   Interdisciplinary Studies: Responses to Migration
▶ CODG 127   Digital Geography: Digital Geography Applications in Community and Social Services
▶ CPLE 725   Planning: Multicultural Cities and Public Policies
▶ CPSY 620   Psychology: Psychology of Immigration
▶ CPSY 941   Psychology: Cross Cultural Psychology
▶ CSOC 474   Sociology: Immigration, Borders and Belonging

DESIGN FOR ARTS AND ENTERTAINMENT

Start your behind-the-scenes career with an interdisciplinary approach to design in the fields of arts, culture, and entertainment. This certificate will help you develop the skills needed to plan and create characters and environments for live stage, film, television, photography, and multimedia installations by exploring a curriculum that is relevant to the current and emerging practice of scenography and design.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (including English), or equivalent, with a minimum average of 60 percent, or mature student status with relevant professional experience.

Students who have no previous drawing experience must successfully complete Drawing Fundamentals (CDID 803).

Certificate Requirements

The successful completion of seven courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

- ▶ Early Terms: CDID 150, CDID 170, CDMP 130
- ▶ Mid Terms: CDMP 122, Cultural Elective, Technology Elective
- ▶ Final Term: CDMP 123

Required Courses

- ▶ CDID 150   Interior Design: Design Theory
- ▶ CDID 170   Design for Arts and Entertainment: Drafting for Entertainment
- ▶ CDMP 122   Film Studies: Production Design for Film and Theatre
- ▶ CDMP 123   Film Studies: Art Direction for Film and Special Events
- ▶ CDMP 130   Design for Arts and Entertainment: History of Arts and Scenography

Cultural Electives (select one)

- ▶ CDFC 106   Fashion Coordination and Styling: Fashion, Culture, and Society
- ▶ CDFP 391   Photography: History of Photography I
- ▶ CDMP 120   Film Studies: Film History
- ▶ CENG 101   English Literature: Laughter and Tears: Comedy and Tragedy
- ▶ CMPC 203   Combined Media: Art in the Modern World
- ▶ CMUS 110   Music: Music and Film

Technology Electives (select one)

- ▶ CCMN 314   Communication: Professional Presentations
- ▶ CDFA 104   Fashion: Fashion Drawing I
- ▶ CDID 552   Lighting Design: Entertainment Lighting Design
- ▶ CDMP 114   Film Studies: Post-Production Sound
- ▶ CFPN 531   Film Studies: Cinematography and Lighting Design I

DESIGN MANAGEMENT

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

The design industry generates billions of dollars in many sectors of the Canadian economy including manufacturing, construction, materials supply, transportation, retail, marketing, and consulting services. Graduates will be equipped to enter or progress within the growing numbers of organizations where design is considered to have strategic importance.

This multidisciplinary certificate program will provide graduates with the knowledge and skills required to be employed in those organizations engaged in the design field. It is aimed at those who may already be working in the design or business fields and/or those who have some design or business post-secondary education. It serves many different disciplines dedicated to design, including fashion, interior, industrial, graphic, landscape, architectural, engineering, and business interests.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent. Work experience and/or post-secondary education related to design or business is desirable.

Certificate Requirements

The successful completion of eight courses (three required courses and five electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

- CDDM 101
- CDDM 102
- Electives (five selections)
- CDDM 103

Required Courses

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

Electives (select five)

- CCMN 314   Communication: Professional Presentations
- CDDM 104   Design Management: Design Awareness I
- CDDM 106   Design Management: Design Research
- CDGA 651   Graphic Communications: Graphic Communications Processes
- CDID 150   Interior Design: Design Theory
- CENT 500   Entrepreneurship: New Venture Startup
- CITM 100   Information Technology Management: Foundations of Information Systems
- CKPM 202   Project Management: Fundamentals of Project Management
- CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills
- CMKT 100   Marketing: Principles of Marketing

DISASTER AND EMERGENCY MANAGEMENT

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate, offered both in class and online, is designed for individuals seeking professional development in disaster management. With the increasing number of natural disasters and emergencies around the world, graduates will be equipped with the knowledge required to effectively manage a crisis.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/disaster.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U, including Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

Students may select only one of CDCM 125, CKDM 100, CKDM 105, CKDM 110, or CKDM 115.

- ▶ CDCM 125 Communication: Disaster and Emergency Incident Communications
- ▶ CKDM 100 Disaster Emergency Management: Principles and Practices of Emergency Management
- ▶ CKDM 105 Disaster Emergency Management: Project Management in Disaster Recovery
- ▶ CKDM 110 Disaster Emergency Management: Law of Disaster and Emergency Management
- ▶ CKDM 115 Disaster Emergency Management: Intl Policies and Disaster Coor
- ▶ CKDM 120 Disaster Emergency Management: Emergency Operations and Incident Management
- ▶ CKDM 130 Disaster Emergency Management: Critical Analysis of Operations
- ▶ CKDM 140 Disaster Emergency Management: Emergency Management Planning
- ▶ CKDM 150 Disaster Emergency Management: Risk Management
- ▶ CKDM 160 Disaster Emergency Management: Emerging Issues

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:

Professional Development Award: Survival in Urban Disasters and Emergencies requires completion of any three of the following courses: CKDM 100, CKDM 120, CKDM 130, CKDM 140, CKDM 150, and/or CKDM 160.

See page 121 for more information.

ECONOMICS

The Certificate in Economics is designed for those without a post-secondary education in economics who wish to acquire knowledge of the discipline. A sound knowledge of economic principles is an important asset for people in a variety of fields of endeavour. The program will be of particular interest to those employed in business or government, and to secondary school teachers of economics.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/economics.**

Academic Coordinator: Michael Jolly, mjolly@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U (including Grade 12 U credits in English and Mathematics) or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ► CECN 104   Economics: Introductory Microeconomics
- ► CECN 204   Economics: Introductory Macroeconomics

Electives (select four)

Students select a total of four electives (one of which must be CECN 301 or CECN 504) from one or more of the seven streams. Please consult the course descriptions for prerequisites.

Core Economics Stream

- ► CECN 301   Economics: Intermediate Macroeconomics I
- ► CECN 504   Economics: Intermediate Microeconomics I
- ► CECN 600   Economics: Intermediate Macroeconomics II
- ► CECN 700   Economics: Intermediate Microeconomics II

International Economics Stream

- ► CECN 301   Economics: Intermediate Macroeconomics I
- ► CECN 504   Economics: Intermediate Microeconomics I
- ► CECN 606   Economics: International Monetary Economics
- ► CECN 700   Economics: Intermediate Microeconomics II

Macroeconomics Stream

Students may select only one of CECN 506, CECN 606, or CECN 808.

- ► CECN 301   Economics: Intermediate Macroeconomics I
- ► CECN 506   Economics: Money and Banking
- ► CECN 600   Economics: Intermediate Macroeconomics II
- ► CECN 606   Economics: International Monetary Economics
- ► CECN 808   Economics: Economic Growth and Technological Change
- ► CECN 815   Economics: Advanced Macroeconomics

Microeconomics Stream

Students may select only one of CECN 501, CECN 601, or CECN 614.

- ► CECN 501   Economics: Industrial Organization
- ► CECN 504   Economics: Intermediate Microeconomics I
- ► CECN 601   Economics: The Economics of Information
- ► CECN 614   Economics: An Introduction to Game Theory
- ► CECN 700   Economics: Intermediate Microeconomics II
- ► CECN 715   Economics: Advanced Microeconomics

Environmental Economics Stream

- ► CECN 301   Economics: Intermediate Macroeconomics I
- ► CECN 502   Economics: Economics of Natural Resources
- ► CECN 510   Economics: Environmental Economics
- ► CECN 700   Economics: Intermediate Microeconomics II

Applied Economics Stream

- ► CECN 301   Economics: Intermediate Macroeconomics I
- ► CECN 605   Economics: Labour Economics
- ► CECN 627   Economics: Econometrics I
- ► CECN 702   Economics: Econometrics II

Economic Policy Stream

- ► CECN 301   Economics: Intermediate Macroeconomics I
- ► CECN 321   Economics: Introduction to Law and Economics
- ► CECN 703   Economics: Public Sector Economics
- ► CECN 803   Economics: Canadian Tax Policy

Note: CECN 104 and CECN 204 give the student access to all the upper-level liberal studies courses in Economics as well as to the upper-level professionally related courses. CECN 110 and CECN 210 are not allowed as substitutes for CECN 104 and CECN 204 for Liberal Studies credit.

Note to registered certificate program students

Effective Fall 2014, the Certificate in Economics has been revised. Students who were formally registered in the certificate prior to July 1, 2014, must complete the requirements in effect at the time of their registration.

ECONOMICS AND FINANCE

Note: *Many of the courses in this program are available by distance education; visit the distance education website at* **www.ryerson.ca/ce/de** *for further information.*

This certificate will help students to qualify as Chartered Financial Analysts, Certified Financial Analysts, and/or Certified Financial Planners, to name only three examples of professional designations. The program will also help to prepare students for the Canadian Securities Examination.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/economics.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U, including Grade 12 U credits in English and Mathematics (one of which must be Advanced Functions, Calculus and Vectors, or Data Management), or M credits with a minimum grade of 70 percent; or equivalent; or mature student status. As well, student must have completed the following courses or equivalents:

- ▶ CACC 110   Accounting: Financial Accounting for Accounting Majors
- ▶ CECN 189   Economics: Introduction to Mathematics for Economics

Certificate Requirements

The successful completion of eight courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CECN 104   Economics: Introductory Microeconomics
- ▶ CECN 129   Economics: Statistics for Economics I
- ▶ CECN 204   Economics: Introductory Macroeconomics
- ▶ CFIN 300   Finance: Managerial Finance I
- ▶ CFIN 401   Finance: Managerial Finance II
- ▶ CFIN 501   Finance: Investment Analysis

Electives (select two)

Students are allowed to choose only one of CECN 721 or CFIN 621 as their electives.

- ▶ CECN 301   Economics: Intermediate Macroeconomics I
- ▶ CECN 504   Economics: Intermediate Microeconomics I
- ▶ CECN 506   Economics: Money and Banking
- ▶ CECN 606   Economics: International Monetary Economics
- ▶ CECN 703   Economics: Public Sector Economics
- ▶ CECN 721   Economics: International Financial Markets
- ▶ CECN 803   Economics: Canadian Tax Policy
- ▶ CFIN 502   Finance: Personal Financial Planning
- ▶ CFIN 510   Finance: Small Business Finance
- ▶ CFIN 512   Finance: Risk Management and Insurance
- ▶ CFIN 601   Finance: Derivatives
- ▶ CFIN 612   Finance: Retirement and Estate Planning
- ▶ CFIN 621   Finance: International Finance

ENERGY MANAGEMENT AND INNOVATION

This certificate program provides adult learners with an opportunity to acquire a level of knowledge and expertise that will permit them to contribute effectively to energy management, conservation, sustainability, and public policy governing this regulated sector; and to energy innovation, entrepreneurship, and the challenges and opportunities for developing new energy technologies and business enterprises. This program has been developed in cooperation with Ryerson's Centre for Urban Energy.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/energy.**

Academic Coordinator: Dr. Bala Vankatesh, bala@ryerson.ca (copying Anne-Marie Brinsmead, Program Director, at a2brinsm@ryerson.ca)

Admission Criteria

It is recommended that applicants have the following:

Mature student status and evidence of relevant college or university level coursework, or equivalent

OR

Mature student status together with relevant industrial or professional experience

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence: CKEI 100; CKEI 110; CKEI 120; CKEI 130; Electives (two selections)

Required Courses

▶ CKEI 100   Energy Management: Energy Innovation and Entrepreneurship
▶ CKEI 110   Energy Management: Energy Conservation: Emerging Trends
▶ CKEI 120   Energy Management: Energy and the Public Policy Debate in Canada
▶ CKEI 130   Energy Management: An Introduction to Smart Grid

Electives (select two)

▶ CECN 510   Economics: Environmental Economics
▶ CKEI 140   Energy Management: Current Topics in Energy Management and Innovation
▶ CKES 190   Environmental Engineering Science: Renewable Energy and Green Technology
▶ CKPM 202   Project Management: Fundamentals of Project Management
▶ CKSS 100   Sustainability: Fundamentals in Sustainability I

Note to registered certificate program students

Effective Fall 2014, the Certificate in Energy Management and Innovation has been revised. Students who were formally registered in the certificate prior to July 1, 2014, must complete the requirements in effect at the time of their registration.

Required Courses

CKEI 140, CKES 190, and CKPM 202 moved to Electives.

Electives

CKEI 110, CKEI 120, and CKEI 130 moved to Required Courses.

> **My experience in the Certificate in Energy Management and Innovation highlighted our future energy options, a better understanding of how markets perform, and a focus on innovation and energy entrepreneurship tied to skills required to be a better manager or business owner.**
>
> Patrick McMahon
> Learner, Energy Management and Innovation

ENGLISH AS A SECOND/ADDITIONAL LANGUAGE

Note: *Many of the courses in this program are available by distance education; visit the distance education website at* **www.ryerson.ca/ce/de** *for further information.*

The Certificate in English as a Second/Additional Language offers a range of general and specialized English courses for professional, vocational, and academic purposes.

It is designed for people who wish to increase their career opportunities and to add to their qualifications. The certificate offers courses at the intermediate and advanced levels and is open to people whose first language is not English.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/esl.**

Individual Courses

Individual courses are designed to develop proficiency in English. Most courses involve readings from a selection of texts, as well as practice for improvement in spoken and written English. Small classes provide maximum individual attention. Students who do not wish to complete the certificate may take individual courses from the program for personal or professional need. An online placement test or interview to determine the appropriate level of study for each student is required for admission to these courses.

Admission Criteria

Admission to the certificate program is by written placement assessment and oral interview during which students' fluency, listening comprehension, communication strategies, and writing will be assessed. The course admission/placement assessment is necessary to determine the appropriate level of study for each student. Assessment will take place during Interview/Placement Assessment Nights. Students may also complete an online placement test for admission.

Certificate Requirements

The successful completion of six credits, earned in one of the following ways:

▶ three courses from the First Level and three from the Second Level

▶ the completion of any combination of courses equaling six certificate credits as recommended and approved by the ESL/EAL program director

If at the commencement of the certificate the student is ranked at the Second Level in the placement assessment, the successful completion of four single-term courses from the Second Level is required for the certificate. Students must achieve a cumulative grade point average of 1.67 or higher to graduate.

First Level

(Three courses required for students entering the Certificate at the First Level. For further information, see Certificate Requirements.)

▶ COEN 204   English as a Second/Additional Language: Intermediate Grammar

▶ COEN 210   English as a Second/Additional Language: Reading/Listening Test Prep I

▶ COEN 220   English as a Second/Additional Language: Writing/Speaking Test Prep I

▶ COEN 294   English as a Second/Additional Language: Writing Accurately and Clearly

▶ COEN 295   English as a Second/Additional Language: Critical Reading and Effective Writing

▶ COEN 299   English as a Second/Additional Language: Effective Conversation Strategies

▶ COEN 301   English as a Second/Additional Language: Pronunciation

Second Level

(Three courses required. Students ranked above the First Level in the placement assessment will require the completion of four Second Level courses.)

▶ CLNG 111   English as a Second/Additional Language: Language and Identity

▶ CLNG 112   English as a Second/Additional Language: Language: Spoken and Written

▶ CLNG 113   English as a Second/Additional Language: Language and Public Life

▶ COEN 296   English as a Second/Additional Language: Writing for Professionals

▶ COEN 298   English as a Second/Additional Language: Scientific and Technical Writing

▶ COEN 304   English as a Second/Additional Language: Advanced Grammar

▶ COEN 306   English as a Second/Additional Language: ESL/EAL: Oral Communication for Professionals

▶ COEN 311   English as a Second/Additional Language: Integrated Skills I

▶ COEN 312   English as a Second/Additional Language: Integrated Skills II

▶ COEN 410   English as a Second/Additional Language: Reading/Listening Test Prep II

▶ COEN 420   English as a Second/Additional Language: Writing/Speaking Test Prep II

ENGLISH LITERATURE AND POPULAR CULTURE

This certificate in designed for students who appreciate the important ways in which English literature and culture enhance the quality of their lives and careers. Designed to allow students to tailor their studies to their own interests and aspirations, the program offers a dynamic grounding in the study of literature, writing, media, and popular culture. Graduates will have a strong knowledge base in contemporary and historical literature and culture that will prove useful in the experience, analysis, and production of cultural works.

Academic Coordinator: Bill Emery, bemery@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, including a credit in English with a minimum grade of 70 percent; or equivalent; or mature student status.

Certificate Requirements

The successful completion of six courses (two required courses and four electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CENG 108 English Literature: Introduction to Fiction
- ▶ CENG 208 English Literature: Introduction to Non-Fiction

Elective Streams (select a total of four courses)

Literature and Entertainment Stream (select a maximum of four)

- ▶ CENG 112 English Literature: Zap, Pow, Bang Pop Lit
- ▶ CENG 222 English Literature: Fairy Tales and Fantasies
- ▶ CENG 503 English Literature: Science Fiction
- ▶ CENG 510 English Literature: Gothic Horror
- ▶ CENG 705 English Literature: Reading Visual Cultures
- ▶ CENG 706 English Literature: Shakespeare and Performance
- ▶ CENG 888 English Literature: Televisual Texts and Contexts

Reading/Writing Culture Stream (select a maximum of four)

- ▶ CENG 200 English Literature: Writing as a Cultural Act
- ▶ CENG 505 English Writing Development: Creative Writing
- ▶ CENG 511 English Literature: The Art of Writing Life
- ▶ CENG 520 English Literature: The Language of Persuasion
- ▶ CENG 610 English Literature: The Language of Love, Sex and Gender
- ▶ CENG 720 English Literature: Principles of Persuasion
- ▶ CENG 921 English Literature: Narrative in a Digital Age

ENTERPRISE ARCHITECTURE AND INFRASTRUCTURE MANAGEMENT

Note: *Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

The telecommunications profession in Canada has grown rapidly. With the introduction of competition to the marketplace and the growing need to move voice, image, and data, the demand for qualified professionals in this area is steadily increasing. Graduates of this certificate will have the skills required for positions involving the use, analysis, design, implementation, and management of telecommunications. The certificate will also provide a perspective on the role and function of information systems.

Courses may be credited toward the Ryerson Bachelor of Commerce (Information Technology Management) degree program should candidates wish to continue their education after attaining this certificate. Up to three course credits may be granted on the basis of courses successfully completed at other institutions. All certificate courses are the equivalents of degree credit courses currently offered by the School of Information Technology Management; however, please note that upon successful admission to the program, courses will be assessed for currency and transferability on a course-by-course basis.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/itm**.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status, and basic computer literacy and knowledge of the functions of business.

Certificate Requirements

The successful completion of six single-term courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. Good oral and written communications skills are essential for success in the program.

Required Courses

- ▶ CITM 207   Information Technology Management: Computer-Enabled Problem Solving
- ▶ CITM 301   Information Technology Management: IT Infrastructure
- ▶ CITM 305   Information Technology Management: Systems Analysis and Design
- ▶ CITM 600   Information Technology Management: Data Communications Network Design

Electives (select two)

- ▶ CITM 315   Information Technology Management: Network Administration
- ▶ CITM 513   Information Technology Management: Adv Infrastructure Deployment and Management
- ▶ CITM 704   Information Technology Management: Wireless and Mobile Communications
- ▶ CITM 732   Information Technology Management: Switching and Routing Laboratory
- ▶ CITM 750   Information Technology Management: IS Project Management
- ▶ CITM 820   Information Technology Management: Information Systems Security and Privacy

ENTREPRENEURSHIP AND MULTICULTURALISM

Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.

Entrepreneurs are innovative people who take on the task of turning an unmet opportunity into a business reality. This certificate is designed to give both long-established and new Canadians the tools and knowledge needed to launch and run a Canadian business within a multicultural context. The four required courses build skills in ideation, opportunity evaluation, business intelligence, and venture planning within a multicultural context. Additional electives allow students to enhance their skills in areas that suit their specific needs (e.g., accounting or communication).

For detailed certificate and program information, please visit **www.ryerson.ca/ce/entrepreneurship**.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six OAC credits or Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence: CZEN 300; CMKT 300; CENT 526; Electives (two selections); and CZEN 500.

Required Courses

- ▶ CENT 526   Entrepreneurship: Entrepreneurial Behaviour and Strategy
- ▶ CMKT 300   Marketing: Marketing Metrics and Analysis
- ▶ CZEN 300   Entrepreneurship: Multicultural Opportunities
- ▶ CZEN 500   Entrepreneurship: Multicultural Venture Startups

Electives (select two)

- ▶ CACC 100   Accounting: Introductory Financial Accounting
- ▶ CCMN 279   Communication: Introduction to Professional Communication
- ▶ CCMN 314   Communication: Professional Presentations
- ▶ CDCE 310   Workplace Communication in Canada (WCC): Formal and Informal Communication in the Workplace
- ▶ CDCE 320   Workplace Communication in Canada (WCC): Advanced Customer Focused Applications
- ▶ CDCE 330   Workplace Communication in Canada (WCC): Effective Persuasion and Public Speaking
- ▶ CGMS 200   Global Management: Introduction to Global Management
- ▶ CINP 901   Nonprofit: Developing Effective Organizations
- ▶ CRMG 200   Retail Management: Intro to Retail and Services Management
- ▶ CRMG 902   Retail Management: Franchising
- ▶ CRMG 910   Retail Management: Multi-Channel Retailing

Note to registered certificate program students

Required Courses

CMKT 300 replaces CMKT 310.

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed four courses as follows:

Professional Development Award: Entrepreneurship and Multiculturalism requires completion of CENT 526, CMKT 300, CZEN 300, and CZEN 500.

ENVIRONMENTAL ENGINEERING SCIENCE

This multidisciplinary program provides graduates with the broad knowledge base and wide range of skills they require as professionals in the environmental field. Students receive a grounding in air, water, and soil processes and contamination, biotechnology, instrumentation, and experiment design. The program also requires the student to develop proficiency in environmental management. Expertise is drawn from a number of degree programs including Applied Chemistry and Biology, Chemical Engineering, Civil Engineering, Mechanical Engineering, and Environmental Health.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/enviroengineer**. For related career information, see Industry Overview.

Admission Criteria

Eligible applicants must have the following:

Undergraduate degree in one of the following programs: Science (e.g., Chemistry, Biology), Civil Engineering, Chemical Engineering, Mechanical Engineering, Mining, Metallurgical Science; or undergraduate degree in other programs (i.e., environment related); individuals without a degree but with an equivalent level of education and experience in environmental science or engineering may be admitted subject to the approval of the academic coordinator. Knowledge of basic chemistry at university level is required.

Admissions Process

Applicants must complete an application for pre-approval and be accepted before entering the program. Application forms and general information are available from The G. Raymond Chang School of Continuing Education office, or online at **www.ryerson.ca/ce** at the Forms and Documents section, or call 416.979.5035, prior to the appropriate application deadlines (see Important Dates).

Applicants wishing to enroll in the program must provide evidence of prior academic accomplishments or relevant work-related experience. The academic coordinator reserves the right to limit entry into the program. The coordinator may also request that applicants reinforce certain fundamental subjects, such as math and chemistry, prior to admission in the program.

If you need further information on the program requirements please attend a Program Open House, or you may contact the Academic Coordinator, Dr.Vadim Bostan at vbostan@ryerson.ca. The applications should be sent to The G. Raymond Chang School of Continuing Education, 297 Victoria Street.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CKES 120   Environmental Engineering Science: Environmental and Atmospheric Processes
- ▶ CKES 210   Environmental Engineering Science: Applied Environmental Analysis
- ▶ CKES 220   Environmental Engineering Science: Environmental Law and Practice

Electives (select three)

- ▶ CKES 102   Environmental Engineering Science: Hydrogeology Soil and Ground Water Science
- ▶ CKES 110   Environmental Engineering Science: Environmental Biotechnology Waste Treatment and Remediation
- ▶ CKES 121   Environmental Engineering Science: Toxicology and Risk Assessment
- ▶ CKES 130   Environmental Engineering Science: Applied Ecology
- ▶ CKES 160   Environmental Engineering Science: Waste Management
- ▶ CKES 170   Environmental Engineering Science: Water Treatment
- ▶ CKES 180   Environmental Engineering Science: Site Assessment
- ▶ CKES 190   Environmental Engineering Science: Renewable Energy and Green Technology

Note to registered certificate program students

This certificate has been revised effective July 1, 2013. Students who formally registered in the certificate prior to July 1, 2013, must complete the program requirements in effect at the time they registered.

Required

CKES 102 moved to electives, thereby reducing the number of Required Courses to three and increasing the number of electives to three.

ETHICS

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

The Certificate in Ethics is designed to provide relevant, university-level education for individuals whose career paths require an ability to apply the principles of ethics in private and public sector organizations.

Individuals with knowledge of and practice in applied ethics have competencies to develop personal and organizational codes of ethics; to recognize, counsel, and train in analyzing and resolving ethical dilemmas; and to defend and monitor ethical decision making in their organizations.

Academic Coordinator: Alex Wellington, awelling@philosophy.ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six courses (one required course and five electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence: Electives – Group A (two selections); Electives – Group B (three selections); and COPH 200.

Required Courses

▶ COPH 200   Humanities: Ethics Capstone Course

Electives – Group A (select two)

Business and Organizations Stream

▶ CPHL 307   Philosophy: Business Ethics
▶ CPHL 444   Philosophy: Ethics in Health Services Management

Environment Stream

▶ CPHL 500   Philosophy: Philosophy of the Natural Environment
▶ CPHL 525   Philosophy: Environmental Ethics

Ethical Theory Stream

▶ CPHL 334   Philosophy: Ethics in Professional Life
▶ CPHL 503   Philosophy: Ancient and Modern Ethics
▶ CPHL 603   Philosophy: Modern and Contemporary Ethics

Health Stream

▶ CPHL 302   Philosophy: Ethics and Health Care
▶ CPHL 444   Philosophy: Ethics in Health Services Management
▶ CPHL 509   Philosophy: Bioethics

Human Rights and Administrative Justice Stream

▶ CPHL 400   Philosophy: Human Rights and Justice
▶ CPHL 614   Philosophy: Philosophy of Human Rights

Law and Juriprudence Stream

▶ CPHL 449   Philosophy: Philosophy of Punishment
▶ CPHL 612   Philosophy: Philosophy of Law

Media and Culture Stream

▶ CPHL 530   Philosophy: Media Ethics

Electives – Group B (select three not previously taken in Electives– Group A)

Business and Organizations Stream

▶ CGMS 802   Global Management: Ethics and Regulation of Int'l Bus
▶ CINT 905   Interdisciplinary Studies: Conflict Resolution in Community Services
▶ CITM 407   Information Technology Management: Info Tech, Ethics and Society
▶ CLAW 122   Law: Business Law
▶ CLAW 525   Law: The Law of the Marketplace
▶ CLAW 529   Law: Employment and Labour Law
▶ CLAW 603   Law: Advanced Business Law
▶ CMHR 600   Human Resources: Diversity and Inclusion in the Workplace
▶ CMHR 640   Human Resources: Leadership
▶ CODG 130   Digital Geography: Legal and Ethical Issues in GIS and Digital Data
▶ CPHL 307   Philosophy: Business Ethics
▶ CPHL 444   Philosophy: Ethics in Health Services Management

Environment Stream

▶ CECN 502   Economics: Economics of Natural Resources
▶ CECN 510   Economics: Environmental Economics
▶ CPHL 500   Philosophy: Philosophy of the Natural Environment
▶ CPHL 525   Philosophy: Environmental Ethics
▶ CPSY 518   Psychology: Environmental Psychology

Ethical Theory Stream

- ► CPHL 334   Philosophy: Ethics in Professional Life
- ► CPHL 503   Philosophy: Ancient and Modern Ethics
- ► CPHL 603   Philosophy: Modern and Contemporary Ethics

Health Stream

- ► CPHL 302   Philosophy: Ethics and Health Care
- ► CPHL 444   Philosophy: Ethics in Health Services Management
- ► CPHL 509   Philosophy: Bioethics
- ► CPHL 602   Philosophy: Health Care and Distributive Justice
- ► CPSY 124   Psychology: Social Psychology
- ► CPSY 706   Psychology: Personal Growth and Positive Psychology

Human Rights and Administrative Justice Stream

- ► CINT 905   Interdisciplinary Studies: Conflict Resolution in Community Services
- ► CPHL 400   Philosophy: Human Rights and Justice
- ► CPHL 507   Philosophy: Ethics and Disability
- ► CPHL 614   Philosophy: Philosophy of Human Rights
- ► CPOG 424   Politics and Public Administration: Human Rights and Global Politics
- ► CPPA 125   Politics and Public Administration: Rights, Equity and the State
- ► CPPA 301   Politics and Public Administration: Administrative Law
- ► CSOC 609   Sociology: Women and Human Rights
- ► CSOC 705   Sociology: Law and Justice

Law and Juriprudence Stream

- ► CCRM 200   Criminal Justice and Criminology: Criminal Law
- ► CCRM 322   Criminal Justice and Criminology: Ethics in Criminal Justice
- ► CECN 321   Economics: Introduction to Law and Economics
- ► CLAW 122   Law: Business Law
- ► CLAW 525   Law: The Law of the Marketplace
- ► CLAW 529   Law: Employment and Labour Law
- ► CLAW 603   Law: Advanced Business Law
- ► CODG 130   Digital Geography: Legal and Ethical Issues in GIS and Digital Data
- ► CPHL 449   Philosophy: Philosophy of Punishment
- ► CPHL 612   Philosophy: Philosophy of Law
- ► CPHL 921   Philosophy: Intellectual Property and Technology
- ► CPPA 301   Politics and Public Administration: Administrative Law
- ► CSOC 705   Sociology: Law and Justice

Media and Culture Stream

- ► CENG 413   English Literature: Colonial and Postcolonial Literatures
- ► CENG 520   English Literature: The Language of Persuasion
- ► CENG 621   English Literature: Women's Texts, Global Contexts
- ► CENG 720   English Literature: Principles of Persuasion
- ► CHST 602   History: The History of Modern Propaganda
- ► CPHL 401   Philosophy: Philosophy and Mass Culture
- ► CPHL 530   Philosophy: Media Ethics
- ► CPHL 621   Philosophy: Beyond the Western Academic Tradition

Note to registered certificate program students

Required Courses

CPHL 334 moved to Ethical Theory Stream in both Elective Groups, thereby reducing the number of Required Courses to one.

Electives – Group A

Electives have been increased to two.

FACILITY MANAGEMENT

Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.

The facility manager is responsible for the integration of the workplace with the people and work of the organization. This program will provide knowledge and analytical skills for those pursuing careers in this profession. It will be of interest to individuals at various stages of their career:

▶ those who are being prepared by an organization to assume a role in facility management

▶ those who are newly appointed to a facility management department

▶ those who wish to upgrade their credentials within the facility management department or to implement a career change

The design of the program is based on the guidelines for professional education developed by the International Facility Management Association.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/facilitymgt.**

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree, or mature student status with related professional experience and education.

Certificate Requirements

The successful completion of eight courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CDFM 102   Facility Management: Facility Management Fundamentals
▶ CDFM 103   Facility Management: Project Planning, Design, and Management
▶ CDFM 104   Facility Management: Building Operations and Maintenance

Electives – Group A (select one)

▶ CCMN 114   Communication: Short Management Reports
▶ CCMN 314   Communication: Professional Presentations

Electives – Group B (select four)

Many of these electives have prerequisites which must be met by the student unless waived by the subject coordinator. Students may be allowed to substitute other appropriate elective courses with permission of the academic coordinator.

▶ CACC 100   Accounting: Introductory Financial Accounting
▶ CDFM 105   Facility Management: Space Planning and Management
▶ CDFM 203   Facility Management: Real Estate Planning and Development
▶ CDID 501   Lighting Design: Lighting Fundamentals
▶ CDID 504   Lighting Design: Lighting Energy Management
▶ CGMS 200   Global Management: Introduction to Global Management
▶ CGMS 401   Global Management: Operations Management
▶ CKAR 500   Architecture: Sustainable Buildings
▶ CKPM 202   Project Management: Fundamentals of Project Management
▶ CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills
▶ CMKT 504   Marketing: Effective Persuasion
▶ COHS 208   Occupational Health: Occupational Health and Safety Law
▶ COHS 718   Occupational Health: Systems Management I

FAMILY SUPPORTS

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate provides individuals with skills and knowledge to support diverse families living in a rapidly changing and complex society. It will appeal to individuals who work with families in a wide range of settings, such as family resource programs, Ontario Early Years Centres, Best Start programs, community agencies, schools, religious institutions, and the workplace. Individuals who provide paid or volunteer service in family resource and support programs will have the opportunity to integrate their current practice with theory related to family supports, develop knowledge and skills needed for exemplary practice, and explore issues of diversity and inclusion as they work collaboratively to develop high quality innovative programs.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/familysupports.**

Academic Coordinator: Catherine Moher, cmoher@ryerson.ca, 416.979.5000, ext. 2535.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status. Admission by interview.

Admission Interview

Admission interviews will be conducted either in person, by phone, or at a Program Open House. For further information, contact The G. Raymond Chang School of Continuing Education office at **ce@ryerson.ca** or 416.979.5035.

Certificate Requirements

The successful completion of six single-term courses or equivalent, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Credits for Related Diplomas

To recognize the significance of the Early Childhood Diploma and other related Diplomas in Community Services sector within the framework of the Certificate in Family Supports, students who have completed an ECE and/or their related diplomas from an accredited academic institution within the past 10 years may be granted up to two elective credits toward the Certificate in Family Supports. In order to receive the appropriate credits, students must formally apply for Transfer Credits and must be registered in the certificate program prior to application. Students who have additional questions are encouraged to contact the academic coordinator.

Required Courses

▶ CINT 900   Interdisciplinary Studies: Program Planning and Evaluation Strategies
▶ CVFS 401   Family Supports: Contemporary Family Issues
▶ CVFS 403   Family Supports: Family Supports Theory and Practice

Electives – Group A (select two)

▶ CINT 917   Interdisciplinary Studies: Community Development
▶ CINT 920   Interdisciplinary Studies: Community Collaborations
▶ CVFS 400   Family Supports: Group Dynamics and Interpersonal Communication
▶ CVFS 402   Family Supports: Families Power and Social Change
▶ CVFS 406   Family Supports: Guiding Children's Development
▶ CVFS 408   Family Supports: Practicum/Project

Electives – Group B (select one)

Students will choose one course from the following:

1. An additional course from Elective Group A above, excluding the two courses already completed.

2. One Interdisciplinary Studies (CINT) course.

3. One Nonprofit and Voluntary Sector Management (CINP) course.

4. With the submission of an approved Course Substitution/ Directive Form signed by the academic coordinator, one course from Psychology, Sociology, Philosophy, or Politics courses, or equivalent.

5. With the submission of an approved Course Substitution/ Directive Form signed by the academic coordinator, one professional course from Early Childhood Education, Nutrition, Child and Youth Care, Social Work, or Gerontology, or equivalent.

FASHION COORDINATION AND STYLING

This certificate is designed to prepare professionally trained students for a career as fashion coordination and styling consultants. It will provide graduates with a solid knowledge foundation, with creative and technical expertise, and with sound problem-solving abilities. The program offers a stimulating study of art, design, and costume history and technology, which will prepare the graduate for career progression within this specialist field of fashion. The fashion industry has far-reaching influence and generates billions of dollars in many sectors of the Canadian economy. There are many avenues of opportunity for graduates in areas such as video and movie production, special events, trade shows and promotional exhibits, retail, television, magazines, corporate and/or individual consultation, and business ownership.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status with relevant professional experience.

Certificate Requirements

The successful completion of eight courses (four required courses and four electives), with a grade point average of 1.67 or higher, is required for completion of the certificate.

Required Courses

- ▶ CDFC 101 Fashion Coordination and Styling: Fashion Coordination
- ▶ CDFC 102 Fashion Coordination and Styling: Fashion Styling
- ▶ CDFC 103 Fashion Coordination and Styling: Design Fundamentals in Fashion
- ▶ CDFC 104 Fashion Coordination and Styling: Creating the Image

Electives (select four)

- ▶ CCMN 373 Communication: Fashion Communication: Professional Approaches
- ▶ CDFA 104 Fashion: Fashion Drawing I
- ▶ CDFA 110 Fashion: Fashion Drawing II
- ▶ CDFC 105 Fashion Coordination and Styling: Fashion Shows and Special Events
- ▶ CDFC 106 Fashion Coordination and Styling: Fashion, Culture, and Society
- ▶ CDFC 107 Fashion Coordination and Styling: Fashion Buying
- ▶ CDFC 200 Fashion Coordination and Styling: Fashion Photography
- ▶ CENT 500 Entrepreneurship: New Venture Startup
- ▶ CFSN 703 Fashion: Visual Merchandising and Display
- ▶ CMKT 100 Marketing: Principles of Marketing

FILM STUDIES

The Certificate in Film Studies provides a good basic grounding in the principles, contemporary theories, and techniques of the motion picture medium. Courses range from an introduction to basic filmmaking to specialized courses such as screen writing; cinematography and lighting workshops; directing screen performance; production design; sound design; and the business of developing, producing, and marketing motion pictures. It is an excellent starting point for people who want to pursue a career in the film industry or satisfy their curiosity about film and film production. The program will be of interest to various individuals:

▶ those working in the film industry who want to improve their qualifications

▶ those new to the industry, or others such as actors, who want to understand more fully all aspects of production

▶ those working in other fields who want to make a career change

▶ those working in allied fields who seek a better understanding of film production

▶ elementary and secondary school teachers who will apply the theoretical and practical knowledge they receive to their own teaching

The Chang School showcases the talents and recognizes the skill and dedication of continuing education film studies students at the annual Peter Gerretsen Film Awards. For further information, visit the website at **www.ryerson.ca/ce/filmawards**.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (including English), or equivalent, with a minimum average of 60 percent, or mature student status with relevant professional experience.

Certificate Requirements

The successful completion of eight courses (five required courses and three electives (or 117 course hours)), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Note: Students who register in courses for which they do not have the stated prerequisites will be withdrawn from those courses, unless they have been given prior permission by the academic coordinator.

Equipment/Facilities Use

Please note that equipment and facilities use outside of class time will not be provided. Extra time may be purchased.

Required Courses

Please consult the course descriptions for prerequisites.

▶ CDMP 117   Film Studies: Film Technology I
▶ CDMP 118   Film Studies: Film and Sound Editing I
▶ CDMP 129   Film Studies: Motion Picture Production I
▶ CDMP 223   Film Studies: Film Technology II
▶ CDMP 229   Film Studies: Motion Picture Production II

Electives (select three courses or 117 hours)

▶ CDMP 109   Business of Film: Business of Film – Producing
▶ CDMP 114   Film Studies: Post-Production Sound
▶ CDMP 119   Film Studies: Digital Film Production I
▶ CDMP 120   Film Studies: Film History
▶ CDMP 121   Film Studies: Film Theory
▶ CDMP 122   Film Studies: Production Design for Film and Theatre
▶ CDMP 123   Film Studies: Art Direction for Film and Special Events
▶ CDMP 125   Film Studies: Fiction Screenwriting
▶ CDMP 126   Film Studies: Non-Fiction Screenwriting
▶ CDMP 209   Business of Film: Business of Film - Development
▶ CDMP 215   Business of Film: Movie Marketing and Distribution
▶ CDMP 231   Film Studies: Short Filmmaking: On Location
▶ CDMP 232   Film Studies: Documentary Filmmaking in Cuba
▶ CDMP 700   Film Studies: Advanced Screenwriting
▶ CFPN 502   Film Studies: Directing Screen Performance – Basic Principles
▶ CFPN 531   Film Studies: Cinematography and Lighting Design I
▶ CFPN 631   Film Studies: Cinematography and Lighting Design II
▶ CMPC 101   Combined Media: Visual Studies I

Note to registered certificate program students

Electives

CMPC 101 replaces CDNM 113.

CDMP 215 replaces CDMP 210.

CDMP 210, CDMP 240, and CFPN 32A/B deleted.

CDMP 700, CFPN 502, and CFPN 631 added.

An Intensive, Integrated, 12-Week Program

Students have the opportunity to obtain the Certificate in Film Studies over 12 intensive, six-day weeks in the Spring/Summer term. This unique fast-track program covers all required motion picture production, technology, and digital editing courses, plus three electives.

For more details about CDMP 999 Summer Film School, visit **www.ryerson.ca/ce/summerfilm**.

FINANCIAL MATHEMATICS MODELING

This certificate program is intended to provide technically trained professionals with an understanding of how to determine the value of financial derivatives and complex investments, and how to assess and analyze, through modeling frameworks, the associated benefits and risks of these instruments. Participants will attain a mastery of financial mathematics, especially in the areas of stochastic processes and probability, in statistics, and in computation, together with an understanding of the highly complex operations of financial markets.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/financialmath**.

Admission Criteria

It is recommended that applicants have the following:

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. Contact Anne-Marie Brinsmead (Program Director, Engineering, Architecture, and Science) at a2brinsm@ryerson.ca.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

- ▶ CFIN 300
- ▶ CCPS 393
- ▶ CFIN 501
- ▶ CMTH 304
- ▶ CMTH 500
- ▶ CMTH 600
- ▶ CMTH 700
- ▶ CMTH 800

Required Courses

- ▶ CMTH 600 Mathematics: Computational Methods In Mathematics
- ▶ CMTH 700 Mathematics: Financial Mathematics I
- ▶ CMTH 800 Mathematics: Financial Mathematics II

Electives (select three)*

- ▶ CCPS 393   Computer Science: Introduction to C and UNIX
- ▶ CFIN 300   Finance: Managerial Finance I
- ▶ CFIN 501   Finance: Investment Analysis
- ▶ CMTH 304   Mathematics: Probability and Statistics I
- ▶ CMTH 500   Mathematics: Introduction to Stochastic Processes

* The electives associated with this certificate program are divided into groups, based on the participant's area of expertise. The academic coordinator for the program will determine the grouping that applies to each participant, designed to strengthen his or her financial mathematics modeling competencies in other areas. A group of three (3) electives selected from the full list of elective courses may be substituted for the suggested elective groupings, at the discretion of the academic coordinator.

Suggested Elective Groupings

Students may choose to specialize to achieve their individual goals. The electives may be grouped as follows:

Mathematical Grouping (for participants with mathematical background): CCPS 393, CFIN 300, CFIN 501

Computational or Engineering Grouping (for participants with computational or engineering background): CFIN 300, CFIN 501, CMTH 500

Financial Grouping (for participants with financial background): CCPS 393, CMTH 304, CMTH 500

Note to registered certificate program students

Required Courses

CKMT 800 deleted.

CMTH 600 added.

Electives

CKCS 140 deleted.

CCPS 393 added.

FINANCIAL PLANNING

This advanced certificate is designed to build on your background in accounting, finance, or management and may lead you to a professional career as a financial planner.

Successful completion of this certificate will allow you to write the national examination that leads to the Certified Financial Planner designation by the Financial Planning Standards Council. For details check their website at **www.fpsc.ca.**

Academic Coordinator: Coleen Clark, colclark@ryerson.ca

Admission Criteria

Eligible applicants must have the following:

Certificate in Accounting – Finance, or an undergraduate degree, or a three-year college diploma, as well as all of the following courses or equivalents.

Note: Applicants should have completed either (CACC 100 and CACC 406) or (CACC 110 and CACC 410).

- ▶ CACC 100 Accounting: Introductory Financial Accounting
- ▶ CACC 110 Accounting: Financial Accounting
- ▶ CACC 406 Accounting: Introductory Management Accounting
- ▶ CACC 410 Accounting: Management Accounting
- ▶ CACC 414 Accounting: Intermediate Accounting I
- ▶ CECN 104 Economics: Introductory Microeconomics
- ▶ CECN 204 Economics: Introductory Macroeconomics
- ▶ CFIN 300 Finance: Managerial Finance I
- ▶ CFIN 401 Finance: Managerial Finance II
- ▶ CLAW 122 Law: Business Law
- ▶ CQMS 102 Quantitative Methods: Business Statistics I
- ▶ CQMS 202 Quantitative Methods: Business Statistics II

Admission Application

Students seeking admission to this program are required to complete an application for pre-approval and submit it to the academic coordinator for the Certificate in Financial Planning. To obtain an application visit **www.ryerson.ca/ce** and click on Forms and Documents, or call 416.979.5035. 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.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

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

FOOD SECURITY

Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.

This certificate focuses on how to meet the challenge of creating sustainable food systems based on social justice and democratic decision-making that will ensure people's right to food. As such, the programs serves anyone with a keen passion in food issues, environmental sustainability, human rights, alleviation of food insecurity, food-related health and education issues, and food policy. Students will go on to work in civil society organization and public sector agencies in Canada and worldwide addressing food issues and also engaging in the private sector to initiate its transformation to a more equitable and sustainable system of production, processing marketing.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/foodsecurity.**

Academic Coordinator: Reg Noble, food@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree in any field, or approval of the academic coordinator and five years of professional experience in a field relevant to food security work, or approval of the academic coordinator and three years' Baccalaureate study with a clear academic standing (at least a C average or GPA of 1.67).

Admission Assessment

If you wish to apply to register for the Certificate in Food Security, you must first 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, Ryerson University's general eligibility rules apply.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- CFNY 403   Food Security: Food Security Concepts and Principles
- CFNY 404   Food Security: Food Policy and Programs for Food Security
- CFNY 405   Food Security: Applied Research Methods and Evaluation

Electives (select three)

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

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

- CFND 401   Foods: Social and Cultural Dimensions of Food
- CFNF 100   Family Studies: Families and Health
- CFNN 111   Nutrition: Nutrition for Nursing Practice
- CFNP 400   Professional Practice: Professional Practice: Placement
- CFNR 400   Research Methods: Independent Study
- CFNY 400   Food Security: Selected Topics in Food Security
- CFNY 406   Food Security: Food Prices and Food Security
- CFNY 407   Food Security: Community Development and Food Security
- CFNY 408   Food Security: Urban Food Security
- CFNY 409   Food Security: Gender and Food Security
- CFNY 510   Food Security: Indigenous Food Systems in Canada
- CINT 912   Interdisciplinary Studies: Community Development: International Field Experience
- CSOC 808   Sociology: Sociology of Food and Eating
- CVFN 233   Food Security: How Safe Is Our Food?
- CVFN 410   Food Security: Understanding Urban Agriculture
- CVFN 411   Food Security: Dimensions of Urban Agriculture
- CVFN 412   Food Security: Urban Agriculture Types
- CVFN 413   Food Security: Urban Agriculture Policy-Making
- CVFS 401   Family Supports: Contemporary Family Issues

Note to registered certificate program students

CFND 401, CFNP 400, and CFNR 400 are only available in classroom to degree program and special students. For scheduling information, contact the Ryerson School of Nutrition.

Electives

CFNY 510 and CVFS 401 added.

PROFICIENCY IN FRENCH

This certificate program is designed to provide proficiency in oral and written French. The program offers opportunities to increase professional qualifications, prepare for travel, and become a more informed citizen in a bilingual nation. Ten levels of language courses, along with a range of advanced and specialized courses, are offered.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/french**.

Admission Criteria

It is recommended that applicants have the following:

Completion of Introductory French I (CFRE 101) with a minimum grade of C+, or admission by placement assessment and interview.

Certificate Requirements

The successful completion of six single-term credit courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Advanced Placement

If the student completes four courses at a level higher than CFRE 401, the successful completion of four single-term credit courses is required for the certificate. All four courses must be at the advanced level (CFRE 501 or higher).

Required Courses

(see Advanced Placement above)

- CFRE 201   French: Introductory French II
- CFRE 301   French: Intermediate French I
- CFRE 401   French: Intermediate French II
- CFRE 501   French: Speaking and Writing French I
- CFRE 601   French: Speaking and Writing French II

Advanced Level Electives (select one)

- CFRE 402   French: French Conversation and Pronunciation
- CFRE 502   French: Advanced Business French I
- CFRE 505   French: Language and Culture I
- CFRE 507   French: English-French Translation I
- CFRE 508   French: Intro to 20th C French Literature I
- CFRE 509   French: Franco-Canadian Literature I
- CFRE 510   French: Effective Writing I
- CFRE 515   French: Introduction to Business French
- CFRE 602   French: Advanced Business French II
- CFRE 605   French: Language and Culture II
- CFRE 607   French: English-French Translation II
- CFRE 608   French: Intro to 20th C French Literature II
- CFRE 609   French: Franco-Canadian Literature II
- CFRE 610   French: Effective Writing II
- CFRE 701   French: French in the Media I
- CFRE 704   French: Intro to Franco-Canadian Culture I
- CFRE 707   French: Introduction to French-English Translation
- CFRE 801   French: French in the Media II
- CFRE 803   French: French Theatre: 20th C and Contemporary
- CFRE 804   French: Intro to Franco-Canadian Culture II
- CFRE 903   French: The Francophone Short Story

FUNDRAISING MANAGEMENT

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate program has been developed to provide students with a sound understanding of the nonprofit and voluntary sector and the role that fundraising can play in support of organizations in this sector. Students will achieve the following:

▶ increase their understanding and skills in charitable sector fundraising management

▶ develop and implement a wide range of strategies and tactics for a successful and ethical operation of a fundraising program

This program has been developed to prepare aspiring fundraising professionals for career entry, to help managers in charitable organizations expand their fundraising skills, and to provide growth and renewal opportunities for experienced professionals.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/fundraising.**

Academic Coordinator: Cathy Mann, cmann@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six single-term courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

New students are encouraged to begin with CINT 916.

Required Courses

▶ CINP 912   Nonprofit: Marketing for Nonprofit Organizations
▶ CINT 916   Interdisciplinary Studies: Introduction to Fundraising
▶ CVFM 201   Fundraising Management: Operations of Fundraising
▶ CVFM 202   Fundraising Management: Donor Centered Fundraising

Electives (select two)

▶ CVFM 203   Fundraising Management: Fundraising Campaigns
▶ CVFM 302   Fundraising Management: Entrepreneurial Fundraising
▶ CVFM 303   Fundraising Management: Annual Giving Programs

GERONTOLOGY

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

The Certificate in Gerontology is designed for professionals working with seniors, such as health and medical personnel, nutritionists, occupational therapists, social workers, family counsellors, recreation specialists, community workers, capacity assessors, administrators, urban planners, designers, personnel officers, volunteer workers, and anyone who wishes to learn about the field of aging.

The learning objectives of the certificate in Gerontology include the following:

▶ to comprehend the social, psychological, and biological theories that are applied within the field of gerontology, examining both normal and abnormal age-related changes that occur throughout the lifespan and their impact on practice

▶ to examine normal and abnormal age-related changes in social, psychological, and biological functioning and evaluate the implications of these changes on the individual's ability to interact with their social and physical environments

▶ to identify key changes in social roles, social supports, and policies that occur with aging within the areas of work and retirement, social and familial relationships, housing and environmental design, transportation and healthcare, and the law

▶ to recognize the diversity in aging as it relates to ethnicity, culture, gender, and sexuality and its impact on Canadian demography

▶ to analyze the current spectrum of cognitive variations associated with aging within the areas of intelligence, problem solving, learning and memory, personality, and mental health

▶ to identify and define both the quantitative and qualitative research methods and the significance of research ethics applied within the field of gerontology

▶ to identify how research contributes to the knowledge within the field of gerontology and apply the appropriate steps to enable data assembly and data analysis

▶ to systematically interpret and critique research findings within the field and determine their implications for the practice of gerontology, and to examine the future trends in gerontology

For detailed certificate and program information, please visit **www.ryerson.ca/ce/gerontology.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status is required.

Certificate Requirements

The successful completion of six single-term courses or their equivalent, with a cumulative grade point average of 1.67 or higher, is required for certificate completion.

Recommended Sequence

It is recommended that students working toward the Certificate in Gerontology start with CVGE 140 and CVGE 141, before proceeding with CINT 901 or CVGE 205 and their electives.

Required Courses

▶ CINT 901   Interdisciplinary Studies: Gerontology: Critical Issues and Future Trends
▶ CVGE 140   Gerontology: Aging and the Individual
▶ CVGE 141   Gerontology: Aging and Society
▶ CVGE 205   Gerontology: Understanding Research

Electives (select two)

▶ CGER 298   Gerontology: Ability, Disability and Aging
▶ CHSM 307   Health Services Management: Principles of Long Term Care Service Del.
▶ CINT 904   Interdisciplinary Studies: Health Promotion and Community Development
▶ CPSY 402   Psychology: Adult Development
▶ CPSY 802   Psychology: Death, Dying and Bereavement
▶ CSOC 606   Sociology: Work and Families in the 21st Century
▶ CVGE 271   Gerontology: Consent, Capacity and Decision Making
▶ CVGE 297   Gerontology: Aging and Interpersonal Skills

GLOBAL DIASPORAS, TRANSNATIONALISM, AND MIGRATION CITIES

This certificate takes a contemporary approach to the phenomena of diaspora by examining the migration of peoples linked to the initial stages of a global economy in the twentieth and twenty-first centuries. The principal focus of the program will be on contemporary disaporas in the context of ever-accelerating globalization. Students will be introduced to the phenomenon of transnationalism – the multiple ties and interactions linking peoples and institutions across the borders of nation states.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Sequence

Students are required to take the courses in the following sequence:

▶ CODS 101

▶ CGEO 691

▶ Electives (three selections)

▶ CODS 200

Required Courses

▶ CGEO 691 Geography: Canadian Immigration: Patterns and Place
▶ CODS 101 Geography: Diaspora and Transnationalism
▶ CODS 200 Geography: Research in Diaspora and Globalized Cities

Electives (select a total of three courses)

Electives – Group A (select one or two)

▶ CGEO 108 Geography: Geography of the Global Village
▶ CGEO 206 Geography: Regions, Nations and the Global Community
▶ CODA 100 Demographic Analysis: Principles of Demographic Analysis

Electives – Group B (select one or two)

▶ CGEO 720 Geography: The Inner Landscape of Culture
▶ CGEO 820 Geography: The Outer Landscape of Culture
▶ CODA 110 Demographic Analysis: GIS Applications in Demography

GLOBAL MANAGEMENT STUDIES

This program is designed for individuals who want to build on their existing cultural knowledge, language advantages, or Canadian business experience to deal effectively with globalization and international business issues. It is a unique experience: a combination of excellent university credit courses to select from and an individual single-term Practicum under the guidance of the academic coordinator.

Academic Coordinator: Carlyle Farrell, farrellc@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status. Eligible applicants must also have completed the following courses or equivalents:

- ▶ CGMS 200 Global Management: Introduction to Global Management
- ▶ CGMS 401 Global Management: Operations Management
- ▶ CMKT 100 Marketing: Principles of Marketing

Certificate Requirements

The successful completion of six courses, including a single-term Practicum, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CGMS 522 Global Management: International Marketing
- ▶ CGMS 723 Global Management: International Trade
- ▶ CGMS 724 Global Management: Management of International Enterprise
- ▶ CZIB 100 International Business: Practicum in International Business

Electives (select two)

- ▶ CFIN 621 Finance: International Finance
- ▶ CGMS 450 Global Management: Project Management
- ▶ CGMS 601 Global Management: International Economics
- ▶ CGMS 690 Global Management: The North American Business Environment
- ▶ CGMS 691 Global Management: The Asian Business Environment
- ▶ CGMS 692 Global Management: The European Business Environment
- ▶ CGMS 695 Global Management: The Middle Eastern Business Environment
- ▶ CGMS 802 Global Management: Ethics and Regulation of Int'l Bus
- ▶ CGMS 805 Global Management: Manufacturing Management
- ▶ CLAW 724 International Business Law: Legal Aspects of International Business

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:

Professional Development Award: Entering Foreign Markets requires completion of CGMS 522, CGMS 723, and CGMS 724.

GRAPHIC COMMUNICATIONS

Graphic communications is one of the most dynamic and exciting industries in Canada today. The preparation of layouts, files, proofs, and finished jobs in the printing industry requires the use of advanced hardware, software, and technology. Knowledgeable and skilled professionals in the field are rewarded with challenging opportunities.

This certificate is of particular interest to individuals who wish to enhance their ability to advance professionally and to those seeking the necessary knowledge and skills to make a career change into the graphic communications industry. Students may enroll directly into entry-level courses. No interview or portfolio is required.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, with minimum average of 60 percent, or equivalent, or mature student status with relevant professional experience.

Certificate Requirements

The successful completion of seven courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CDGA 651   Graphic Communications: Graphic Communications Processes
▶ CGRA 102   Graphic Communications: Layout and Typography I
▶ CGRA 103   Graphic Communications: Introduction to Electronic Premedia I
▶ CGRA 104   Graphic Communications: Printing Processes I

Electives (select three)

▶ CGRA 116   Graphic Communications: Estimating in the Graphic Arts
▶ CGRA 202   Graphic Communications: Layout and Typography II
▶ CGRA 203   Graphic Communications: Introduction to Electronic Premedia II
▶ CGRA 204   Graphic Communications: Printing Processes II
▶ CGRA 230   Graphic Communications: Selling in the Graphic Arts
▶ CGRA 320   Graphic Communications: Binding and Finishing I

Advanced Standing

Students who successfully complete the Certificate in Graphic Communications and two single-term Liberal Studies courses from Table A (see the Ryerson Undergraduate Program Calendar at **www.ryerson.ca/calendar** for more information), and the two courses CGMS 200 and CCMN 279, may be considered, subject to an interview and normal program admission criteria and procedures, for direct entry into the second year of the Graphic Communications Management degree program.

HEALTH INFORMATICS

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

The demand for skilled workers in the field of Health Informatics is growing rapidly in response to the need to deliver less expensive and higher quality health care. Designed for Canadian and internationally educated professionals who have a background in health or information technology, the program allows you to choose courses that will give you the skills you need for this expanding field.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/healthinformatics.**

Academic Coordinator: Pria Nippak, pnippak@ryerson.ca

Admission Criteria

Eligible applicants must have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status, and a minimum of one years' related professional experience in the health or information technology sectors.

Admission Application

Students seeking admission to this program are required to complete an application for pre-approval and submit it to the academic coordinator. To obtain an application, visit **www.ryerson.ca/ce** and click on 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.

Certificate Requirements

The successful completion of eight courses (four required courses and four electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CHIT 100 Health Informatics: Introduction to Health Informatics
- ▶ CHIT 201 Health Informatics: Healthcare Interoperability
- ▶ CHIT 300 Health Informatics: Introduction to Healthcare Human Computer Interface
- ▶ CHSM 301 Health Services Management: The Healthcare Systems

Electives (select four)

Students should select either CHIM 300 or CHSM 305, but not both, as they contain similar content.

Students should select CMHR 405 if they wish to pursue CMHR 650 as CHSM 437 does not provide a prerequisite for CMHR 650.

- ▶ CHIM 300 Health Information Management: Managing Health Information Services
- ▶ CHIM 301 Health Information Management: Healthcare Information Analysis
- ▶ CHIM 404 Health Information Management: Health Economics
- ▶ CHIM 405 Health Information Management: Issues in Health Information Management
- ▶ CHSM 305 Health Services Management: The Management Cycle
- ▶ CHSM 306 Health Services Management: Management Leadership and Decision-Making
- ▶ CHSM 437 Health Services Management: Human Resources Management in Healthcare
- ▶ CITM 207 Information Technology Management: Computer-Enabled Problem Solving
- ▶ CITM 301 Information Technology Management: IT Infrastructure
- ▶ CITM 305 Information Technology Management: Systems Analysis and Design
- ▶ CITM 410 Information Technology Management: Business Process Design
- ▶ CITM 500 Information Technology Management: Data and Information Management
- ▶ CITM 505 Information Technology Management: Managing Information Systems
- ▶ CITM 750 Information Technology Management: IS Project Management
- ▶ CMHR 405 Human Resources: Organizational Behaviour and Interpersonal Skills
- ▶ CMHR 650 Human Resources: Management of Change
- ▶ CZLW 100 Law: Information Access and Protection of Privacy
- ▶ CZLW 110 Law: Health Information Access and Privacy

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:

Professional Development Award: Health Informatics requires completion of three courses: CHIT 100, or CHIT 201, or CHIT 300, or CZLW 110.

See page 115 for more information.

HEALTH SERVICES MANAGEMENT

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate program provides management education for the health service industry both now and in the foreseeable future. This program provides an opportunity for current and potential health care managers to increase their knowledge and skills in significant aspects of health service provision. Many of the courses in the Health Services Management certificate program qualify for exemptions in the part-time degree completion program in Health Services Management (see the Ryerson Undergraduate Part-Time Degree Studies Calendar at **www.ryerson.ca/calendar** for more information).

Academic Coordinator: Jim Tiessen, jhtiessen@ryerson.ca

Admission Criteria

Eligible applicants must have the following:

OSSD with six Grade 12 U or M credits or equivalent; OR mature student status; OR a Community College diploma in a related health services field.

Admission Application

Students seeking admission to this program are required to complete an application for pre-approval and submit it to the academic coordinator. To obtain an application, visit **www.ryerson.ca/ce** and click on 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.

Certificate Requirements

The successful completion of nine courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. Up to four course credits may be granted on the basis of courses successfully completed at other institutions.

Required Courses (select six)

Students may select only one of CHSM 407 or CVNU 321. Students who wish to progress to the degree program should take CHSM 407. Students seeking the certificate only may take CVNU 321, which has no prerequisite.

- ▶ CCMN 279   Communication: Introduction to Professional Communication
- ▶ CHSM 301   Health Services Management: The Healthcare Systems
- ▶ CHSM 305   Health Services Management: The Management Cycle
- ▶ CHSM 326   Health Services Management: Law for Health Managers
- ▶ CHSM 407   Health Services Management: Financial Management
- ▶ CHSM 437   Health Services Management: Human Resources Management in Healthcare
- ▶ CVNU 321   Nursing: Financial Management

Electives (select three)

- ▶ CHSM 306   Health Services Management: Management Leadership and Decision-Making
- ▶ CHSM 307   Health Services Management: Principles of Long Term Care Service Del.
- ▶ CHSM 308   Health Services Management: Project Management – Long Term Care
- ▶ CHSM 309   Health Services Management: Trends in Long Term Care Service Delivery
- ▶ CHSM 310   Health Services Management: Institutional Structure
- ▶ CHSM 408   Health Services Management: Program Planning and Evaluation
- ▶ CHSM 417   Health Services Management: Research Methodology

Note to registered certificate program students

Electives

CHSM 408 added.

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:

Professional Development Award: Health Services Management requires completion of CHSM 305, CHSM 306, and CHSM 437.

HEALTH STUDIES

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

The Certificate in Health Studies is comprised of specially selected courses from other health-related Chang School certificate programs, such as Health Informatics, Health Services Management, Ethics, Psychology, 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.

Academic Coordinator: Pria Nippak, pnippak@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six OAC credits or Grade 12 U or M credits, or equivalent, or mature student status. Completion of the professional development award will qualify students for entry into the certificate.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Course

▶ CHSM 301   Health Services Management: The Healthcare Systems

Electives (select five)

Students select a total of five electives from one or more of the five streams.

Open to all streams

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

▶ CCMN 279   Communication: Introduction to Professional Communication
▶ CCMN 314   Communication: Professional Presentations

Health Informatics Stream

▶ CHIT 100   Health Informatics: Introduction to Health Informatics
▶ CHIT 201   Health Informatics: Healthcare Interoperability
▶ CHIT 300   Health Informatics: Introduction to Healthcare Human Computer Interface
▶ CZLW 110   Law: Health Information Access and Privacy

Health Services Management Stream

▶ CHSM 305   Health Services Management: The Management Cycle
▶ CHSM 306   Health Services Management: Management Leadership and Decision-Making
▶ CHSM 330   Health Services Management: Managerial Epidemiology for Healthcare
▶ CHSM 437   Health Services Management: Human Resources Management in Healthcare
▶ CKPM 202   Project Management: Fundamentals of Project Management

Health Ethics Stream

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

▶ CPHL 302   Philosophy: Ethics and Health Care
▶ CPHL 334   Philosophy: Ethics in Professional Life
▶ CPHL 444   Philosophy: Ethics in Health Services Management
▶ CPHL 509   Philosophy: Bioethics
▶ CPHL 602   Philosophy: Health Care and Distributive Justice

Gerontology Stream

▶ CINT 904   Interdisciplinary Studies: Health Promotion and Community Development
▶ CVGE 140   Gerontology: Aging and the Individual
▶ CVGE 141   Gerontology: Aging and Society

Psychology Stream

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

▶ CPSY 102   Psychology: Introduction to Psychology I
▶ CPSY 105   Psychology: Perspectives in Psychology
▶ CPSY 325   Psychology: Psychological Disorders
▶ CPSY 605   Psychology: Psychology of Health and Health Care
▶ CPSY 607   Psychology: Drugs and Human Behaviour
▶ CPSY 802   Psychology: Death, Dying and Bereavement
▶ CPSY 805   Psychology: Adjustment, Stress and Coping
▶ CPSY 808   Psychology: Community Psychology

Note to registered certificate program students

Electives (Health Services Management Stream)

CKPM 202 added.

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:

Professional Development Award: Health Ethics requires completion of three courses: (CPHL 302 or CPHL 509), or CPHL 334, or CPHL 444, or CPHL 602.

Professional Development Award: Health Informatics requires completion of three courses: CHIT 100, or CHIT 201, or CHIT 300, or CZLW 110.

Professional Development Award: Health Services Management requires completion of CHSM 305, CHSM 306, and CHSM 437.

HUMAN RESOURCES MANAGEMENT

Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.

This certificate program provides comprehensive education in current human resources management techniques. It is ideal for human resources management professionals who wish to expand or update their skills, and for those seeking employment in the human resources field.

Many of the courses in the Human Resources Management certificate program may qualify for exemptions in the Certified Human Resources Professional (CHRP) designation offered by the Human Resources Professionals Association (HRPA) (**www.hrpa.ca**).

For detailed certificate and program information, please visit **www.ryerson.ca/ce/hrmanagement**.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status, with some experience in business.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. Up to three course credits may be granted on the basis of courses successfully completed at other institutions.

Required Courses

- ▶ CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills
- ▶ CMHR 523   Human Resources: Human Resources Management

Electives (select four)

- ▶ CLAW 529   Law: Employment and Labour Law
- ▶ CMHR 505   Human Resources: Organizational Behaviour II
- ▶ CMHR 522   Human Resources: Industrial Relations
- ▶ CMHR 600   Human Resources: Diversity and Inclusion in the Workplace
- ▶ CMHR 623   Human Resources: Recruitment and Selection (Staffing)
- ▶ CMHR 670   Human Resources: Special Topics in Org Behav and HR Mgmt
- ▶ CMHR 671   Human Resources: Human Resources Information Systems
- ▶ CMHR 711   Human Resources: Occupational Health and Safety
- ▶ CMHR 733   Human Resources: Training and Development
- ▶ CMHR 749   Human Resources: Compensation Management
- ▶ CMHR 849   Human Resources: Human Resources Planning

IBM MAINFRAME SYSTEM Z COMPUTING

Important Note: The certificate in IBM Mainframe System z Computing is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Engineering, Architecture and Science program area at 416.979.5035 or ce@ryerson.ca.

Mainframe computers are complex hardware systems used by large corporations and government institutions for mission critical applications such as intensive data processing, management information systems, financial transaction processing, manufacturing control systems, and managing large databases including census statistics and financial data. Mainframe computers, a significant segment of the IBM product line, are used for large scale simultaneous processing of very large information databases. Security of data warehousing and accuracy of processing are of paramount importance. Mainframes require sophisticated and specialized computer programming management and maintenance.

This certificate, developed in partnership with IBM Canada, provides learners with a thorough overview of the Mainframe environment, including hardware systems, workflows, end-user interfaces, programming, and data management. The curriculum has been designed to provide graduates with comprehensive theoretical and practical knowledge in basic and advanced Mainframe computing, focusing on the z/OS environment.

Admission Criteria

Eligible applicants must have the following:

Undergraduate degree in Computer Science or a related field, or have clear academic standing in the final year of such a degree program or have significant related employment experience.

Admission Process

Applicants must complete and submit an application for pre-approval and be approved before registering for the first course. In addition, applicants wishing to enroll in the first course must provide a resume listing employment experience, copies of credentials of academic standing, and certification documents. For further information about program requirements, please contact the Program Manager, Janet Shusterman at jshuster@ryerson.ca, 416.979.5000, ext. 7907.

Certificate Requirements

The successful completion of six courses (one required course and five electives), with a cumulative grade point average of 1.67 or higher is required to earn the certificate.

Required Courses

▶ CKCS 191   Mainframe Computing: Introduction to Mainframe Computing z/OS Environment

Electives (select five)

▶ CKCS 192   Mainframe Computing: Mainframe Application Programming ASSEMBLER
▶ CKCS 193   Mainframe Computing: Mainframe Application Programming COBOL
▶ CKCS 194   Mainframe Computing: Mainframe Batch Programming JCL
▶ CKCS 195   Mainframe Computing: Mainframe Online Programming: CICS
▶ CKCS 196   Mainframe Computing: Mainframe Database Management Systems DB2
▶ CKCS 197   Mainframe Computing: Websphere Application Server on z/OS

Note to registered certificate program students

The certificate in IBM Mainframe System z Computing is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Engineering, Architecture and Science program area at 416.979.5035 or ce@ryerson.ca.

IMAGE ARTS (WITH SPECIALIZATIONS IN FILM STUDIES, NEW MEDIA, OR PHOTOGRAPHY STUDIES)

Important Note: The certificate in Image Arts with a specialization in New Media is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Academic Coordinator, Rhonda Abrams, at rabrams@ryerson.ca.

This certificate is designed to lead to careers in the film, photography, new media, communications, and cultural industries. Graduates should be capable of performing responsibly in these industries as professionals in both creative and managerial positions, and in undertakings ranging from the highly commercial to the artistic and experimental. The curriculum will also provide students with the necessary grounding to move on to advanced study in a variety of media-related academic and artistic disciplines.

This program provides a general background in design, art history, and cultural studies, along with professional specialization in the three areas of Film, New Media, and Photography Studies. There is a strong link between theory and practice in each of these options.

Successful completion of the certificate in Film Studies or Photography Studies will make a student eligible to apply for admission to the second year of the related Image Arts degree program, subject to space availability and competition. These students will also be required to take the appropriate Liberal Studies courses.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/imagearts.**

Film Studies Coordinator: James Warrack, jwarrack@ryerson.ca

New Media Coordinator: Rhonda Abrams, rabrams@ryerson.ca

Photography Studies Coordinator: Dennis Miles, dmiles@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (including English), or equivalent, with a minimum average of 60 percent, or mature student status with relevant professional experience.

Certificate Requirements

The successful completion of eight single-term (or equivalent) courses is required for the certificate, as listed in each option. Students must achieve a cumulative grade point average of 1.67 or higher to graduate.

Equipment/Facilities Use

Please note that equipment and facilities use outside of class time will not be provided. Extra time may be purchased.

Required Courses

- CMPC 101   Combined Media: Visual Studies I
- CMPC 103   Combined Media: Art and the Classical Tradition
- CMPC 201   Combined Media: Concepts and Theories
- CMPC 203   Combined Media: Art in the Modern World

This certificate offers concentrations in either Film Studies, New Media, or Photography Studies. Students must fulfill the requirements of one of these three areas as listed below.

Specialization in Film Studies

- CDMP 117   Film Studies: Film Technology I
- CDMP 118   Film Studies: Film and Sound Editing I
- CDMP 129   Film Studies: Motion Picture Production I

Specialization in New Media

- CDNM 109   New Media: Introduction to Web Presentation
- CDNM 121   New Media: Introduction to Interaction Design
- CDNM 209   New Media: Flash for New Media
- CDNM 221   New Media: Video and Audio for New Media

Specialization in Photography

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

Note to registered certificate program students

The certificate in Image Arts with a specialization in New Media is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Academic Coordinator, Rhonda Abrams, at rabrams@ryerson.ca.

INFORMATION SYSTEMS MANAGEMENT

Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.

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 which 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. Courses focus on how to develop and manage information systems to meet the strategic needs of business and government. 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. 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.

For further information about the program, please contact The Chang School at 416.979.5035, or attend a Program Open House.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/itm.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six single-term courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ► CITM 100   Information Technology Management: Foundations of Information Systems
- ► CITM 207   Information Technology Management: Computer-Enabled Problem Solving
- ► CITM 305   Information Technology Management: Systems Analysis and Design
- ► CITM 410   Information Technology Management: Business Process Design

Electives (select two)

- ► CITM 200   Information Technology Management: Fundamentals of Programming
- ► CITM 301   Information Technology Management: IT Infrastructure
- ► CITM 350   Information Technology Management: Concepts of e-Business
- ► CITM 407   Information Technology Management: Info Tech, Ethics and Society
- ► CITM 500   Information Technology Management: Data and Information Management
- ► CITM 750   Information Technology Management: IS Project Management

INFRASTRUCTURE ASSET MANAGEMENT AND RENEWAL

This certificate program provides adult learners with the opportunity to acquire a comprehensive knowledge of and expertise in the fundamental processes and techniques required to establish and run an effective asset management program, including developing solutions associated with asset management, evaluation, preservation and rehabilitation of existing infrastructure, repair materials and strategies, and risk, fiscal, and sustainability management best practices. When dealing with deteriorating buildings, tunnels, water towers, bridges, and public transit systems, together with naturally deteriorating and inadequate bridges and roads, participants will learn to apply holistic, systematic, and risk-based processes to decision making concerning the management and renewal of government, public, and private enterprise physical assets, including infrastructure, fixed plant, and mobile equipment.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/infrastructure.**

Admission Criteria

It is recommended that applicants have the following:

Mature student status and evidence of relevant college or university level coursework, or equivalent

OR

Mature student status together with relevant industrial or professional experience

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

▶ CKAM 100
▶ CKAM 110
▶ CKAM 120
▶ CKAM 130
▶ CKAM 140
▶ CKAM 150

Required Courses

▶ CKAM 100 Infrastructure Asset Management: Infrastructure Asset Management Fundamentals
▶ CKAM 110 Infrastructure Asset Management: Infrastructure Asset Financial Management and Practices
▶ CKAM 120 Infrastructure Asset Management: Engineering Risk Management
▶ CKAM 130 Infrastructure Asset Management: Infrastructure Asset Maintenance, Planning and Scheduling
▶ CKAM 140 Infrastructure Asset Management: Infrastructure Asset Evaluation and Rehabilitation
▶ CKAM 150 Infrastructure Asset Management: Infrastructure Project Evaluation

FUNDAMENTALS OF INTERIOR DESIGN

Interior designers work in a dynamic, imaginative, and complex industry combining technological knowledge with artistic vision. This certificate is intended for individuals interested in the fundamentals of interior design:

▶ those who are considering interior design as a possible career and are prepared to enter a full-time interior design program upon completion of the certificate

▶ those who have a general interest in interior design

Students should be aware that professional interior designers require membership in the Association of Registered Interior Designers of Ontario (www.arido.ca). Membership is extended only to graduates of degree and diploma programs in recognized schools of interior design who have several years' experience and who successfully complete the Association's qualifying examinations.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (including English and Mathematics), with a minimum average of 60 percent, or equivalent, or mature student status.

Certificate Requirements

The successful completion of seven courses (four required courses and three electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate. In determining the order of courses within the program, students should note carefully the prerequisite requirements listed with each course.

Required Courses

▶ CDID 150   Interior Design: Design Theory
▶ CDID 151   Interior Design: Interior Design I: Drafting
▶ CDID 152   Interior Design: Interior Design I: Space Planning
▶ CIRC 112   Interior Design: Communications I

Electives (select three)

▶ CDID 153   Interior Design: Interior Materials and Finishes
▶ CDID 155   Interior Design: Design Dynamics I: Portfolio 1
▶ CDID 157   Interior Design: Kitchen and Bathroom Design
▶ CIRC 113   Interior Design: Communications II
▶ CIRH 101   Interior Design: History of Design I

LABORATORY MANAGEMENT AND PRACTICES

Important Note: The certificate in Laboratory Management and Practices is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Engineering, Architecture and Science program area at 416.979.5035 or ce@ryerson.ca.

This certificate program, offered online, has been developed for professionals currently practicing or anticipating careers in science-related fields. This program has been designed to equip graduates with managerial skills combined with practical knowledge (ranging from safety, environmental awareness, standards and regulations, specialized information technology systems, effective communications, record keeping, and technical writing) that laboratory work requires.

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree in a relevant field (e.g., Chemistry, Biology, Physics, or Environmental or Earth Science) with a GPA of 2.0, or equivalent

OR

A post-secondary diploma with a GPA of 2.0, or equivalent

OR

Three years of professional practice in a laboratory setting in a technical capacity

Certificate Requirements

The successful completion of 12 19.5-hour courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CKLP 100   Laboratory Practice: Professional Laboratory Practice
- ▶ CKLP 110   Laboratory Practice: Standards and Good Practices
- ▶ CKLP 120   Laboratory Practice: Intro to Lab Project Management
- ▶ CKLP 130   Laboratory Practice: Intro to Laboratory Regulations
- ▶ CKLP 140   Laboratory Practice: Laboratory and Research Ethics
- ▶ CKLP 150   Laboratory Practice: Sample Management
- ▶ CKLP 160   Laboratory Practice: Laboratory Info Management
- ▶ CKLP 170   Laboratory Practice: Data Handling

Electives (select four)

- ▶ CKLP 180   Laboratory Practice: Applied Technical Writing
- ▶ CKLP 190   Laboratory Practice: Skills for Professional Practice
- ▶ CKLP 200   Laboratory Practice: Intro to Intellectual Property
- ▶ CKLP 210   Laboratory Practice: Laboratory Quality Processes
- ▶ CKLP 220   Laboratory Practice: Independent Study I
- ▶ CKLP 230   Laboratory Practice: Independent Study II
- ▶ CKLP 240   Laboratory Practice: Fundamentals of Clinical Research
- ▶ CKLP 250   Laboratory Practice: Current Topics in Lab Science

Note to registered certificate program students

The certificate in Laboratory Management and Practices is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Engineering, Architecture and Science program area at 416.979.5035 or ce@ryerson.ca.

LANDSCAPE DESIGN

Note: This certificate program may be completed entirely at a distance. Visit the distance education website at www.ryerson.ca/ce/de for further information.

Landscape Design combines the fields of art, science, and humanities. Landscape designers focus on designing and restoring sustainable public and private outdoor spaces. Their services are sought in the residential, commercial, and public sectors.

Whether you are just beginning or continuing your education in Landscape Design, this certificate offers an excellent education in the fundamental components that comprise the field of landscape design. Through course offerings, you will learn how to analyze, plan, design, manage, and sustain the built and natural environment.

Courses are offered in a combination of lectures, field trips, studios, seminars, and other interactive learning opportunities. Our distance education courses continue to be developed and are available on the Internet.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/landscape**.

Acting Academic Coordinator: Sam Benvie, sbenvie@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

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.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

The order in which the required courses are taken should be considered carefully so as to meet the prerequisites for the desired elective courses.

- ▶ CKLA 300   Landscape Design: Landscape Design Communications and Theory
- ▶ CKLA 310   Landscape Design: Landscape Construction, Materials and Methods
- ▶ CKLA 320   Landscape Design: Plant Materials
- ▶ CKLA 330   Landscape Design: Landscape Design Studio

Electives (select two)

- ▶ CKLA 400   Landscape Design: Ecology and Sustainable Landscapes
- ▶ CKLA 410   Landscape Design: Horticultural Science
- ▶ CKLA 420   Landscape Design: Art and Management of Planting Design
- ▶ CKLA 430   Landscape Design: Making and Meaning of Landscapes
- ▶ CKLA 440   Landscape Design: Digital Landscape Design
- ▶ CKLA 450   Landscape Design: Landscape Restoration

Alternative Formats of Instruction

A number of courses in this program are available in a variety of alternative accelerated formats, beyond the typical 13-week, one evening per week class. Classes may be offered two evenings a week for six weeks; three evenings a week for four weeks; or every day for a full week. Please refer to specific course descriptions to see which formats the courses will be offered in during each term.

LEADERSHIP IN ORGANIZATIONS

Formerly: Organizational Leadership

Note: *Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

Organizational leadership and management skills are critical to success in business, in the voluntary sector, community services, and any profession where you must achieve results through others. The Certificate in Organizational Leadership will help you develop the ability to influence, motivate, and enable others to contribute towards the effectiveness and success of your organization. Upon completion of this certificate, you will be able to apply leadership knowledge and skills to any job, in any sector.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/orgleaders.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U, including Grade 12 U or M credits, or equivalent, or mature student status with relevant work experience.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▸ CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills
▸ CMHR 640   Human Resources: Leadership

Electives (select four)

▸ CMHR 505   Human Resources: Organizational Behaviour II
▸ CMHR 638   Human Resources: Leaders as Coaches and Mentors
▸ CMHR 650   Human Resources: Management of Change
▸ CMHR 700   Human Resources: Cross-Cultural Dimensions of Organizational Behaviour
▸ CMHR 721   Human Resources: Negotiation and Conflict Resolution
▸ CMHR 741   Human Resources: Managing Interpersonal Dynamics
▸ CMHR 841   Human Resources: Organization Theory and Design
▸ CMHR 850   Human Resources: Organization Development

Note to registered certificate program students

Effective Fall 2014, the Certificate in Organizational Leadership has been revised to Leadership in Organizations. Students who were formally registered in the certificate prior to July 1, 2014, must complete the requirements in effect at the time of their registration.

LIGHTING DESIGN

This multidisciplinary certificate is designed to provide students with the broad knowledge base and wide range of skills required as professionals in the lighting industry. Changes are taking place in the lighting industry, largely centred around increased legislative acts limiting energy budgets for new construction, retrofitting and the need for designing buildings which are environmentally responsible and ergonomically sound, and with enhanced vision for health and safety. New information is available, new technologies have been developed, new methodologies exist, and new questions are emerging as the building industry works toward an integration of architecture, engineering and resource management, and the concerns for health and safety are moved to the forefront in design.

The Certificate in Lighting Design is of particular interest to those persons who are seeking to enhance their knowledge and skill in the art and science of lighting design and who are degree graduates of one of either Architecture or Landscape Architecture, Engineering, Interior Design, or Theatre Design and Production.

Graduates of other programs such as Business, Fashion, and Radio and Television Arts, or individuals without degrees, but with a satisfactory level of education and experience in the lighting industry, may also be eligible with the approval of the academic coordinator.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/lxdesign.**

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree or mature student status with related professional experience and education.

Course Prerequisites

Successful completion of all stated prerequisites is required for registration in a course. Students who register in a course without successful completion of the prerequisites will be required to withdraw.

Certificate Requirements

The certificate will require the completion of seven courses, with a cumulative grade point average of 1.67 or higher.

Required Courses

- ▶ CDID 501   Lighting Design: Lighting Fundamentals
- ▶ CDID 502   Lighting Design: Human Factors in Lighting
- ▶ CDID 503   Lighting Design: Introduction to Lighting Design
- ▶ CDID 504   Lighting Design: Lighting Energy Management
- ▶ CDID 550   Lighting Design: Introduction to Daylighting Design
- ▶ CDID 551   Lighting Design: Advanced Lighting Design

Electives (select one)

- ▶ CDID 552   Lighting Design: Entertainment Lighting Design
- ▶ CDID 553   Lighting Design: Lighting Design Practicum
- ▶ CDID 554   Lighting Design: Lighting Research Practicum

MAGAZINE AND WEB PUBLISHING

The Certificate in Magazine and Web Publishing is designed to provide essential knowledge and skills in all aspects of producing a magazine, from management through writing to editing to ad sales, circulation, and production. Students in the certificate come from various backgrounds:

▶ those planning a career in the web publishing or magazine industry, either staff or freelance

▶ those working at a magazine or website, large or small, and looking to sharpen the skills they use in their job and/or broaden their knowledge of the other disciplines within their company

▶ those thinking of starting up their own magazine or website

Instructors with extensive experience, all of whom currently work in the field, offer professional-level teaching that combines a solid theoretical base with practical training. Magazines Canada recognizes the high level of quality and professionalism that Ryerson brings to its Magazine and Web Publishing certificate program. For detailed certificate and program information, please visit **www.ryerson.ca/ce/magazine**.

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree, or mature student status with acceptable professional experience in publishing or a related field. You may take individual courses without pursuing the certificate. All applicants are encouraged to attend a Program Open House, or may contact The Chang School at 416.979.5035 or ce@ryerson.ca.

Certificate Requirements

The successful completion of seven 39-hour courses, or the equivalent, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CDJN 112   Magazine and Web Publishing: Magazine and Website Publishing
▶ CDJN 113   Magazine and Web Publishing: Magazine and Website Editing

Electives (five 39-hour courses or equivalent combination of electives totalling 195 hours)

39-Hour Courses

▶ CDJN 116   Magazine and Web Publishing: Introduction to Magazine Design
▶ CDJN 117   Magazine and Web Publishing: Writing for Magazines and the Web
▶ CDJN 118   Magazine and Web Publishing: Advanced Feature Writing
▶ CDJN 119   Magazine and Web Publishing: Magazine Copy Editing
▶ CDJN 205   Magazine and Web Publishing: Magazine Production

19.5-Hour Courses

Students may substitute two of the following 19.5-hour courses for any of the above 39-hour electives.

▶ CDJN 120   Magazine and Web Publishing: Magazine Fact-Checking and Research

▶ CDJN 121   Magazine and Web Publishing: Magazine Packaging
▶ CDJN 122   Magazine and Web Publishing: Advanced Magazine Editing
▶ CDJN 123   Magazine and Web Publishing: Success as a Freelancer
▶ CDJN 124   Magazine and Web Publishing: The Art of Pitching
▶ CDJN 201   Magazine and Web Publishing: Magazine Advertising Sales and Marketing
▶ CDJN 202   Magazine and Web Publishing: Magazine Marketing and Circulation
▶ CDJN 204   Magazine and Web Publishing: Layout Software for Magazine Editors
▶ CDJN 206   Magazine and Web Publishing: Creating Website Editorial
▶ CDJN 207   Magazine and Web Publishing: The Online Publishing Toolkit
▶ CDJN 208   Magazine and Web Publishing: Ad Sales on the Web

Note to registered certificate program students

Electives (19.5-Hour Courses)

CDJN 123 and CDJN 124 added.

Special Two-Day Workshop

So You Want to Start a Magazine? (CDJN 101)

How to have a smart launch and long-term success

Launching a magazine is an exciting and rewarding thing to do, but the process – from developing a concept to day-to-day business management – is more complicated than it seems.

Join us for an intensive two-day course that emphasizes all the practical aspects of launching a magazine in today's highly competitive market. If you are thinking of starting up a magazine, you will gain from the experience and insights of an expert and save time and money.

Visit **www.ryerson.ca/ce/startamagazine** for details.

MEDIA WRITING FUNDAMENTALS

Students will receive a thorough overview of all the various forms of writing for the electronic media, including dramatic writing, commercial writing, and writing for factual programs. Practical assignments will be supported by theoretical material that provides fundamental instruction in dramatic theory and marketing theory, and will provide both a context and a critical lens through which students may view their written work.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/rta**.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M courses, including OAC English or Grade 12 U English (ENG4U) with a minimum grade of 70 percent or higher, or mature student status.

Admission Application

Students seeking admission to this program are required to complete an application for pre-approval. To obtain an application, visit **www.ryerson.ca/ce** and click on Forms and Documents, or call 416.979.5035. Completed application forms along with all of the appropriate documentation should be taken to the Program Open House. Incomplete applications will not be considered.

Students not wishing to complete the Certificate in Media Writing Fundamentals may take individual courses from the certificate program for general interest and the application process is not necessary.

Certificate Requirements

The successful completion of seven courses (two required courses plus five electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate. The order in which the required courses are taken should be considered carefully so as to meet the prerequisites for the desired elective courses.

Required Courses

The order in which the required courses are taken should be considered carefully so as to meet the prerequisites for the desired elective courses.

▶ CRTA 102   Broadcasting and Media Production: Creative Processes
▶ CRTA 212   Broadcasting and Media Production: Media Writing

Electives (select five)

▶ CDMP 125   Film Studies: Fiction Screenwriting
▶ CDMP 126   Film Studies: Non-Fiction Screenwriting
▶ CRTA 941   Broadcasting and Media Production: Dramatic Writing
▶ CRTA 942   Broadcasting and Media Production: Advertising Copywriting
▶ CRTA 943   Broadcasting and Media Production: Comedy Writing
▶ CRTA 944   Broadcasting and Media Production: Writing for Animation
▶ CRTA 945   Broadcasting and Media Production: Writing for Factual and Reality Programs

Note to registered certificate program students

Required Courses

CRTA 102 replaces CBDC 102.

CRTA 212 replaces CBDC 202.

Electives

CRTA 941 replaces CBDC 941.

CRTA 942 replaces CBDC 942.

CRTA 943 replaces CBDC 943.

CRTA 944 replaces CBDC 944.

CRTA 945 replaces CBDC 945.

CBDC 946 deleted.

MENTAL HEALTH AND ADDICTIONS

This certificate program provides a comprehensive curriculum in mental health and addictions to individuals requiring knowledge in the area in dealing with employees, clients, family members, and friends through their places of employment, volunteer activities, or personal situations. Building on a foundation of psychological concepts, the curriculum comprising degree-level courses acquaints students with the various perspectives describing and understanding mental health, mental health disorders and addictions, and interventions, including assessment, treatment, and self-help strategies within individual, group, family, and community contexts.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or three years of experience in business, community service, or industry.

Certificate Requirements

The successful completion of 10 course credits, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CPSY 102   Psychology: Introduction to Psychology I
▶ CPSY 202   Psychology: Introduction to Psychology II
▶ CPSY 215   Psychology: Psychology of Addictions
▶ CPSY 325   Psychology: Psychological Disorders

Electives (total of six courses)

Electives – Group A (select at least two)

▶ CPSY 214   Psychology: Psychopharmacology
▶ CPSY 324   Psychology: Biological Psychology
▶ CPSY 335   Psychology: Clinical Psychology
▶ CPSY 607   Psychology: Drugs and Human Behaviour

Electives – Group B (select two to four)

▶ COPS 250   Psychology: Independent Study
▶ CPSY 300   Psychology: Psychology and Law
▶ CPSY 302   Psychology: Child Development
▶ CPSY 412   Psychology: Human Brain Circuitry
▶ CPSY 602   Psychology: Developmental Psychopathology
▶ CPSY 605   Psychology: Psychology of Health and Health Care
▶ CPSY 620   Psychology: Psychology of Immigration
▶ CPSY 621   Psychology: Psychology of Human Sexuality
▶ CPSY 802   Psychology: Death, Dying and Bereavement
▶ CPSY 805   Psychology: Adjustment, Stress and Coping
▶ CPSY 806   Psychology: Behaviour Modification
▶ CPSY 808   Psychology: Community Psychology

MINING MANAGEMENT

This certificate program will provide students with additional competencies in natural resource development, financing, and value creation in the mining industry. This 234-hour, post-baccalaureate certificate is designed to provide employable skills and act as a direct channel for students to access a large and growing sector of the Canadian economy. It addresses sustainability in the context of corporate social responsibility, exploration and development operations, risk factors, the reporting of these findings, and managerial strategies in the mining sector.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/mining**.

Admission Criteria

Eligible applicants must have the following:

An undergraduate degree with a GPA of 1.67

AND

Five years of professional experience in a relevant field

Admission Application

Students seeking admission to this program are required to complete an application for pre-approval and submit it to the academic coordinator. To obtain an application, visit **www.ryerson.ca/ce** and click on 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.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

- ► CZMM 403
- ► CZMM 420
- ► Electives (three selections)
- ► CZMM 500

Required Courses

- ► CZMM 403 Mining Management: CSR, Sustainability, and Mining
- ► CZMM 420 Mining Management: Resource Valuation, Financing, and Investor Relations
- ► CZMM 500 Mining Management: Corporate Strategy in the Mining Sector

Elective Courses (select three)

- ► CZMM 411 Mining Management: Exploration and Development Operations
- ► CZMM 421 Mining Management: Risk Management and the Mining Sector
- ► CZMM 422 Mining Management: Mining Management Accounting
- ► CZMM 430 Mining Management: Mining in the Global Environment

"Ryerson's approach brings together professionals who are taught to integrate the financial and operational aspects of this highly complex industry. This is critically important for managers where economic, social, and environmental sustainability are key elements of the business, whether at home or abroad.

Dr. Philip Walsh, P.Geol
Program Advisory Council, Mining Management
Associate Professor, Entrepreneurship and Strategy,
Ted Rogers School of Management

MUSIC: GLOBAL AND CULTURAL CONTEXTS

The Certificate in Music: Global and Cultural Contexts explores musical creation in all of its rich diversity. Students will learn about the complexities of music from around the globe, from ancient times until the modern age. Through concrete study of the ways in which music reflects and responds to its shifting cultural, social, political, and historical environments, students will hone skills in critical thinking, analysis, and writing. The program will be well-suited to students with broad interest in the study and practice of music for personal enrichment, academic progress, or professional development.

Academic Coordinator: Paul Swoger-Ruston, pruston@ryerson.ca (copying Nenita Elphick, Program Director, at elphick@ryerson.ca)

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (including English) with a minimum grade of 70 percent, or equivalent, or mature student status with relevant work experience.

Certificate Requirements

The successful completion of six courses (three required courses and three electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence: CMUS 101 and/or CMUS 106; Electives – Group A (one or two selections); and Electives – Group B (three selections).

Required Courses

Students may select one or both of the following courses. If only one course is taken, then two selections must be made from Electives – Group A.

▶ CMUS 101   Music: Intro to World and Early European Music
▶ CMUS 106   Music: The Architecture of Music

Electives – Group A (select one or two)

▶ CMUS 105   Music: Voices Without Borders: Global Chorus
▶ CMUS 211   Music: Music Cultures of the City
▶ CMUS 401   Music: Music, Religion and Spirituality
▶ CMUS 501   Music: Traditional Musics of the World

Electives – Group B (select three)

▶ CMUS 110   Music: Music and Film
▶ CMUS 201   Music: Introduction to Classical Music
▶ CMUS 303   Music: Global Guitar
▶ CMUS 403   Music: Latin American Music
▶ CMUS 406   Music: Chinese Instrumental Music
▶ CMUS 505   Music: Popular Music and Culture
▶ CMUS 506   Music: Chinese Music Studies

ADVANCED NEUROSCIENCE-STROKE CARE

Important Note: The certificate in Advanced Neuroscience-Stroke Care is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Community Services program area at 416.979.5035 or ce@ryerson.ca.

This Interprofessional Certificate in Advanced Neuroscience-Stroke Care offers health care providers the opportunity to develop an advanced understanding of evidence-based practices and research across the continuum of neuroscience and stroke client-centred care. Developed by subject matter experts in both the clinical and academic fields, the curriculum ensures industry relevance and recognition. To maximize access for health care professionals, all courses will be delivered through a combination of self-study, online course work, and live web conferencing.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/neuroscience-stroke**.

Admission Criteria

It is recommended that applicants have the following:

A baccalaureate degree or equivalent in a health-related field of study and a minimum of one years' related professional experience in neuroscience-stroke care.

If an applicant has experience in neuroscience-stroke care and/or is in the process of completing a baccalaureate degree or equivalent, the program manager will assess the applicant's work experience and academic credentials to determine the applicant's admissibility to the program.

Students who wish to enroll in specific courses on a stand-alone basis may do so with permission of the academic coordinator.

Students seeking admission to this program are required to complete an application for pre-approval. Complete an application via the online eligibility form.

Admission Interview

Admission interviews will be conducted either in person, by phone, or through an online Information Session. For further information, contact The G. Raymond Chang School of Continuing Education office by email at cenurse@ryerson.ca or 416.979.5000, ext. 4775.

Certificate Requirements

The successful completion of six single-term courses or equivalent, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CVNS 600   Neuroscience: Critical Appraisal of Evidence
- ▶ CVNS 620   Neuroscience: Health Promotion Paradigms
- ▶ CVNS 630   Neuroscience: Brain Structures and Cognition
- ▶ CVNS 640   Neuroscience: Neuro-Stroke Assessment
- ▶ CVNS 650   Neuroscience: Client Stroke Rehabilitation Recovery
- ▶ CVNS 660   Neuroscience: Leadership in Stroke Care

Note to registered certificate program students

The certificate in Advanced Neuroscience-Stroke Care is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Community Services program area at 416.979.5035 or ce@ryerson.ca.

NEWS STUDIES

This certificate program is designed to provide students with a thorough understanding of how journalists gather, report, analyze, and explain what is considered "news." It is of interest to those whose work intersects with journalists, media relations personnel, individuals interested in news and the media, and students interested in pursuing a career in communications.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/newsstudies.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Sequence

Students are required to take the courses in the following sequence:

- ► CNNS 101
- ► Electives (five selections)

Required Course

- ► CNNS 101   News Studies: Introduction to News Studies

Electives (select five)

- ► CJRN 123   Journalism: Ethics and Law in the Practice of Journalism
- ► CJRN 401   Journalism: History of Journalism
- ► CJRN 404   Journalism: Journalism's Best
- ► CJRN 412   Journalism: Documentary Survey
- ► CNNS 102   News Studies: Understanding Multimedia Journalism
- ► CNNS 500   News Studies: Journalism and the Arts
- ► CNNS 502   News Studies: Journalism and the World of Business
- ► CNNS 505   News Studies: Health and Science Journalism
- ► CNNS 512   News Studies: Reporting Sports

Note to registered certificate program students

As of the 2013–2014 academic year, the curriculum as noted above, shows the courses that must be completed by all students in order to satisfy the graduation requirements of the Certificate in News Studies. Students formally registered in the certificate prior to Fall 2013, should contact Muthana Zouri, Program Director, Communication and Design, at 416.979.5000, ext. 6684 or mzouri@ryerson.ca to review their student record and the graduation requirements of the News Studies certificate.

NONPROFIT AND VOLUNTARY SECTOR MANAGEMENT

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

Ryerson has created this distinctive, interdisciplinary certificate program in response to a growing demand for education that focuses on the specialized needs of the sector.

This program is the first undergraduate university certificate program in nonprofit sector management in Canada. It is affiliated with Ryerson's Centre for Voluntary Sector Studies, which provides a dynamic link to the sector through research, consultation, and educational programming. This unique program offers the following:

► an interdisciplinary curriculum pooling knowledge from three academic disciplines: business management, public administration, and social work

► a practical blend of theory and application taught by academics and practitioners

► a wide range of current and relevant courses covering key areas such as marketing, financial management, fundraising, advocacy, strategic planning, program evaluation, organizational management, and organizational change

Courses are available in a variety of formats including distance via the Internet.

Who Will Benefit

► managers, staff, practitioners, and volunteers of nonprofit organizations

► those interested in pursuing careers in the nonprofit sector

► those interested in developing partnerships with nonprofit organizations

The certificate is affiliated with Ryerson University's Centre for Voluntary Sector Studies.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/nonprofit**. For related career information, see Industry Overview.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Certificate Requirements

The successful completion of eight single-term courses (four required courses and four electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

► CINP 900   Nonprofit: Understanding the Nonprofit Sector
► CINP 901   Nonprofit: Developing Effective Organizations
► CINP 902   Nonprofit: Program Evaluation
► CINP 920   Nonprofit: Critical Issues in the Third Sector

Electives (select four)

► CINP 910   Nonprofit: Strategic Planning
► CINP 911   Nonprofit: Advocacy and Governmental Relations
► CINP 912   Nonprofit: Marketing for Nonprofit Organizations
► CINP 913   Nonprofit: Leading Through Change
► CINP 914   Nonprofit: Issues of Diversity
► CINP 915   Nonprofit: Financial Management
► CINP 916   Nonprofit: NGOs and World Governance

ADVANCED NURSING LEADERSHIP AND MANAGEMENT

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate program is designed to meet the needs of nurses currently employed or aspiring to be employed in leadership and management roles within a health services setting. The program builds on the foundational leadership and management content encompassed by a baccalaureate degree; provides access to courses that will focus on students' main area of leadership and/or management interest; and provides students with the opportunity to apply newly acquired knowledge to a practical leadership and/or management issue.

Admission Criteria

Students seeking admission to this certificate program must be Registered Nurses (RN) who are registered with the professional governance body of their jurisdiction. They must hold a Canadian undergraduate degree in Nursing (BScN) or equivalent degree.

Admission Application

Students seeking admission to this program are required to complete an application for pre-approval and submit it to the academic coordinator before registering in their first course. Complete an application via the online eligibility form.

Admission Interview/Placement Assessment

An individual consultation with a program advisor is required in order to assist students in selecting both a focus for the certificate and appropriate electives. Contact the Nursing program advisors at cenurse@ryerson.ca or 416.979.5000, ext. 4775.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

▶ CVNU 360

▶ Electives – Group A (select one)

▶ Electives – Group B (select one or two)

▶ Electives – Group C (select one or two)

▶ CVNU 370

It is highly recommended that students complete CVNU 360 as their first course. The capstone course, CVNU 370, may only be taken as the last course in the certificate. Students are encouraged to contact the Nursing program advisors in order to plan their capstone registration.

Required Courses

▶ CVNU 360   Nursing: Advanced Leadership and Management
▶ CVNU 370   Nursing: Change and Innovation

Electives (select a total of four courses)

Electives – Group A: Program Planning and Evaluation (select one)

▶ CHSM 408   Health Services Management: Program Planning and Evaluation
▶ CINP 902   Nonprofit: Program Evaluation
▶ CINT 900   Interdisciplinary Studies: Program Planning and Evaluation Strategies
▶ CPPA 402   Politics and Public Administration: Program Planning and Evaluation

Electives – Group B: Leadership (select one or two)

▶ CINT 905   Interdisciplinary Studies: Conflict Resolution in Community Services
▶ CINT 907   Interdisciplinary Studies: Team Work for Community Services
▶ CINT 911   Interdisciplinary Studies: International Community Development
▶ CMHR 505   Human Resources: Organizational Behaviour II
▶ CMHR 638   Human Resources: Leaders as Coaches and Mentors
▶ CMHR 741   Human Resources: Managing Interpersonal Dynamics

Electives – Group C: Management (select one or two)

- ▸ CHIM 300   Health Information Management: Managing Health Information Services
- ▸ CHSM 301   Health Services Management: The Healthcare Systems
- ▸ CHSM 305   Health Services Management: The Management Cycle
- ▸ CHSM 307   Health Services Management: Principles of Long Term Care Service Del.
- ▸ CHSM 326   Health Services Management: Law for Health Managers
- ▸ CHSM 437   Health Services Management: Human Resources Management in Healthcare
- ▸ CINP 915   Nonprofit: Financial Management
- ▸ CINT 920   Interdisciplinary Studies: Community Collaborations
- ▸ CKPM 202   Project Management: Fundamentals of Project Management
- ▸ CKPM 203   Project Management: Planning and Scheduling
- ▸ CKPM 209   Project Management: Project Risk and Quality Management
- ▸ CMHR 650   Human Resources: Management of Change
- ▸ CMHR 721   Human Resources: Negotiation and Conflict Resolution
- ▸ CMHR 841   Human Resources: Organization Theory and Design
- ▸ CSWP 934   Social Work: Community Engagement Foundations
- ▸ CSWP 936   Social Work: Community Engagement Practices
- ▸ CVNU 321   Nursing: Financial Management

OCCUPATIONAL HEALTH AND SAFETY

Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.

This certificate program in Occupational Health and Safety was developed in cooperation with the Ryerson School of Occupational and Public Health (**www.ryerson.ca/sophe**). This unique offering is designed especially for those currently involved in the field who wish to expand their knowledge and improve their skills. The program covers a wide range of perspectives, principles, and issues in the occupational health and safety field, and is applicable to all types of industry.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/ohs**. For related career information, see Industry Overview.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status and extensive professional experience.

Certificate Requirements

The successful completion of eight courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ► CCMN 114   Communication: Short Management Reports
- ► COHS 208   Occupational Health: Occupational Health and Safety Law
- ► COHS 508   Occupational Health: Occupational Health
- ► COHS 608   Occupational Health: Hazard Recognition and Control
- ► COHS 718   Occupational Health: Systems Management I
- ► CVOH 217   Occupational Health: Measurement and Analysis
- ► CVOH 221   Occupational Health: Topics in Occupational Health and Safety

Electives (select one)

- ► CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills
- ► COHS 477   Occupational Health: Integrated Disability Management
- ► CPPA 101   Politics and Public Administration: Cdn Public Administration I: Institutions

Note: Many of the courses are offered in an intensive format. For additional information, see course descriptions at **www.ryerson.ca/ce.**

> **The Chang School's Certificate in Occupational Health and Safety is the oldest program of its kind in Canada and it boasts graduates across the country. Students take our certificate to hone their skills as effective practitioners in the field of occupational health and safety and The Chang School delivers by covering a a wide range of perspectives, principles, and issues in the field.**

Craig Fairclough
Academic Coordinator, Occupational Health and Saftey

PHOTOGRAPHY STUDIES

Photography has become an important medium of communication in industry, sales and advertising, government, education, the press, and the arts; consequently, there has been a rise in the demand for properly trained and qualified personnel to work in these fields. This certificate program addresses these needs by offering a basic professional program of study in photography for those who wish to upgrade their present level of expertise, retrain or make a career change, establish their own business, improve opportunities for advancement or job placement in photography-related fields, or prepare for entrance into the degree program at an advanced level.

The courses in the certificate program are usually equivalent to one-half or one-quarter of similar courses in the undergraduate degree program. In some cases full credit for an undergraduate degree course may be granted by completing specific certificate courses (see course descriptions). Transfer Credit students will not be considered unless they have already taken the Image History, Image Theory, and Visual Studies courses.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/photography**.

Individual Courses

Students not wishing to complete the Certificate in Photography Studies may take individual courses from the certificate program for general interest.

Admission Criteria

It is recommended that applicants have the following:

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 professional experience.

Advanced Standing

Mature students may be eligible on the basis of work experience in a relevant field. Applicants possessing higher qualifications will be considered for advanced standing on individual merits.

Certificate Requirements

The successful completion of eight single-term courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Equipment/Facilities Use

Please note that equipment and facilities use outside of class time will not be provided. Extra time may be purchased.

Required Courses

- ► CDFP 328   Photography: Photography Production I
- ► CDFP 329   Photography: Photography Production II
- ► CDFP 391   Photography: History of Photography I

Electives (select five)

- ► CDFP 320   Photography: Analog Photography
- ► CDFP 322   Photography: Photography for Ad Agencies
- ► CDFP 332   Photography: Digital Printing
- ► CDFP 333   Photography: Photography and Digital Imaging
- ► CDFP 358   Photography: Photography and the Web
- ► CDFP 367   Photography: Photoshop for Photographers
- ► CDFP 378   Photography: 20th Century Photography
- ► CDFP 381   Photography: Advanced Fashion Photography
- ► CDFP 382   Photography: Advanced Portrait Photography
- ► CDFP 389   Photography: Studio Lighting I
- ► CDFP 390   Photography: Studio Lighting II
- ► CDFP 392   Photography: Documentary Photography
- ► CDFP 398   Photography: History of Photography II
- ► CDFP 403   Photography: Creative Wedding Photography
- ► CDFP 404   Photography: Magazine/Editorial Photography
- ► CDFP 405   Photography: Architectural Photography
- ► CDFP 415   Photography: Studio Lighting III
- ► CFPN 532   Photography: Advanced Studio Lighting
- ► CFPN 536   Photography: Media Business Studies
- ► CFPN 539   Photography: The Human Figure
- ► CFPN 543   Photography: Historical Processes Workshops

Note to registered certificate program students

Electives

CDFP 415 added.

An Intensive, 12-Week Program

Students now have the opportunity to obtain the Certificate in Photography Studies over 12 intensive, 5-day weeks. This unique fast-track program covers all required production, technology, and studio courses.

CDFP 999 Photography: Photography Studies Intensive

PHYSICAL ACTIVITY: ASSESSMENT AND PROMOTION

This program provides dietetic and nutrition practitioners with a unique interdisciplinary perspective on human movement. It offers knowledge and tools necessary to approach physical activity using the population health framework. Topics include exercise physiology, physical assessment, social aspects of health and activity, health related fitness outcomes and body weight management, healthy development and aging, and methodology to create active environments and lifestyles.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/PracticeinMotion.**

Admission Criteria

Eligible applicants must have:

A Bachelor's degree in Nutrition and Food (or equivalent) or have clear standing in an upper year of such a degree program. Please Paul Gorczynski, Academic Coordinator, at paulgorczynski@ryerson.ca for approval (an interview might be required).

Certificate Requirements

The successful completion of seven courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. It is recommended that the following courses are completed first: CFNA 100, CPLN 303, CFNA 201, and CFNA 300.

Required Courses

▶ CFNA 100   Physical Activity: Health and Physical Activity
▶ CFNA 201   Physical Activity: Lifestyle and Fitness Assessment
▶ CFNA 202   Physical Activity: Physical Activity and the Environment
▶ CFNA 300   Physical Activity: Nutrition and Physical Activity
▶ CFNA 301   Physical Activity: Exercise Intervention
▶ CPLN 303   Physical Activity: Exercise Science and Physiology
▶ CVPA 200   Physical Activity: Anatomy

PROGRAM AND PORTFOLIO MANAGEMENT

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

Globalization has caused the market to become more competitive and organizations to become more complex. Both of these factors have created a demand for effective project, program, and portfolio management. This has been heightened by increased pressures presented by the recent economic downturn.

The goal of the Certificate in Program and Portfolio Management is to equip individuals who possess project management experience with the knowledge and skills required to successfully manage programs and portfolios. Inextricably partnered with this goal is that of providing reputable, university-level education which elevates the competency and relative desirability of certificate graduates in the field of project management.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/ppm**.

Academic Coordinator: John Estrella, jestrella@ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree or equivalent;

OR

A post-secondary diploma or equivalent AND three years of professional work experience (i.e., full-time and paid employment in a corporate, government/NGO/military, academic/research, and/or not-for-profit setting);

OR

Five years of related full-time professional work experience AND the approval of the academic coordinator;

OR

Ryerson University's Certificate in Project Management or equivalent;

OR

Current standing as a Project Management Professional (PMP) by the Project Management Institute (PMI).

Certificate Requirements

The successful completion of six credits (four required courses and six to eight electives (or 156 course hours)), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CKPP 110   Program and Portfolio Management: Overview of Program Management
▶ CKPP 120   Program and Portfolio Management: Overview of Portfolio Management
▶ CKPP 130   Program and Portfolio Management: Program and Portfolio Governance
▶ CKPP 140   Program and Portfolio Management: Organizational Strategy Through Projects

Electives (select 156 hours)

19.5-Hour Courses

▶ CKPP 210   Program and Portfolio Management: Financial Measurements for Success
▶ CKPP 220   Program and Portfolio Management: Managing Programs and Projects Virtually
▶ CKPP 230   Program and Portfolio Management: Enterprise Risk Management
▶ CKPP 240   Program and Portfolio Management: Advanced Leadership Skills
▶ CKPP 250   Program and Portfolio Management: Leading Organizational Change
▶ CKPP 260   Program and Portfolio Management: Creating Balanced Portfolios
▶ CKPP 270   Program and Portfolio Management: Crisis Management and Program Recovery
▶ CKPP 280   Program and Portfolio Management: Global Program Management

39-Hour Courses

▶ CKPP 310   Program and Portfolio Management: Program and Portfolio Management Research
▶ CKPP 320   Program and Portfolio Management: Program and Portfolio Management Practicum

PROJECT MANAGEMENT

Note: *This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate program in Project Management provides adult learners with an opportunity to acquire a level of knowledge and expertise that will permit them to contribute effectively to the management and the control of costs within any project environment. The program was developed in cooperation with the Project Management Institute, Southern Ontario Chapter.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/pm**. For related career information, see Industry Overview.

Certificate Streams

▶ Project Management (General)

▶ Architecture, Engineering, and Construction (AEC)

▶ Business and Information Management

▶ Community and Health Services Management

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent; persons lacking some of these requirements will be considered on an individual basis taking into account work-related experience and maturity.

Certificate Requirements

The successful completion of eight single-term courses, earned in one of the following ways:

▶ five required core courses, two stream-specific courses, and one elective

▶ five required core courses and three courses from the general stream

Students must achieve a cumulative grade point average of 1.67 or higher to graduate.

Recommended Sequence

Students are advised to take the courses in the following sequence: CKPM 202 or CITM 750, CKPM 203, CKPM 211, CKPM 212, CKPM 209. Students in the Business and Information Management stream are advised to take CITM 305 and CITM 410 first.

Suggested Textbooks and Readings

Visit the website at **www.ryerson.ca/ce/pm** for a list of textbooks and readings that may be used for all six Project Management Intensive courses. Please be aware that this list is subject to change. A finalized list will be presented on the first day of class.

Required Courses

Core Program, Introductory Required Course

Note: Students must choose either CKPM 202 or CITM 750. Students who plan to pursue the ITM degree should take CITM 750, as CKPM 202 is not a degree credit and cannot be used towards the ITM degree.

▶ CITM 750   Information Technology Management: IS Project Management

▶ CKPM 202   Project Management: Fundamentals of Project Management

Core Program, Required Courses

▶ CKPM 203   Project Management: Planning and Scheduling

▶ CKPM 209   Project Management: Project Risk and Quality Management

▶ CKPM 211   Project Management: Leadership in Project Management

▶ CKPM 212   Project Management: Project Cost and Procurement Management

Select one option below:

Option 1: Project Management General Stream, Required Courses

Note: Students may substitute one of the following courses with one 39-hour course from 'Electives – All Streams'.

▶ CCMN 114   Communication: Short Management Reports

▶ CKPM 207   Project Management: Project Management Systems

▶ CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills

Option 2: Architecture, Engineering, and Construction Stream, Required Courses

▶ CKPM 213   Project Management: Management of Projects in the AEC

▶ CKPM 214   Project Management: Project Development and Control

Option 3: Business and Information Management Stream, Required Courses

Note: Students in this stream should take CITM 305 and CITM 410 first, then take CITM 750 or CKPM 202, followed by the required courses in the core program.

- ▶ CITM 305   Information Technology Management: Systems Analysis and Design
- ▶ CITM 410   Information Technology Management: Business Process Design

Option 4: Community and Health Services Management Stream, Required Courses (select two)

- ▶ CHSM 301   Health Services Management: The Healthcare Systems
- ▶ CHSM 305   Health Services Management: The Management Cycle
- ▶ CHSM 307   Health Services Management: Principles of Long Term Care Service Del.

Note: Unlike the industry specific streams, the general stream does not have a free elective.

Electives – All Streams (select one 39-hour course or two 19.5-hour courses)

19.5-Hour Courses

- ▶ CKPP 110   Program and Portfolio Management: Overview of Program Management
- ▶ CKPP 120   Program and Portfolio Management: Overview of Portfolio Management

39-Hour Courses

- ▶ CCMN 114   Communication: Short Management Reports
- ▶ CHSM 306   Health Services Management: Management Leadership and Decision-Making
- ▶ CHSM 308   Health Services Management: Project Management – Long Term Care
- ▶ CINT 905   Interdisciplinary Studies: Conflict Resolution in Community Services
- ▶ CITM 505   Information Technology Management: Managing Information Systems
- ▶ CKPM 207   Project Management: Project Management Systems
- ▶ CKPM 215   Project Management: Emerging Trends in Project Management
- ▶ CKPM 216   Project Management: Project Management Internship
- ▶ CMHR 405   Human Resources: Organizational Behaviour and Interpersonal Skills

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:

Professional Development Award: Project Management requires completion of any three of the following courses: CKPM 202, CKPM 203, CKPM 207, CKPM 209, CKPM 211, CKPM 212, CKPM 213, CKPM 214, CKPM 215, and/or CKPM 216.

PROJECT MANAGEMENT FOR TECHNICAL PROFESSIONALS

Formerly: Project Management Bridging Certificate for Internationally Educated Professionals

This certificate program will prepare professionals with technical backgrounds such as engineers, information technology professionals, scientists, environmentalists, and other technical professionals to become employed in middle-level management (MLM) positions in the field of project management. Participants will gain knowledge and skills in estimating, scheduling, risk analysis, quality assurance, leadership, problem-solving, and Canadian workplace culture and communication.

Certificate graduates will increase opportunities for career advancement or employability by acquiring a level of knowledge and expertise that will permit them to move into project management roles. This certificate will help prepare students to write the Project Management Professional (PMP)® examination offered by the Project Management Institute (PMI). Certificate graduates will be eligible to continue on to the Certificate in Project Management and/or the Certificate in Program and Portfolio Management, both offered by The Chang School.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/mlm.**

Admission Criteria

Eligible applicants must have the following:

An undergraduate degree and a minimum of two years of professional experience in a related field

AND

Be an accepted and registered participant in the Gateway for International Professionals' Middle-level Managers (MLM) with Technical Background Bridging Program

AND

Be a legal resident of Ontario at the time of application, and be eligible to work in Canada

AND

Have resided in Canada for no more than 10 years

AND

Be an internationally educated professional in a suitable technical discipline

AND

Demonstrate English language proficiency through any of Ryerson University's approved English language proficiency test scores

OR

OSSD with six Grade 12 U or M credits, or equivalent; persons lacking some of these requirements will be considered on an individual basis taking into account 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@ryerson.ca or 416.979.5000, ext. 2705.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Course

▶ CKPM 202   Project Management: Fundamentals of Project Management

Electives (select a total of five courses)

Electives – Group A (select three)

▶ CKPM 123   Project Management:Strategic Project Mgt (Tech Prof)
▶ CKPM 207   Project Management: Project Management Systems
▶ CKPM 211   Project Management: Leadership in Project Management
▶ CKPM 212   Project Management: Project Cost and Procurement Management
▶ CKPM 216   Project Management: Project Management Internship
▶ CKPM 456   Project Management: Enterprise Project Mgt (Tech Prof)

Electives – Group B (select two)

▶ CCMN 432   Communication: Communication in the Engineering Professions
▶ CDCE 400   Workplace Communication in Canada (WCC): Exploring Leadership Skills
▶ CDCE 910   Workplace Communication in Canada (WCC): Effective Oral Communication
▶ CMHR 405 Human Resources: Organizational Behaviour and Interpersonal Skills
▶ CMHR 650 Human Resources: Management of Change

Note to registered certificate program students

Effective Fall 2014, the Certificate in Project Management Bridging Certificate for Internationally Educated Professionals has been revised to Project Management for Technical Professionals. Students who were formally registered in the certificate prior to July 1, 2014, must complete the requirements in effect at the time of their registration.

PSYCHOLOGY

This certificate program will appeal to students who wish to enhance their career opportunities and/or personal interests. The program provides the opportunity to study and understand human behaviour in a wide variety of settings. It is designed to familiarize students with the methods, concepts, theories, and applications of psychology. Students may choose electives from a variety of areas in psychology or they may choose to specialize. Suggested specializations include the following:

▶ 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

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or three years of experience in business, community service, or industry.

Transfer Credits

Up to four single-term course credits may be granted on the basis of the successful completion of other Ryerson psychology courses or the completion of psychology courses at other post-secondary institutions meeting Ryerson Faculty of Arts requirements.

Certificate Requirements

The successful completion of eight course credits, with a cumulative grade point average of 1.67 or higher, is required for the certificate. Three courses are compulsory: a foundation course, a research methodology course, and an independent study course. A foundation course must be taken as the first course. The independent study course may be taken only after the foundation course, the research methodology course, and three other courses chosen from the electives have been completed.

Required Courses

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

▶ COPS 250   Psychology: Independent Study
▶ COPS 601   Psychology: Research Methodology
▶ CPSY 102   Psychology: Introduction to Psychology I
▶ CPSY 105   Psychology: Perspectives in Psychology

Students planning to enroll in the Independent Study course should contact the Academic Coordinator, Department of Psychology, at 416.979.5000, ext. 6195, in the first week of September or January, to be assigned a faculty advisor from the Department of Psychology.

Electives (select five)

▶ CPSY 202   Psychology: Introduction to Psychology II
▶ CPSY 214   Psychology: Psychopharmacology
▶ CPSY 215   Psychology: Psychology of Addictions
▶ CPSY 300   Psychology: Psychology and Law
▶ CPSY 302   Psychology: Child Development

▶ CPSY 304   Psychology: Psychology of Gender
▶ CPSY 308   Psychology: Psychology of Thinking
▶ CPSY 324   Psychology: Biological Psychology
▶ CPSY 325   Psychology: Psychological Disorders
▶ CPSY 402   Psychology: Adult Development
▶ CPSY 412   Psychology: Human Brain Circuitry
▶ CPSY 504   Psychology: Social Psychology
▶ CPSY 505   Psychology: Personality Theory
▶ CPSY 518   Psychology: Environmental Psychology
▶ CPSY 602   Psychology: Developmental Psychopathology
▶ CPSY 606   Psychology: Abnormal Psychology
▶ CPSY 607   Psychology: Drugs and Human Behaviour
▶ CPSY 614   Psychology: Psychology of Sport
▶ CPSY 620   Psychology: Psychology of Immigration
▶ CPSY 621   Psychology: Psychology of Human Sexuality
▶ CPSY 706   Psychology: Personal Growth and Positive Psychology
▶ CPSY 707   Psychology: Models of Stress and Adaptation
▶ CPSY 802   Psychology: Death, Dying and Bereavement
▶ CPSY 805   Psychology: Adjustment, Stress and Coping
▶ CPSY 806   Psychology Behaviour Modification
▶ CPSY 807   Psychology: Psychology of Prejudice
▶ CPSY 808   Psychology: Community Psychology
▶ CPSY 941   Psychology: Cross Cultural Psychology Specialization

Suggested Elective Groupings

Students may choose electives from a variety of areas in psychology, or they may choose to specialize to achieve their individual goals. The electives may be grouped as follows:

Abnormal Behaviour: CPSY 215, CPSY 325, CPSY 602, CPSY 606, CPSY 607, CPSY 805, CPSY 806

Biology and Behaviour: CPSY 214, CPSY 215, CPSY 324, CPSY 412, CPSY 607, CPSY 621

Growth and Development: CPSY 302, CPSY 402, CPSY 602, CPSY 802

Personality: CPSY 505, CPSY 706, CPSY 805

Social Behaviour: CPSY 304, CPSY 504, CPSY 518, CPSY 614, CPSY 807, CPSY 808

Social Issues: CPSY 300, CPSY 518, CPSY 607, CPSY 620, CPSY 808, CPSY 941

PUBLIC ADMINISTRATION AND GOVERNANCE

Note: *This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

Students who wish to obtain their Certificate in Public Administration and Governance or the Advanced Certificate in Public Administration and Governance, must apply through the Office of Undergraduate Admissions for admission to the Public Administration and Governance program. Do not use the standard continuing education certificate application. Upon completing these certificates, students may continue their studies to earn a degree in Public Administration and Governance. Please contact Joseph Zboralski, Department of Politics and Public Administration: jzboralski@politics.ryerson.ca.

The Certificate and Advanced Certificate in Public Administration and Governance are designed for working public sector employees, students aspiring to careers in the public service, and those interested in gaining knowledge about public administration and public policy in Canada.

These certificates will provide students with the following:

▶ a better understanding of organizations and operations in the public sector

▶ the attainment of analytic, administrative, communication, and management skills necessary for career development in the public sector and organizations that deal with it

▶ an awareness of the political forces that shape public administration and policy

These certificates fulfill Levels 1 and 2 of the Public Administration and Governance degree program.

Program Information: Department of Politics and Public Administration: jzboralski@politics.ryerson.ca

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits (including English) with a minimum of 60 percent, or mature student status.

Grade 13 subjects/OSSHGD may be combined/substituted with OACs/OSSD. Students who present credits from the OSSHGD (Grade 13 stream) or in combination with credits from the OSSD (OAC stream) should ensure that the credits satisfy the requirements.

Certificate Requirements

The successful completion of eight single-term courses, with a cumulative grade point average of 1.67 or higher, is required. Students working toward a certificate must formally register in the Public Administration and Governance program (see introductory note above).

Required Courses

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

Required Group 1 (select two)

▶ CPPA 120   Politics and Public Administration: Canadian Politics and Government
▶ CPPA 121   Politics and Public Administration: Ontario Politics and Government
▶ CPPA 122   Politics and Public Administration: Local Politics and Government
▶ CPPA 124   Politics and Public Administration: Indigenous Politics and Governance

Liberal Studies Elective Group A
(One 1-term lower-level course required)

Liberal Studies courses are indicated by a "LL" for Lower Level and "UL" for Upper Level. Consult the undergraduate calendar for the complete list of Liberal Studies courses, and use the Course Search to search for your course by subject, term, time, or instruction mode.

Professionally Related Elective Group B
(Two 1-term courses required from Table I)

Students intending to proceed to further levels of the program should familiarize themselves with prerequisites pertaining to professionally related elective courses at all levels of the program as well as options for obtaining a minor. Consult the undergraduate calendar for a list of courses.

Note: Upon successful completion of Level 1, students may apply for a Certificate in Public Administration and Governance by completing an Application to Graduate with a Certificate, prior to the appropriate application deadlines.

ADVANCED PUBLIC ADMINISTRATION AND GOVERNANCE

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

Students who wish to obtain their Certificate in Public Administration and Governance or the Advanced Certificate in Public Administration and Governance, must apply through the Office of Undergraduate Admissions for admission to the Public Administration and Governance program. Do not use the standard continuing education certificate application. Upon completing these certificates, students may continue their studies to earn a degree in Public Administration and Governance. Please contact Joseph Zboralski, Department of Politics and Public Administration: jzboralski@politics.ryerson.ca.

The Certificate and Advanced Certificate in Public Administration and Governance are designed for working public sector employees, students aspiring to careers in the public service, and those interested in gaining knowledge about public administration and public policy in Canada.

These certificates will provide students with the following:

▶ a better understanding of organizations and operations in the public sector

▶ the attainment of analytic, administrative, communication, and management skills necessary for career development in the public sector and organizations that deal with it

▶ an awareness of the political forces that shape public administration and policy

These certificates fulfill Levels 1 and 2 of the Public Administration and Governance degree program.

Program Information: Department of Politics and Public Administration: jzboralski@politics.ryerson.ca

Admission Criteria

Eligible applicants must have the following:

Certificate in Public Administration and Governance.

Certificate Requirements

The successful completion of eight single-term courses, with a cumulative grade point average of 1.67 or higher, is required. Students working toward a certificate must formally register in the Public Administration and Governance program (see introductory note).

Required Courses

▶ CPPA 211   Politics and Public Administration: Public Policy

Required Group 1 (select three, not previously taken)

▶ CPPA 120   Politics and Public Administration: Canadian Politics and Government
▶ CPPA 121   Politics and Public Administration: Ontario Politics and Government
▶ CPPA 122   Politics and Public Administration: Local Politics and Government
▶ CPPA 235   Politics and Public Administration: Theories of the State
▶ CPPA 303   Politics and Public Administration: Financial Management
▶ CPPA 319   Politics and Public Administration: Politics of Work and Labour

Liberal Studies Elective Group A
(One 1-term lower-level course required)

Liberal Studies courses are indicated by a "LL" for Lower Level and "UL" for Upper Level. Consult the undergraduate calendar for the complete list of Liberal Studies courses, and use the Course Search to search for your course by subject, term, time, or instruction mode.

Professionally Related Elective Group B
(1 course required)

▶ CECN 104   Economics: Introductory Microeconomics
▶ CECN 204   Economics: Introductory Macroeconomics
▶ CECN 210   Economics: Inflation and Unemployment in Canada
▶ CECN 220   Economics: Evolution of the Global Economy
▶ CECN 320   Economics: Introduction to Financial Economics Professionally

Related Elective Group C
(Two 1-term courses required)

Please refer to the Undergraduate Calendar, Professionally Related Electives Table I for a complete list of appropriate courses.

Students intending to proceed to Level 3 of the program should familiarize themselves with prerequisites pertaining to professionally related elective courses at all levels of the program as well as options for obtaining a minor.

Note: Upon successful completion of Level 2, students may apply for an Advanced Certificate in Public Administration and Governance by completing an Application to Graduate with a Certificate, prior to the appropriate application deadlines.

Students who have successfully completed the requirements for the Certificate and Advanced Certificate are eligible to continue to the degree level. For more information, contact the Department of Politics and Public Administration, 416.979.5057.

PUBLIC ADMINISTRATION AND LEADERSHIP

This program is designed for individuals who have already completed a degree and who wish to deepen their understanding of the key aspects of public sector management. The curriculum is focused on key areas of policy development, public sector finance, collaborative governance, intergovernmental affairs, program evaluation, e-government, and administrative law. A special capstone course focuses on the nature and style of leadership in the public sector.

Academic Coordinator: Chris Gore, chris.gore@politics.ryerson.ca

Admission Criteria

Eligible applicants must have the following:

An undergraduate degree in any field. Applicants who do not have a background in politics or public administration and/or no experience in the public sector are encouraged to successfully complete COPA 103 prior to admission in the certificate.

Admission Application

Students seeking admission to this program are required to submit an application for pre-approval to the academic coordinator for the Certificate in Public Administration and Leadership. To obtain an application, visit **www.ryerson.ca/ce** and click on 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.

Certificate Requirements

The successful completion of six courses (three required courses and three electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

- ▶ CPPA 211   Politics and Public Administration: Public Policy
- ▶ CPPA 404   Politics and Public Administration: Issues in Public Administration
- ▶ CPPA 501   Politics and Public Administration: Public Sector Leadership

Electives (select three)

- ▶ CPPA 301   Politics and Public Administration: Administrative Law
- ▶ CPPA 303   Politics and Public Administration: Financial Management
- ▶ CPPA 335   Politics and Public Administration: Theories of Bureaucracy
- ▶ CPPA 401   Politics and Public Administration: Collaborative Governance
- ▶ CPPA 402   Politics and Public Administration: Program Planning and Evaluation
- ▶ CPPA 403   Politics and Public Administration: e-Government
- ▶ CPPA 414   Politics and Public Administration: Comparative Public Policy
- ▶ CPPA 425   Politics and Public Administration: Intergovernmental Relations

PUBLIC RELATIONS

Note: *This certificate program may be completed entirely at a distance. Visit the distance education website at* **www.ryerson.ca/ce/de** *for further information.*

If a challenging career consulting with professional businesses, community organizations, or government agencies sounds appealing, then public relations may be for you. Public relations practitioners work with a variety of leaders and other professionals to protect and enhance organizational reputation; manage issues and crises; conduct media relations; develop internal and external communication programs; develop and manage communication budgets; and write supporting communication materials such as plans, reports, news releases, business presentations, newsletters, website content, and much more.

Recognized by the International Association of Business Communicators (IABC), the Certificate in Public Relations provides a curriculum that will hone your practical, analytical, and theoretical skills to prepare you for a career in public relations.

Admission Criteria

It is recommended that applicants have the following:

An undergraduate degree or three-year community college diploma; mature students must have, at least, a high school diploma and four years of progressive work experience in public relations practice, or in a business, professional, or technical field.

Course Prerequisites

Successful completion of all stated prerequisites is required for registration in a course. Students who register in a course without successful completion of the prerequisites will be required to withdraw.

Certificate Requirements

The successful completion of the equivalent of eight 39-hour courses with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

- ▶ CDPR 100
- ▶ CDPR 111
- ▶ Electives – three 39-hour courses (or equivalent combination of electives totalling 117 hours)
- ▶ CDPR 104
- ▶ CDPR 105
- ▶ CDPR 107

Required Courses

- ▶ CDPR 100   Public Relations: Public Relations Principles
- ▶ CDPR 104   Public Relations: Planning Programming and Budgeting
- ▶ CDPR 105   Public Relations: Research and Program Evaluation
- ▶ CDPR 107   Public Relations: Public Relations Project
- ▶ CDPR 111   Public Relations: Writing for Public Relations

Electives (three 39-hour courses or equivalent combination of electives totalling 117 hours)

39-Hour Courses

- ▶ CDPR 106   Public Relations: Media Relations
- ▶ CDPR 108   Public Relations: Social Media in Public Relations
- ▶ CDPR 113   Public Relations: Internal Communications Management

19.5-Hour Courses

Students may substitute two of the following 19.5-hour courses for any of the above 39-hour electives.

- ▶ CDPR 102   Public Relations: Business Presentations
- ▶ CDPR 103   Public Relations: Advanced PR Writing
- ▶ CDPR 110   Public Relations: Reputation Management
- ▶ CDPR 115   Public Relations: Corporate Social Responsibility

Note to registered certificate program students

Effective Fall 2014, the Certificate in Pubic Relations has been revised. Students who were formally registered in the certificate prior to July 1, 2014, must complete the requirements in effect at the time of their registration.

Required Courses

CDPR 201 deleted.

CDPR 100 added.

Electives (39-Hour Courses)

CDPR 104 moved to Required Courses, thereby increasing the number of Required Courses to five and reducing the number of Electives to three (or 117 hours in total).

CDPR 114 deleted.

Electives (19.5-Hour Courses)

CDPR 110 added.

PUBLISHING

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This program teaches the skills necessary to publish books successfully. The program will be of interest to the following:

▶ those who want to enter the publishing industry

▶ those who are employed in the publishing industry or in areas where publishing skills are required

▶ those who are working as freelancers in publishing-related fields

▶ those who wish to upgrade their credentials with a view to career change

For detailed certificate and program information, please visit **www.ryerson.ca/ce/publishing**. For related career information, see Industry Overview.

Instructors

Our instructors are respected industry experts. They all work in publishing and bring up-to-date, applied knowledge to every course. Visit **www.ryerson.ca/ce/publishinginstructors** for current instructor biographies.

Awards

Students registered in the certificate program may apply for the program's awards and bursary; visit **www.ryerson.ca/ce/publishingawards** for more details.

Internships

We have an extensive network of industry partnerships that provide direct links between classroom experience and a career; visit **www.ryerson.ca/ce/publishinginternships** to see the companies that may be offering industry internships to students in the program.

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree, or mature student status with related professional experience and education.

Notice to Students

Correct use of the English language is essential in the publishing industry. It is therefore an element in the evaluation and grading of assignments.

Students with no background in publishing are strongly advised to begin by taking either overview course (CDPB 100 or CDPB 200). Students with full-time positions are advised to register in no more than two credits per term. Specialized half-credit courses require some knowledge of subject or industry. In general, comfort with computers and a knowledge of appropriate software are an asset.

Certificate Requirements

The successful completion of eight 39-hour courses or the equivalent, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▶ CDPB 100   Publishing: Publishing Overview: Trade
▶ CDPB 200   Publishing: Publishing Overview: Education

Electives (six 39-hour courses or equivalent 19.5-hour courses required)

39-Hour Courses

▶ CDPB 101   Publishing: The Business of Book Publishing
▶ CDPB 102   Publishing: Copy Editing for Books, Journals, and Reports
▶ CDPB 103   Publishing: Production for Books, Journals, and Reports
▶ CDPB 104   Publishing: Introduction to Book Design
▶ CDPB 105   Publishing: Sales and Marketing for Book Publishers
▶ CDPB 110   Publishing: Publicity for Book Publishers
▶ CDPB 201   Publishing: Literary Rights Management
▶ CDPB 202   Publishing: Substantive and Stylistic Editing
▶ CDPB 212   Publishing: Visual Skills for Publishing
▶ CDPB 312   Publishing: Practical Grammar and Punctuation
▶ CDPB 803   Publishing: Digital Publishing and Production

19.5-Hour Courses

Students may substitute any two of the following 19.5-hour courses for any one of the above 39-hour electives.

▶ CDPB 301   Publishing: Publishing for Children
▶ CDPB 302   Publishing: Government Reports
▶ CDPB 304   Publishing: Scholarly and Reference Publishing
▶ CDPB 306   Publishing: Trade Books: Fiction
▶ CDPB 309   Publishing: Editing Books for Children and Teens
▶ CDPB 310   Publishing: Proofreading for Books, Journals, and Reports
▶ CDPB 311   Publishing: Indexing for Books, Journals, and Reports

Condensed Scheduling Option

This spring, **CDPB 999 Publishing Intensive** participants can complete six courses in the Certificate in Publishing, and access specialized material only available in the Publishing Intensive course. For more details, visit the Chang School website at **www.ryerson.ca/ce/publishing**.

RESIDENTIAL CARE FOR CHILDREN AND YOUTH

Important Note: The Certificate in Residential Care for Children and Youth is currently under review and will not be accepting new registrants at this time. For further information, please contact the Community Services area at 416.979.5035.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/rccy.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Registrants must be employed in a residential care facility or have permission of the academic coordinator.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. Up to three course credits may be granted on the basis of courses successfully completed at other post-secondary institutions.

Required Courses

▶ CVCY 101   Residential Care for Children and Youth: Communications in Residential Care
▶ CVCY 102   Residential Care for Children and Youth: Human Growth and Development
▶ CVCY 103   Residential Care for Children and Youth: Principles of Group Care
▶ CVCY 104   Residential Care for Children and Youth: Residential Care Techniques
▶ CVCY 105   Residential Care for Children and Youth: Health, Ethics and Professionalism
▶ CVCY 200   Residential Care for Children and Youth: Reflective Practice Seminar

RETAIL MANAGEMENT

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate is designed for students seeking or currently employed in retail, the largest employment sector in Canada. The program will focus on fundamental retail topics and provides students with the ability to choose electives based on broad interests or specific areas such as buying, operations, or management.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/retail.**

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status, and a minimum of one years' related professional experience in the retail industry.

Certificate Requirements

The successful completion of six courses (two required courses and four electives), with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

Students who demonstrate the requisite combination of education and work experience may apply to the academic coordinator waive CRMG 200. Students granted this waiver must complete five elective courses instead of four.

- ▶ CRMG 200 Retail Management: Intro to Retail and Services Management
- ▶ CRMG 302 Retail Management: Retail Consumer Insight

Electives (select four or five)

- ▶ CENT 500 Entrepreneurship: New Venture Startup
- ▶ CGMS 200 Global Management: Introduction to Global Management
- ▶ CMHR 405 Human Resources: Organizational Behaviour and Interpersonal Skills
- ▶ CMHR 523 Human Resources: Human Resources Management
- ▶ CMKT 100 Marketing: Principles of Marketing
- ▶ CQMS 102 Quantitative Methods: Business Statistics I
- ▶ CRMG 301 Retail Management: Retail Operations Management
- ▶ CRMG 303 Retail Management: Service Quality Management
- ▶ CRMG 400 Retail Management: Buying Process I
- ▶ CRMG 434 Retail Management: Intro to Logistics and Supply Chain Mgmt
- ▶ CRMG 452 Retail Management: Visual Merchandising and Space Planning
- ▶ CRMG 902 Retail Management: Franchising
- ▶ CRMG 907 Retail Management: Relationship Marketing
- ▶ CRMG 909 Retail Management: Advanced Buying Process II
- ▶ CRMG 910 Retail Management: Multi-Channel Retailing
- ▶ CRMG 911 Retail Management: Retail Sales Management
- ▶ CRMG 916 Retail Management: Managing B2B Channels
- ▶ CRMG 919 Retail Management: Retail Business Analytics
- ▶ CRMG 925 Retail Management: Leading in Retail Service Organizations
- ▶ CZRM 100 Retail Management: Industry Project

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:

Professional Development Award: Retail Buying requires completion of CRMG 400, CRMG 452, and CRMG 909.

Professional Development Award: Retail Operations requires completion of CRMG 301, CRMG 303, and CRMG 925.

ROBOTICS AND EMBEDDED SYSTEMS

*Note: This certificate program may be completed entirely at a distance. Visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

This certificate program provides adult learners with hands-on opportunities to acquire knowledge and skills that will permit them to contribute and respond effectively to our collective societal need to provide innovation through advances in robotics and embedded systems product and device development. Topics covered will range from microprocessor-based control systems to systems-on-chip (SoC) design to device software development for the purposes of consumer and commercial product development in any number of fields. Participants will build as they learn, producing robotic and embedded systems throughout the duration of the program.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/robotics.**

Admission Criteria

It is recommended that applicants have the following:

Mature student status and evidence of relevant college or university level coursework, or equivalent

OR

Mature student status together with relevant industrial or professional experience

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence: CKRE 100, CKRE 110, CKRE 120, CKRE 130, CKRE 140, CKRE 150

Required Courses

- ▶ CKRE 100 Robotics and Embedded Systems: Embedded Systems Programming
- ▶ CKRE 110 Robotics and Embedded Systems: Digital Logic and Hardware Architecture
- ▶ CKRE 120 Robotics and Embedded Systems: Programming Robotics Systems
- ▶ CKRE 130 Robotics and Embedded Systems: Embedded Systems Hardware Architecture and Implementation
- ▶ CKRE 140 Robotics and Embedded Systems: Real-Time Embedded Systems Programming
- ▶ CKRE 150 Robotics and Embedded Systems: Emerging Issues in Robotics and Embedded Systems

SOCIAL SCIENCES AND HUMANITIES FOUNDATIONS

This certificate provides an opportunity to explore areas in social sciences and humanities and develop transferable university-level skills such as critical analysis and problem solving. Courses are based on the common first-year foundation of Ryerson's Faculty of Arts programs and may provide an opportunity for students to strengthen applications for full-time undergraduate degrees. Successfully completed courses may be considered as transfer credits to higher education degree programs, subject to admission and requirements for credit transfer.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or equivalent, or mature student status.

Students who have not met the above requirements are required to take CENG 108 as one of their four electives. It is recommended that they take CENG 108 immediately following CSSH 205, since both courses will provide a strong foundation in the writing skills needed to complete this certificate successfully.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Recommended Sequence

Students are advised to take the courses in the following sequence:

▸ CSSH 205

▸ Electives (four selections – two from Humanities and two from Social Sciences)

▸ CSSH 301

Students who are planning to pursue an Arts degree and who do not have an English Grade 12 U or M course with a grade of 70% or higher are required to take CENG 108 as one of their four electives. It is recommended that they take CENG 108 immediately following CSSH 205, since both courses will provide a strong foundation in the writing skills needed to complete this certificate successfully.

Required Courses

▸ CSSH 205   Social Sciences: Academic Writing and Research
▸ CSSH 301   Social Sciences: Research Design and Qualitative Methods

Electives (select a total of four courses)

Electives – Humanities (select two)

▸ CFRE *** A French course†
▸ CSPN *** A Spanish course†
▸ CACS 100   Contemporary Studies: Ideas That Shape the World I
▸ CACS 200   Contemporary Studies: Ideas That Shape the World II
▸ CENG 108   English Literature: Introduction to Fiction

▸ CENG 208   English Literature: Introduction to Non-Fiction
▸ CHIS 104   History: Ten Days That Shook The World
▸ CHIS 105   History: Inventing Popular Culture
▸ CHIS 106   History: Technology, Warfare and Social Change
▸ CHIS 107   History: Colonization, Colonialism and Independence
▸ CPHL 101   Philosophy: Plato and the Roots of Western Philosophy
▸ CPHL 201   Philosophy: Problems in Philosophy
▸ CPHL 333   Philosophy: Philosophy of Human Nature
▸ CPHL 366   Philosophy: Existentialism and Art and Culture
▸ CSSH 105   Social Sciences: Critical Thinking I

Electives – Social Sciences (select two)

▸ CCRM 100   Criminal Justice and Criminology: Introduction to Canadian Criminal Justice
▸ CCRM 102   Criminal Justice and Criminology: Introduction to Criminology
▸ CECN 104   Economics: Introductory Microeconomics
▸ CECN 204   Economics: Introductory Macroeconomics
▸ CEUS 102   Environment and Urban Sustainability: Environment and Sustainability
▸ CEUS 202   Environment and Urban Sustainability: Sustaining the City's Environments
▸ CGEO 131   Geography: Energy, Earth and Ecosystems
▸ CGEO 151   Geography: Location, Location, Location
▸ CPOG 100   Politics and Public Administration: People, Power and Politics
▸ CPOG 110   Politics and Public Administration: Power and Influence in Canadian Politics
▸ CPPA 101   Politics and Public Administration: Cdn Public Administration I: Institutions
▸ CPPA 102   Politics and Public Administration: Cdn Public Administration II: Processes
▸ CPSY 102   Psychology: Introduction to Psychology I
▸ CPSY 202   Psychology: Introduction to Psychology II
▸ CSOC 105   Sociology: Introduction to Sociology
▸ CSOC 107   Sociology: Sociology of the Everyday
▸ CSSH 102   Social Sciences: Learning and Development Strategies

† An online placement test is required. For details, see the Department's website at www.ryerson.ca/llc/currentstudents/placement_tests.html.

PROFICIENCY IN SPANISH

This certificate is designed to provide proficiency in oral and written Spanish. It allows students the opportunity to upgrade their professional qualifications and to prepare for business or educational travel in the Spanish speaking world.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/spanish.**

Admission Criteria

It is recommended that applicants have the following:

Completion of Introductory Spanish I (CSPN 101) with a minimum grade of C+, or admission by placement assessment and interview.

Certificate Requirements

The successful completion of six single-term courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Advanced Placement

If the student completes four courses at a level higher than CSPN 401, the successful completion of four single-term courses is required for the certificate. All four courses must be at an advanced level (CSPN 501 or higher).

Required Courses (see Advanced Placement above)

- ▶ CSPN 201   Spanish: Introductory Spanish II
- ▶ CSPN 301   Spanish: Intermediate Spanish I
- ▶ CSPN 401   Spanish: Intermediate Spanish II
- ▶ CSPN 501   Spanish: Advanced Spanish I
- ▶ CSPN 601   Spanish: Advanced Spanish II

Electives (select one)

- ▶ CSPN 402   Spanish: Spanish Conversation and Pronunciation
- ▶ CSPN 510   Spanish: Spanish Grammar for Native Speakers
- ▶ CSPN 515   Spanish: Introduction to Business Spanish
- ▶ CSPN 610   Spanish: Spanish Gram. for Native Speakers II
- ▶ CSPN 702   Spanish: Advanced Business Spanish
- ▶ CSPN 704   Spanish: Introduction to Latin American Culture I
- ▶ CSPN 708   Spanish: Contemporary Spanish Fiction
- ▶ CSPN 710   Spanish: Spanish of Spain and Latin America
- ▶ CSPN 804   Spanish: Introduction to Latin American Culture II
- ▶ CSPN 810   Spanish: Cultural Context of Writing

Note to registered certificate program students

Electives

CSPN 510 and CSPN 610 added.

" Although I speak Spanish, I wasn't proficient at grammar or writing. I work with Spanish-speaking children, so I decided to enroll in The Chang School's Proficiency in Spanish certificate. It was interactive and skillfully taught. Now I'm more comfortable communicating with anyone who speaks Spanish – including my family!

Sandra Montesdeoca
Graduate, Certificate in Proficiency in Spanish

STRATEGIC MARKETING

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

Why strategic? Because you choose the courses you need to meet your career goals. This certificate is designed to meet the needs of marketing professionals wanting to develop expertise in a specific area or take a variety of courses to address knowledge gaps, as well as career changers wanting the fundamentals of marketing.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/marketing**. For related career information, see Industry Overview.

Admission Criteria

It is recommended that applicants have the following:

OSSD with six Grade 12 U or M credits, or its equivalent, or mature student status with experience in business.

Certificate Requirements

The successful completion of six courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate. In exceptional cases credits may be granted on the basis of courses successfully completed at other institutions. Please note that you must apply for formal Transfer Credit.

Recommended Sequence

Students are advised that CMKT 100 must be taken before CMKT 300, and both of these courses must be successfully completed prior to enrollment in all other Marketing courses.

Required Courses

Students who demonstrate the requisite combination of education and work experience may apply to the academic coordinator to waive CMKT 100. Students granted this waiver must complete five Elective courses instead of four.

- ▶ CMKT 100 Marketing: Principles of Marketing
- ▶ CMKT 300 Marketing: Marketing Metrics and Analysis

Electives (select four or five)

Students select four or five electives from one or more of the five streams.

Marketing Innovation Stream

- ▶ CMKT 500 Marketing: Marketing Research
- ▶ CMKT 723 Marketing: Marketing in the Service Industry
- ▶ CMKT 730 Marketing: Assessing/Managing Market Opportunities
- ▶ CMKT 731 Marketing: Competitive Intelligence

Marketing Research Stream

- ▶ CMKT 400 Marketing: Understanding Consumers and the New Media
- ▶ CMKT 500 Marketing: Marketing Research
- ▶ CMKT 600 Marketing: Integrated Case Analysis

- ▶ CMKT 700 Marketing: Business Intelligence/Decision Modeling
- ▶ CMKT 702 Marketing: Advanced Marketing Management

Social Media Stream

- ▶ CITM 350 Information Technology Management: Concepts of e-Business
- ▶ CMKT 400 Marketing: Understanding Consumers and the New Media
- ▶ CMKT 510 Marketing: Innovations in Marketing
- ▶ CMKT 700 Marketing: Business Intelligence/Decision Modeling

Sports Marketing Stream

- ▶ CMKT 504 Marketing: Effective Persuasion
- ▶ CMKT 600 Marketing: Integrated Case Analysis
- ▶ CMKT 702 Marketing: Advanced Marketing Management
- ▶ CMKT 828 Marketing: Sport Marketing Concepts and Strategy
- ▶ CMKT 829 Marketing: International Sport Marketing

General Stream

- ▶ CGMS 522 Global Management: International Marketing
- ▶ CITM 350 Information Technology Management: Concepts of e-Business
- ▶ CMKT 400 Marketing: Understanding Consumers and the New Media
- ▶ CMKT 500 Marketing: Marketing Research
- ▶ CMKT 504 Marketing: Effective Persuasion
- ▶ CMKT 510 Marketing: Innovations in Marketing
- ▶ CMKT 600 Marketing: Integrated Case Analysis
- ▶ CMKT 700 Marketing: Business Intelligence/Decision Modeling
- ▶ CMKT 702 Marketing: Advanced Marketing Management
- ▶ CMKT 723 Marketing: Marketing in the Service Industry
- ▶ CMKT 730 Marketing: Assessing/Managing Market Opportunities
- ▶ CMKT 731 Marketing: Competitive Intelligence
- ▶ CMKT 828 Marketing: Sport Marketing Concepts and Strategy
- ▶ CMKT 829 Marketing: International Sport Marketing
- ▶ CMKT 850 Marketing: Applied Research Project

SUSTAINABILITY MANAGEMENT AND ENTERPRISE PROCESS EXCELLENCE

Formerly: Sustainability Management

*Note: Many of the courses in this program are available by distance education; visit the distance education website at **www.ryerson.ca/ce/de** for further information.*

Today, we live in challenging times with a fractured, unsustainable society and economy. In response to a growing need to move the world toward sustainable development and sustainable practices, a whole new profession is emerging. Sustainability management is of strategic importance globally in order to enhance and maximize the organizational impacts of the principles of sustainability in order to enhance and maximize the organizational impacts of the principles of sustainability by addressing the social, economic, and environmental dimensions – also known as the Triple Bottom Line (TBL or 3BL) or People-Planet-Profits (PPP) issues.

This unique certificate provides the competencies identified as being most critical to the successful performance of professionals working in the field of sustainability management by applying high demand tools and techniques of Lean Six Sigma quality assurance to further address management challenges, problem solving, and solution execution. The students will have the ability to leverage Lean Six Sigma processes and decision making in order to achieve business, economic, and sustainability goals at their places of work.

For detailed certificate and program information, please visit **www.ryerson.ca/ce/sustain**.

Admission Criteria

It is recommended that applicants have the following:

Undergraduate degree in a relevant field with a GPA of 2.0, or equivalent

OR

A post-secondary diploma with a GPA of 2.0, or equivalent, AND three years of full-time relevant employment, subject to approval of the certificate's academic coordinator

OR

A total equivalent of four years of relevant full-time employment, subject to the approval of the certificate's academic coordinator

Transfer Credits

Up to three transfer credits may be granted for previous studies similar to the courses listed in the elective streams. If an appropriate equivalency is established, a specific credit will be granted; however, a generic transfer credit (CKSS GEN) will be considered if a direct course equivalency cannot be established, but the course falls within one of the four elective streams of the certificate.

The primary requirements for a course to be considered for the CKSS GEN credit is as follows:

It must connect to and/or fall within one of the General, Architecture and Landscape Design, Environmental Management, or Socioeconomics of Sustainability Forces and Progress elective streams

OR

It must cover, in varying degrees, all of the social, economic, and environmental dimensions of sustainability/sustainable development

Certificate Requirements

The successful completion of six single-term courses, with a cumulative grade point average of 1.67 or higher, is required for the certificate.

Required Courses

▸ CKSS 100   Sustainability: Fundamentals in Sustainability I
▸ CKSS 101   Sustainability: Fundamentals in Sustainability II
▸ CKSS 210   Sustainability: Lean Six Sigma Contin Improvement
▸ CKSS 211   Sustainability: Lean Six Sigma Sust Bus Enterprise

Electives (select two)

Students select a total of two electives from one or more of the four streams.

General

▸ CHTT 510   Hospitality and Tourism: Sustainable Tourism Development
▸ CKPM 202   Project Management: Fundamentals of Project Management
▸ CKSS 102   Sustainability: Designing a Sust-Enterprise
▸ CKSS 212   Sustainability: Lean Six Sigma Quality Assurance

Architecture and Landscape Design

▸ CKAR 500   Architecture: Sustainable Buildings
▸ CKAR 601   Architectural Preservation and Conservation: Building Science for Architectural Preservation and Conservation
▸ CKAR 610   Architectural Preservation and Conservation: Architectural Preservation and Conservation Techniques

- CKLA 400   Landscape Design: Ecology and Sustainable Landscapes
- CKLA 430   Landscape Design: Making and Meaning of Landscapes
- CKLA 450   Landscape Design: Landscape Restoration

Environmental Management

- CKES 130   Environmental Engineering Science: Applied Ecology
- CKES 160   Environmental Engineering Science: Waste Management
- CKES 180   Environmental Engineering Science: Site Assessment
- CKES 190   Environmental Engineering Science: Renewable Energy and Green Technology
- CKES 210   Environmental Engineering Science: Applied Environmental Analysis
- CKES 220   Environmental Engineering Science: Environmental Law and Practice

Socioeconomics of Sustainability Forces and Progress

- CECN 502   Economics: Economics of Natural Resources
- CECN 510   Economics: Environmental Economics
- CFNY 404   Food Security: Food Policy and Programs for Food Security
- CFNY 407   Food Security: Community Development and Food Security
- CKEI 100   Energy Management: Energy Innovation and Entrepreneurship
- CKEI 110   Energy Management: Energy Conservation: Emerging Trends
- CKEI 120   Energy Management: Energy and the Public Policy Debate in Canada
- CKEI 130   Energy Management: An Introduction to Smart Grid
- CKSS 201   Sustainability: Sustainability Topics and Trends
- CVFN 410   Food Security: Understanding Urban Agriculture
- CVFN 411   Food Security: Dimensions of Urban Agriculture
- CVFN 412   Food Security: Urban Agriculture Types
- CVFN 413   Food Security: Urban Agriculture Policy-Making

Note to registered certificate program students

Effective Fall 2014, the Certificate in Sustainability Management has been revised to Sustainability Management and Enterprise Process Excellence. Students who were formally registered in the certificate prior to July 1, 2014, must complete the requirements in effect at the time of their registration. The movement of CKSS 102 (to the Electives – General Stream) and the addition of CKSS 210 and CKSS 211 increases the number of required courses for certificate completion from three to four. The number of elective courses has been reduced from three to two.

Required Courses

CKSS 102 is now an Elective in the General Stream.

CKSS 210 and CKSS 211 added.

Electives

A new stream added as per the following:

General Electives – CHTT 510, CKPM 202, CKSS 102, CKSS 212

Natural Environment Electives

Name change: Environmental Management

Urban Environment Electives

Name change: Architecture and Landscape Design

CKEI 110, CKEI 130, CVFN 410, CVFN 411, CVFN 412, and CVFN 413 moved to Socioeconomics of Sustainability Forces and Progress Stream

Socioeconomics of Sustainability Forces Electives

Name change: Socioeconomics of Sustainability Forces and Progress

CHTT 510 and CKPM 202 moved to General Stream

Professional Development

You can receive an acknowledgement of professional achievement once you have successfully completed three courses as follows:
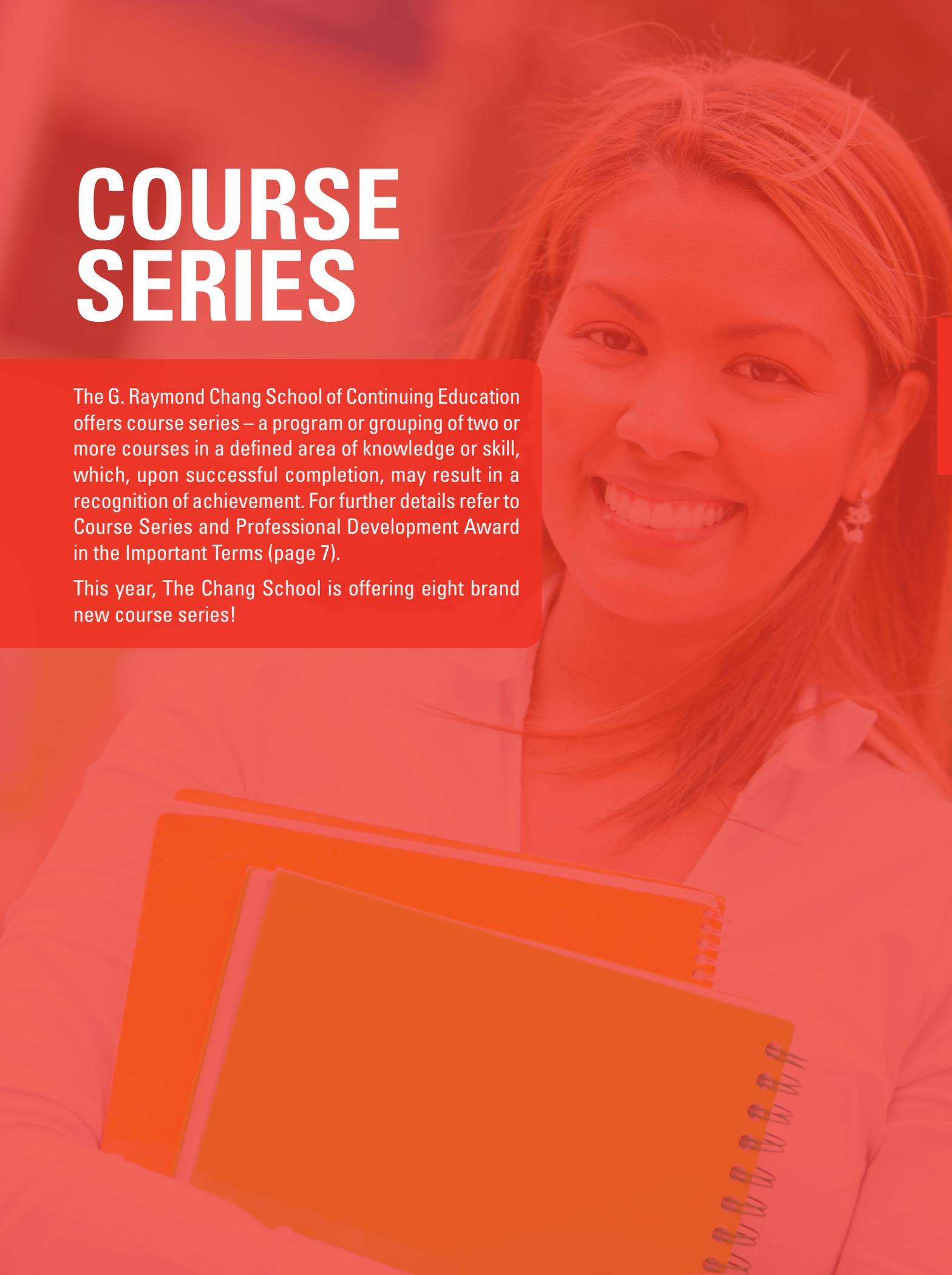
Professional Development Award: Sustainability Management and Enterprise Process Excellence requires completion of any three of the following courses: CKSS 100, CKSS 101, CKSS 210, and/or CKSS 211.

COURSE SERIES

The G. Raymond Chang School of Continuing Education offers course series – a program or grouping of two or more courses in a defined area of knowledge or skill, which, upon successful completion, may result in a recognition of achievement. For further details refer to Course Series and Professional Development Award in the Important Terms (page 7).

This year, The Chang School is offering eight brand new course series!

COURSE SERIES

New course series launched for the 2014-2015 academic year.

.NET APPLICATION DEVELOPER

.NET is a software development Framework developed by Microsoft that runs primarily on Microsoft Windows. It includes a large library of classes and provides language interoperability across several programming languages such as C#, Visual Basic, and C++. In this course series, learners gain hands-on experience developing a wide range of applications by using tools and components within the .NET framework and Visual Studio. This course series may assist you with your preparation for various Microsoft .NET certifications.

This course series is appropriate for learners with a programming background. For further information about this course series, please visit **www.ryerson.ca/ce/ITS**.

For general admission information, contact ce@ryerson.ca or 416.979.5035. For information about Information Technology Studies, contact: Janet Shusterman at itstudies@ryerson.ca or 416.979.5000, ext. 7907.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Recommended Sequence

Students are advised to take the Required Courses in the following sequence: CXEC 300; CXEC 309; CXEC 335; CXEC 336.

Required Courses

▶ CXEC 300   .NET Application Developer: Programming With C# and the .NET Framework
▶ CXEC 309   .NET Application Developer: Developing Web Applications with ASP .NET
▶ CXEC 335   .NET Application Developer: Developing Adv Web Apps with ASP.NET MVC
▶ CXEC 336   .NET Application Developer: Developing Windows Azure and Web Services

Supplementary Courses

▶ CXEC 329   Mobile Application Developer: iPhone Application Development
▶ CXEC 340   Enterprise Content Management: Microsoft SharePoint Web Development

Note to course series students

CXEC 304 and CXEC 305 deleted.

CXEC 335 and CXEC 336 added.

ADVANCED MAKE-UP ARTISTRY AND SPECIAL EFFECTS

This course series focuses on make-up artistry in film, TV, theatre, and photography; you'll learn the latest techniques and receive professional advice about succeeding in the business.

For more information, visit **www.ryerson.ca/ce/makeup** or contact Jane Stevenson, Instructor, at jsteven@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

▶ CDTH 431   Make-up Techniques: Make-Up Artistry for Film Video and TV
▶ CDTH 435   Make-up Techniques: Special Effects Make-Up for Stage and Screen
▶ CDTH 448   Make-up Techniques: Introduction to Make-Up Techniques for Theatre and Film

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

ARTS AND ENTERTAINMENT ADMINISTRATION

If you work in the cultural sector as an individual or as a group, Ryerson University's G. Raymond Chang School of Continuing Education can help you develop entrepreneurial skills to support your creative work through a course series in Arts and Entertainment Administration. The course series provides learners with a blend of practical and theoretical instruction in a format that arts managers, potential arts managers, and individual artists will find suitable for their experience. The instruction addresses issues for both the for-profit and not-for-profit sectors.

Each course is taught by a seasoned professional who works in the cultural industry and who can help you develop confidence in learning to build your business.

For more information, visit **www.ryerson.ca/ce/aeadmin** or contact Sholem Dolgoy, Academic Coordinator, at a.e.a@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

▶ CDAM 100   Arts and Entertainment Administration: Making a Living in the Arts
▶ CDAM 102   Arts and Entertainment Administration: Audience Outreach and Engagement
▶ CDAM 103   Arts and Entertainment Administration: Progmmatic Mktng for Arts and Ent
▶ CDAM 104   Arts and Entertainment Administration: Social Media Mktng Arts and Ent

Note to course series students

CDAM 101 deleted.

CDAM 103 and CDAM 104 added.

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

CARING CLOWN

This program is for older adults who want to make a difference by bringing joy, laughter, and fun into the lives of long-term care residents. Through several courses, students are trained in clowning techniques and achieve an understanding of aging and the dementia process. In addition, working closely with long-term care homes, a practicum provides an opportunity for the Caring Clown to gain experience.

For further information about this course series, please visit **www.ryerson.ca/ce/caringclown**. For general information, contact mena.carravetta@ryerson.ca or 416.979.5103.

Those who successfully complete this course series are eligible to earn a Recognition of Completion from The G. Raymond Chang School of Continuing Education.

Required Courses

▶ CSAC 109   ACT II STUDIO: Clown and Comedy: Introduction to Clown
▶ CSCC 910   Caring Clown: Caring Clown Basics
▶ CSCC 911   Caring Clown: Caring Clown Practicum Supplementary Workshops

Supplementary Workshops

These courses give you the opportunity to further develop your learning and professional skills; however, they are not required for completion of the Caring Clown Recognition of Completion.

▶ CSCC 200   Caring Clown: Strengthen Your Clown Character
▶ CSCC 201   Caring Clown: Clowning Into the World of the Other

CATIA ENGINEERING DESIGN

This program provides students with foundational, applied, and academic knowledge and skill sets in CATIA design. The courses offer students a comprehensive picture of current best practices in CATIA design and real-life industry applied case studies. They allow students to meet their individual interests in extending their knowledge and skills needed to support engineering design and product development. This knowledge and applicable skill set will be useful for technical digital practitioners whether they are serving on commercial, para-public, national defense, municipal, provincial, and national or international structural design projects or product development projects.

For more information, please contact Anne-Marie Brinsmead, Program Director, Engineering, Architecture, and Science at a2brinsm@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

- ▶ CKAE 100   Aerospace: CATIA Engineering Design I
- ▶ CKAE 101   Aerospace: CATIA Engineering Design II
- ▶ CKAE 102   Aerospace: ATIA Engineering Design III

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

CISCO CERTIFIED NETWORK ASSOCIATE (CCNA) ROUTING AND SWITCHING

Important Note: The course series in Cisco Certified Network Associate (CCNA) Routing and Switching is currently under review and will not be accepting any new registrants at this time. For further information, please contact the Engineering, Architecture, and Science program area at 416.979.5035 or ce@ryerson.ca.

This two-course series provides learners with the fundamental skills and knowledge of Cisco technologies. The series may assist with your preparation for the Cisco Certified Network Associate (CCNA) Routing and Switching exam.

This course series is appropriate for learners with a network administration background. For further information about this course series, please visit **www.ryerson.ca/ce/ITS**.

For general admission information, contact ce@ryerson.ca or 416.979.5035. For information about Information Technology Studies, contact: Janet Shusterman at itstudies@ryerson.ca or 416.979.5000, ext. 7907.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

- ▶ CXNA 101   Cisco Certified Network Associate (CCNA) Routing and Switching: Networking Basics for Cisco
- ▶ CXNA 102   Cisco Certified Network Associate (CCNA) Routing and Switching: Interconnecting Cisco Network Devices (ICND)

COMPUTER AND NETWORK SUPPORT

Networking-oriented courses are designed to provide learners with the material needed to become proficient with concepts and practices related to today's networking technologies. This course series provides learners with hands-on experience with networking devices and software, Microsoft and Linux network administration, and system security practices.

Entry into this course series is appropriate for learners who are familiar with the Windows environment and have proficient file management and keyboarding skills as well as experience with an office suite application.

For further information about this course series, please visit **www.ryerson.ca/ce/ITS.**

For general admission information, contact ce@ryerson.ca or 416.979.5035. For information about Information Technology Studies, contact: Janet Shusterman at itstudies@ryerson.ca or 416.979.5000, ext. 7907.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Recommended Sequence

Students are advised to take the Required Courses in the following sequence: CXIT 401; CXIT 421; CXIT 620 or CXIT 630.

Required Courses

- ▶ CXIT 401 Computer and Network Support: A+
- ▶ CXIT 421 Computer and Network Support: Network Administration for Microsoft
- ▶ CXIT 620 Computer and Network Support: Windows Active Directory Planning
- ▶ CXIT 630 Computer and Network Support: Network Administration for Linux

Supplementary Courses

- ▶ CXCC 110 Computer and Network Support: Certified Information Systems Security Professional (CISSP)

Note to course series students

Supplementary Courses

CXCC 110 replaces CXCC 104.

COMPUTER APPLICATIONS

This course series is intended for individuals who have an interest in keeping up with the latest and hottest computer-specific applications, technology, and software. Students may take any combination of three courses in the series, in any order.

For more information, please contact ce@ryerson.ca or call 416.979.5035.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses (select three 42-hour courses or equivalent combination of courses totalling 126 hours)

42-Hour Courses

- ▶ CXEC 328 Mobile Application Developer: Android Application Development
- ▶ CXEC 329 Mobile Application Developer: iPhone Application Development
- ▶ CXIT 630 Computer and Network Support: Network Administration for Linux

21-Hour Courses

Students may substitute two of the following courses for any of the above 42-hour courses.

- ▶ CKCS 900 Computer Science: Introduction to C++
- ▶ CKCS 901 Computer Science: Introduction to Cloud Computing
- ▶ CKCS 902 Computer Science: Digital Speech Processing
- ▶ CKCS 903 Computer Science: Fundamentals of Speech Recognition
- ▶ CKCS 904 Computer Science: Introduction to Eye Tracking
- ▶ CKCS 905 Computer Science: Contracting for Cloud Computing

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

COSTUME SPECIALTIES

Theatrical costumes are created to meet the aesthetic and physical needs of a production, using specialized techniques and methods to achieve the custom designs created for the fantastical world of performance. This course series offers classes in the theatrical approach to costume dyeing, painting breakdown, surface design, embellishment, and specialty building. The practical studio approach offers designers, artists, and artisans alternative practices that they can incorporate into their own work.

For more information, contact Sholem Dolgoy, Academic Coordinator, at a.e.a@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

▶ CDTH 460   Theatre: Costume Painting and Dyeing
▶ CDTH 461   Theatre: Costume Specialty Building
▶ CDTH 462   Theatre: Costume Surface Design

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

ENTERING FOREIGN MARKETS

This course series is designed for students who wish to build on their existing cultural knowledge, language capabilities, or Canadian business experience in order to develop skills in entering foreign markets. Completion of this series will provide students with the tools to analyze foreign market opportunities and select appropriate entry mode strategies. Students will also develop the knowledge and skills required to design and implement foreign market strategies, organize overseas market operations, and develop strategies for multinational corporations. This series will also equip students with a solid understanding of the role of the Canadian government in the regulation of international trade and the competencies required to establish an export-import operation.

For more information, contact Carlyle Farrell, Academic Coordinator, at farrellc@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

▶ CGMS 522   Global Management: International Marketing
▶ CGMS 723   Global Management: International Trade
▶ CGMS 724   Global Management: Management of International Enterprise

These courses may be applied to the Global Management Studies certificate or to an applicable certificate. Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

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ENTREPRENEURSHIP AND MULTICULTURALISM

The four courses required for this course series will provide an essential body of knowledge needed to start and/or grow a business venture within a multicultural context.

For more information, please contact Sean Wise, Academic Coordinator, at sean.wise@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

- ▶ CENT 526   Entrepreneurship: Entrepreneurial Behaviour and Strategy
- ▶ CMKT 300   Marketing: Marketing Metrics and Analysis
- ▶ CZEN 300   Entrepreneurship: Multicultural Opportunities
- ▶ CZEN 500   Entrepreneurship: Multicultural Venture Startups

The courses may be applied to the Entrepreneurship and Multiculturalism certificate. Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

HEALTH ETHICS

Students will be provided with opportunities for exploring and examining ethical considerations in health and health care systems.

For more information, contact Pria Nippak, Academic Coordinator, at pnippak@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses (select three)

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

- ▶ CPHL 302   Philosophy: Ethics and Health Care
- ▶ CPHL 334   Philosophy: Ethics in Professional Life
- ▶ CPHL 444   Philosophy: Ethics in Health Services Management
- ▶ CPHL 509   Philosophy: Bioethics
- ▶ CPHL 602   Philosophy: Health Care and Distributive Justice

The courses may be applied to the Health Studies certificate or to an applicable health-related certificate. Once you have successfully completed the courses, email ce@ryerson.ca with your name, student number, and the courses series you have completed. Upon verification, you will receive your professional development award.

HEALTH INFORMATICS

Students will be introduced to the basic concepts of health informatics from both the information technology and health systems perspectives.

For more information, contact Pria Nippak, Academic Coordinator, at pnippak@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses (select three)

- ▶ CHIT 100   Health Informatics: Introduction to Health Informatics
- ▶ CHIT 201   Health Informatics: Healthcare Interoperability
- ▶ CHIT 300   Health Informatics: Introduction to Healthcare Human Computer Interface
- ▶ CZLW 110   Law: Health Information Access and Privacy

The courses may be applied to the Health Studies certificate or to an applicable health-related certificate. Once you have successfully completed the courses, email ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

HEALTH SERVICES MANAGEMENT

Students will be introduced to the basic principles of health services management.

For more information, contact Jim Tiessen, Academic Coordinator, at jhtiessenk@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

- ▶ CHSM 305   Health Services Management: The Management Cycle
- ▶ CHSM 306   Health Services Management: Management Leadership and Decision-Making
- ▶ CHSM 437   Health Services Management: Human Resources Management in Healthcare

The courses may be applied to the Health Studies certificate or to an applicable health-related certificate. Once you have successfully completed the courses, email ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

THE HUMAN BODY

Mature working and non-working adults are increasingly aware of their need to learn, based on scientific evidence, how to transform their habits and lifestyles to meet the needs of their age and health situations when it comes to the human body. This course series provides the opportunity to educate adults about the human body and impacts to it, including the biology-based and chemistry-based science of food.

Each course in this series will explore the science underlying the human body and how to use the science to make informed life choices.

For more information, please visit **www.ryerson.ca/ce/humanbody** or contact Andrew McWilliams, Academic Coordinator, Biology and Chemistry, at amcwilli@ryerson.ca or Anne-Marie Brinsmead, Program Director, Engineering, Architecture, and Science at a2brinsm@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

- ▶ CBLG 10A/B   Biology: Anatomy and Physiology
- ▶ CKBG 100   Biology: Human Body Health Tools
- ▶ CKBG 110   Biology: The Science of Food Foundations
- ▶ CKBG 115   Biology: The Science of Supplements

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

IMMIGRATION AND SETTLEMENT STUDIES

This course series provides students with the knowledge and skills needed to serve immigrants and their families directly, create policy related to that service, or create a supportive workplace environment for diverse populations.

For more information about the Course Series in Immigration and Settlement Studies, please contact June Pollard, Academic Coordinator, Interdisciplinary Studies, at jpollard@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

(all available online via distance education)

- ▶ CINT 913   Interdisciplinary Studies: Issues of Migration
- ▶ CINT 914   Interdisciplinary Studies: Settlement Experiences
- ▶ CINT 915   Interdisciplinary Studies: Responses to Migration

Electives (select one)

- ▶ CECN 640   Economics: The Economics of Immigration
- ▶ CGEO 691   Geography: Canadian Immigration: Patterns and Place
- ▶ CINT 905   Interdisciplinary Studies: Conflict Resolution in Community Services
- ▶ CMHR 600   Human Resources: Diversity and Inclusion in the Workplace
- ▶ CMHR 700   Human Resources: Cross-Cultural Dimensions of Organizational Behaviour
- ▶ CPSY 620   Psychology: Psychology of Immigration
- ▶ CPSY 941   Psychology: Cross Cultural Psychology
- ▶ CSOC 474   Sociology: Immigration, Borders and Belonging

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

INFORMATION ACCESS AND PROTECTION OF PRIVACY

Our current electronic age requires us to balance access to information and the right to privacy, and professionals are required to understand and support that balance. This course series is designed for professionals who want to better understand access versus privacy and security issues.

For more information, contact Avner Levin, Academic Coordinator, at avner.levin@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

- ▶ CZLW 100   Law: Information Access and Protection of Privacy
- ▶ CZLW 110   Law: Health Information Access and Privacy
- ▶ CZLW 120   Law: Law for Forensics Professionals

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

The course series in Information Access and Protection of Privacy is designed for professionals who want to better understand access versus privacy and security issues.

'Information Access and Protection of Privacy' (CZLW 100) provides an introduction and current status of legislation, while 'Health Information Access and Privacy' (CZLW 110) and 'Law for Forensics Professionals' (CZLW 120) will deepen your understanding through a focus on the health and law enforcement sectors.

INTERDISCIPLINARY CONFLICT RESOLUTION AND TEAM BUILDING

This course series provides health and community services professionals and students with the knowledge and skills to work in interdisciplinary teams with a specific focus on understanding the nature of conflict and its root causes as well as team building. Students will explore a range of conflict resolution methods, approaches, and strategies. The relationship between conflict, conflict resolution, and issues of diversity will be addressed. The interpersonal skills and personal and professional values that impact on working in teams and the dynamics of an effective team will also be considered.

For more information, contact June Pollard, Academic Coordinator, Interdisciplinary Studies, at jpollard@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

- ► CINT 905   Interdisciplinary Studies: Conflict Resolution in Community Services
- ► CINT 907   Interdisciplinary Studies: Team Work for Community Services

Electives (select one)

- ► CINT 920   Interdisciplinary Studies: Community Collaborations
- ► CINT 921   Interdisciplinary Studies: Writing for Disability Activism
- ► CSWP 935   Social Work: Engaging Diverse Communities

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

JAVA EE SOLUTION DEVELOPER

Java EE (Enterprise Edition) is the current enterprise level industry standard for object-oriented cross platform distributed application development. This course series provides learners with hands-on experience with tools for web component solution development within the Java EE development architecture including servlets, JSP (JavaServer Pages), EJB (Enterprise JavaBeans), Struts, Spring Framework, JSF (JavaServer Faces), and Hibernate. This course series may assist you with your preparation for various Oracle (Sun) certifications.

This course series is appropriate for learners with a programming background. For further information about this course series, please visit **www.ryerson.ca/ce/ITS.**

For general admission information, contact ce@ryerson.ca or 416.979.5035. For information about Information Technology Studies, contact: Janet Shusterman at itstudies@ryerson.ca or 416.979.5000, ext. 7907.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Recommended Sequence

Students are advised to take the Required Courses in the following sequence: CXEC 320; CXEC 312; CXEC 313; CXEC 322 or CXEC 324.

Required Courses

To be eligible to be awarded the Professional Development Award, students select one of CXEC 322 or CXEC 324 for their fourth course.

- ► CXEC 312   Java EE Solution Developer: Developing Java EE Compliant Applications (Enterprise JavaBeans)
- ► CXEC 313   Java EE Solution Developer: Web Component Development with Java Technology (Servlets and JSP)
- ► CXEC 320   Java EE Solution Developer: Java Advanced
- ► CXEC 322   Java EE Solution Developer: Developing Advanced Web Applications Using Java
- ► CXEC 324   Java EE Solution Developer: Spring and Hibernate Java Apps

Supplementary Courses

- ► CXEC 328   Mobile Application Developer: Android Application Development

MOBILE APPLICATION DEVELOPER

This two-course series provides learners with hands-on experience developing applications for Android and the iPhone, the two most popular and prominent mobile development platforms. Students will learn the skills and knowledge required to develop their own mobile applications for each device.

This course series is appropriate for learners with a programming background in Java programming (for CXEC 328), and in object-oriented programming (OOP) (for CXEC 329. For further information about this course series, please visit **www.ryerson.ca/ce/ITS.**

For general admission information, contact ce@ryerson.ca or 416.979.5035. For information about Information Technology Studies, contact: Janet Shusterman at itstudies@ryerson.ca or 416.979.5000, ext. 7907.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Recommended Prerequisites

Students are strongly recommended to complete CXEC 300 or CXEC 320 (for CXEC 329) or CXEC 320 (for CXEC 328), or have equivalent OOP experience or advanced Java programming experience, prior to taking the courses in this series.

To self-assess for equivalent OOP experience, visit **www.ryerson.ca/ce/ITS** and view the detailed course description for either CXEC 300 or CXEC 320.

Required Courses

▶ CXEC 328   Mobile Application Developer: Android Application Development
▶ CXEC 329   Mobile Application Developer: iPhone Application Development

PROJECT MANAGEMENT

This course series will assist students who are interested in starting or transitioning to a project management career and project managers who need professional development units (PDUs) to maintain their professional credentials.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses (select three)

▶ CKPM 202   Project Management: Fundamentals of Project Management
▶ CKPM 203   Project Management: Planning and Scheduling
▶ CKPM 207   Project Management: Project Management Systems
▶ CKPM 209   Project Management: Project Risk and Quality Management
▶ CKPM 211   Project Management: Leadership in Project Management
▶ CKPM 212   Project Management: Project Cost and Procurement Management
▶ CKPM 213   Project Management: Management of Projects in the AEC
▶ CKPM 214   Project Management: Project Development and Control
▶ CKPM 215   Project Management: Emerging Trends in Project Management
▶ CKPM 216   Project Management: Project Management Internship

The courses may be applied to the Project Management certificate. Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

RETAIL BUYING

Students will examine the role of the buyer, the procurement process, and merchandise management. An exploration of in-store design, layout, and display options using space planning software will also be covered.

For more information, please visit **www.ryerson.ca/ce/retail** or contact Sean Sedlezky, Academic Coordinator, Retail Management at ssedlezk@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

▶ CRMG 400 Retail Management: Buying Process I
▶ CRMG 452 Retail Management: Visual Merchandising and Space Planning
▶ CRMG 909 Retail Management: Advanced Buying Process II

These courses may be applied to the Retail Management certificate. Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

RETAIL OPERATIONS

Students will examine a variety of systems relevant to the retail environment through case studies and online discussions. Other topics will include teamwork, employee motivation, retail metrics, and meeting consumers' needs.

For more information, please visit **www.ryerson.ca/ce/retail** or contact Sean Sedlezky, Academic Coordinator, Retail Management at ssedlezk@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses

▶ CRMG 301 Retail Management: Retail Operations Management
▶ CRMG 303 Retail Management: Service Quality Management
▶ CRMG 925 Retail Management: Leading in Retail Service Organizations

Note to course series students

CRMG 900 and CRMG 901 deleted; CRMG 303 and CRMG 925 added.

The number of required courses remains at three.

These courses may be applied to the Retail Management certificate. Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

SQL SERVER SOLUTION DEVELOPER

SQL Server is a Relational Database Management System (RDMS) developed by Microsoft that offers a rich set of tools for developing business intelligence solutions. This Chang School Course Series provides learners with hands-on experience in developing end-to-end business intelligence solutions using SQL Server. The courses in this Chang School Course Series may assist with your preparation for various Microsoft database certifications.

For further information about this course series, please visit **www.ryerson.ca/ce/ITS.**

For general admission information, contact ce@ryerson.ca or 416.979.5035. For information about Information Technology Studies, contact: Janet Shusterman at itstudies@ryerson.ca or 416.979.5000, ext. 7907.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Recommended Sequence

Students are advised to take the Required Courses in the following sequence: CXEC 327; CXEC 332 or CXEC 330; CXEC 334.

Required Courses

- ▶ CXEC 327   SQL Server Solution Developer: Advanced SQL
- ▶ CXEC 330   SQL Server Solution Developer: SQL Server Reporting Services
- ▶ CXEC 332   SQL Server Solution Developer: SQL Server Integration Services
- ▶ CXEC 334   SQL Server Solution Developer: Server Analysis Services

SURVIVAL IN URBAN DISASTERS AND EMERGENCIES

This course series provides individuals the opportunity to attain functional proficiency in responding to and aiding workers and citizens in urban settings compromised by a disaster or emergency where support systems are limited or are non-existent. Competencies acquired in-class and through survival simulation activities include, but are not limited to, planning for urban survival, long-term survival strategies, expedient shelters, water, fire, heat, light and food access, safety, security and protection, navigating by day/night, hazards and threats, recovery on-the-ground, and the psychology of survival.

For more information, contact Alex Ferworn, Academic Coordinator, Disaster and Emergency Management, at aferworn@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses (select three)

- ▶ CKDM 100   Disaster Emergency Management: Principles and Practices of Emergency Management
- ▶ CKDM 120   Disaster Emergency Management: Emergency Operations and Incident Management
- ▶ CKDM 130   Disaster Emergency Management: Critical Analysis of Operations
- ▶ CKDM 140   Disaster Emergency Management: Emergency Management Planning
- ▶ CKDM 150   Disaster Emergency Management: Risk Management
- ▶ CKDM 160   Disaster Emergency Management: Emerging Issues

These courses may be applied to the Disaster and Emergency Management certificate. Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

SUSTAINABILITY MANAGEMENT AND ENTERPRISE PROCESS EXCELLENCE

This course series provides individuals the competencies to promote sustainability by prioritizing, deploying, and implementing best practices with proven techniques, including Lean Six Sigma, to execute vital strategic plans in private and public enterprise. Individuals will come away with the ability to generate organizational transformation, resulting in eco-efficiency, innovative products and services, engaged communities, all while gaining competitive advantage globally. They will also posses systems-thinking, decision-making, and consensus-building abilities to maximize their organizations' impacts.

For more information, visit **www.ryerson.ca/ce/sustain** or contact Saeed Nejatian, Academic Coordinator, at snejatian@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses (select three)

- ▶ CKSS 100　Sustainability: Fundamentals in Sustainability I
- ▶ CKSS 101　Sustainability: Fundamentals in Sustainability II
- ▶ CKSS 210　Sustainability: Lean Six Sigma Contin Improvement
- ▶ CKSS 211　Sustainability: Lean Six Sigma Sust Bus Enterprise

These courses may be applied to the Sustainability Management and Enterprise Process Excellence certificate. Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

URBAN AGRICULTURE

In order to help students develop their skills and capacity to address global problems, specifically those related to the current global food crisis and climate change, an urban agriculture course series has been developed as part of the elective offerings of The Chang School's Certificate in Food Security. The series will consist of four courses and students who complete them will receive official acknowledgement from the University of having achieved completion.

Students who complete this course series will gain in-depth knowledge of the technical aspects of urban agriculture as well as the policy dimensions and governance issues that must be taken into account in the development of effective urban agriculture systems.

For more information about the Course Series in Urban Agriculture, please contact Reg Noble, Academic Coordinator, Food Security, at food@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses
(all available via distance education)

- ▶ CVFN 410　Food Security: Understanding Urban Agriculture
- ▶ CVFN 411　Food Security: Dimensions of Urban Agriculture
- ▶ CVFN 412　Food Security: Urban Agriculture Types
- ▶ CVFN 413　Food Security: Urban Agriculture Policy-Making

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.

Note: *These courses have been developed in partnership with ETC-Urban Agriculture (ETC-UA) and the international network of Resource Centres on Urban Agriculture and Food Security (RUAF).*

WEBSITE DESIGN AND DEVELOPMENT

This course series provides learners with the foundation to design and develop creative websites by providing the skills required to control the way a website is displayed and to incorporate dynamic functionality. A wide range of design and development tools are explored which allows learners to gain a rich hands-on experience.

Entry into this course series is appropriate for learners who are familiar with the Windows environment and have proficient file management and keyboarding skills, as well as experience with a MS Office Suite application.

For further information about this course series, please visit **www.ryerson.ca/ce/ITS.**

For general admission information, contact ce@ryerson.ca or 416.979.5035. For information about Information Technology Studies, contact: Janet Shusterman at itstudies@ryerson.ca or 416.979.5000, ext. 7907.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Recommended Sequence

Students are advised to take the Required Courses in the following sequence: CXCP 663; CXCP 674; CXCP 675; CXCP 680; CXCP 660.

Required Courses

- ▶ CXCP 660 Website Design and Development: Advanced HTML5 Development
- ▶ CXCP 663 Website Design and Development: HTML and Cascading Style Sheets
- ▶ CXCP 674 Website Design and Development: Introduction to JavaScript
- ▶ CXCP 675 Website Design and Development: Advanced JavaScript
- ▶ CXCP 680 Website Design and Development: Dreamweaver

Supplementary Courses

- ▶ CXCP 184 Website Design and Development: Adobe Photoshop
- ▶ CXCP 685 Website Design and Development: PHP/My SQL Web Design Fundamentals
- ▶ CXCP 695 Website Design and Development: eCommerce Design with PHP/MySQL
- ▶ CXCP 705 Website Design and Development: Ajax with jQuery Introduction

Note to course series students

This course series has been revised effective July 1, 2013. Students who began the program prior to July 1, 2013, must complete the program requirements in effect at the time they started.

Required Courses

CXCP 185, CXCP 673, CXCP 679, and CXCP 700 deleted.

CXCP 660, CXCP 674, CXCP 675, and CXCP 680 added.

WORKPLACE COMMUNICATION IN CANADA (WCC)

The Workplace Communication in Canada (WCC) program's goal is to maximize the employability (and leverage preparedness for professional bridging programs) of internationally educated professionals by implementing the following:

▶ a comprehensive assessment of strengths and individual needs (Communication Skills Assessment)

▶ a workplace-focused curriculum (materials developed in partnership with employers and profession-specific bridging programs)

▶ an experiential curriculum (using role plays, simulations with actors, workplace scenarios, debate clubs, and group work)

The WCC Communication Skills Assessment ensures entry to the most appropriate level of communication and language program. In order to make this program sector/profession relevant, each of the learning tools and modules will incorporate profession-related materials and experiences.

For further information and admission requirements, visit the WCC website at **www.ryerson.ca/ce/wcc** or email wcc@ryerson.ca.

Those who successfully complete this course series are eligible to earn a Professional Development Award from The G. Raymond Chang School of Continuing Education.

Required Courses (select four)

▶ CDCE 310   Workplace Communication in Canada (WCC): Formal and Informal Communication in the Workplace
▶ CDCE 320   Workplace Communication in Canada (WCC): Advanced Customer Focused Applications
▶ CDCE 330   Workplace Communication in Canada (WCC): Effective Persuasion and Public Speaking
▶ CDCE 340   Workplace Communication in Canada (WCC): Teamwork and Organizational Behaviour
▶ CDCE 910   Workplace Communication in Canada (WCC): Effective Oral Communication

Once you have successfully completed the courses, email The Chang School at ce@ryerson.ca with your name, student number, and the course series you have completed. Upon verification, you will receive your professional development award.