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Ryerson University website address: www.ryerson.ca

It is the responsibility of each full-time undergraduate student to access the updated online Ryerson University Full-time Undergraduate Calendar each year and to follow his/her curriculum as stated in the relevant Calendar. The online Undergraduate Ryerson University Calendar is available at www.ryerson.ca/calendar

Since Ryerson University Calendars are legal documents, they take precedence over this Student Handbook. In the event of any inconsistency, the Fall 2019 / Winter 2020 Ryerson University Undergraduate Calendar and the Fall 2019 / Winter 2020 Yeates School of Graduate Studies Calendar will prevail.

If you have any suggestions or comments about this Student Handbook, please write to:

Dianne Mendonca
Departmental Assistant
Department of Civil Engineering, Room MON221
Ryerson University
E-mail: civil@ryerson.ca
# TABLE OF CONTENTS

## UNDERGRADUATE PROGRAM

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Overview/Curriculum Information</td>
<td>7</td>
</tr>
<tr>
<td>First Year Transition Program</td>
<td>8</td>
</tr>
<tr>
<td>Writing Skills Resource Path</td>
<td>8</td>
</tr>
<tr>
<td>Co-Operative Internship Program</td>
<td>8</td>
</tr>
<tr>
<td>Optional Specialization in Engineering Innovation and Entrepreneurship (OSEIE)</td>
<td>9</td>
</tr>
<tr>
<td>Optional Specialization in Management Sciences (OSMS)</td>
<td>9</td>
</tr>
<tr>
<td>Engineering Transfer Credits</td>
<td>9</td>
</tr>
<tr>
<td>Liberal Studies and Minors</td>
<td>9</td>
</tr>
<tr>
<td>The G. Raymond Chang School of Continuing Education Certificates</td>
<td>10</td>
</tr>
<tr>
<td>Accelerated Master of Applied Science (MA$^{Sc}$) Pathway</td>
<td>10</td>
</tr>
<tr>
<td>Required Criteria for Third Year Students to Continue in Civil Engineering Program or Join Structural Engineering Option in Fall 2020 / Winter 2021</td>
<td>11</td>
</tr>
<tr>
<td>Required Criteria for Civil Engineering Program Students Entering Fourth Year in Fall 2020 / Winter 2021</td>
<td>12</td>
</tr>
<tr>
<td>New Curriculum: Fall 2020 / Winter 2021 for Fall 2014 and Later- First Year Admits</td>
<td>13</td>
</tr>
<tr>
<td>Former Curriculum: Fall 2018/Winter 2019 for Fall 2013 and Prior-First Year Admits</td>
<td>20</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>26</td>
</tr>
<tr>
<td>Glossary/Academic Definitions</td>
<td>43</td>
</tr>
<tr>
<td>Table A – List of Lower Liberal Level Studies Courses</td>
<td>44</td>
</tr>
<tr>
<td>Table A – Lower Liberal Level Studies Courses Restrictions</td>
<td>49</td>
</tr>
<tr>
<td>Table B – List of Upper Liberal Level Studies Courses</td>
<td>50</td>
</tr>
<tr>
<td>Table B – Upper Liberal Level Studies Courses Restrictions</td>
<td>56</td>
</tr>
<tr>
<td>Undergraduate Grading Scale</td>
<td>57</td>
</tr>
</tbody>
</table>

## GRADUATE PROGRAM

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Overview</td>
<td>58</td>
</tr>
<tr>
<td>Areas of Specialization</td>
<td>59</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>59</td>
</tr>
<tr>
<td>Expenses and Financial Support</td>
<td>60</td>
</tr>
<tr>
<td>Research Areas</td>
<td>60</td>
</tr>
</tbody>
</table>

## FACILITIES

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary Times Building</td>
<td>62</td>
</tr>
<tr>
<td>Computer Labs</td>
<td>62</td>
</tr>
<tr>
<td>Physical Labs</td>
<td>63</td>
</tr>
</tbody>
</table>

## FACTS FROM A TO Z

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviations</td>
<td>67</td>
</tr>
</tbody>
</table>
Welcome to the Department of Civil Engineering at Ryerson University and the road to excellence! Our vision is to become one of the best civil engineering programs in Canada and we are making steady progress toward the realization of this goal! Ryerson University is well known for its applied education and the Department of Civil Engineering exemplifies this quality. We proudly provide state-of-the-art civil engineering undergraduate and graduate studies education and research in this dynamic field. When you study Civil Engineering in our Department, you learn many new exciting and challenging engineering concepts and theories in our classrooms and labs. Our Program provides students with many excellent learning experiences leading to successful careers and engaged students who enable change. The Department, through the sustained work of faculty members and staff continues on a transformative path to meet the changing needs of students and helping to shape Canada’s future generation of change makers, advocacy leaders, innovators and entrepreneurs. Civil Engineering students, graduates, faculty members and staff all contribute significantly to Ontario’s and Canada’s social, cultural and economic well-being.

As many of today’s greatest engineering challenges are urban, our department is the ideal place to invent solutions. Located in downtown Toronto, you will be continually inspired to generate novel ideas that address the needs of city living.

Our faculty members are inspired, too. Dedicated to advancing your learning and career-readiness, they are engaged in exciting research and development projects, many in collaboration with industry, and have won major awards for their teaching. Under their guidance, you will learn to balance the safety, design and financial considerations of our most essential infrastructure systems. You will also develop self-confidence, creativity, critical thinking, and a passion for lifelong learning.

Civil engineers play a crucial role in quality of life around the world. Our innovative, interdisciplinary department, and our strong connections with industry and the city, will give you the knowledge and real-world experience you need to make your mark.

Our undergraduate and graduate students are always excelling at various peer competitions at international, national and regional levels. This year in February 2019, our undergraduate students won First Place in the 2019 Great Northern Concrete Toboggan Race. This event had over 450 engineering students from over 20 universities in a competition that challenges students to design and build a concrete toboggan. Some of the many other great achievements accomplished by our students this past year include a M.A.S.C student who won First Place Paper at the Eleventh Western Canadian Association on Water Quality. At the 2019 Convocation, a Civil Engineering B.Eng. graduand was awarded the Ryerson University Gold Medal of the Faculty of Engineering and Architectural Science. Ryerson Gold Medals are the University’s highest awards presented to students with outstanding academic achievement and significant contributions to the life of the University and/or their professional community or community at large. There are many other great achievements and awards accomplished by our undergraduate and graduate students and we are very proud of all their outstanding achievements!

In the Department of Civil Engineering you will be taught by dedicated faculty members who are engaged in many exciting engineering research and development projects, many in collaboration with industry who bring this expertise to the classrooms and labs. Your faculty members have won many national, provincial and university awards for their teaching and research and have also collectively published over 300 peer-reviewed journal papers and won over 30 national and international awards. Leaders from industry and government in our Advisory Council also help keep our curriculum more relevant. I hope that you will find the information in this Student Handbook helpful. Please visit our website www.ryerson.ca/civil and contact us at civil@ryerson.ca

Best Regards,

Dr. Khaled Sennah, P.Eng.
Chair
PROGRAM OVERVIEW/CURRICULUM INFORMATION

The curriculum provides for a general four-year Civil Engineering program. Graduates from the Civil Engineering program would expect to be employed by engineering technology and consulting companies, the construction industry, the mining industry, and municipality and government agencies.

After completing two years in the Civil Engineering program students may continue in the regular Civil Engineering program or choose the Structural Engineering option. There will be a 60% cap for enrolment in either the Civil Engineering program or the Structural Engineering option. Enrolment in the Civil Engineering program or the Structural Engineering option after the second year will be made on a competitive basis, subject to program capacity. (Please visit ryerson.ca/civil/undergraduate for more details.) In addition, students continuing in the Civil Engineering program will have the option of pursuing either the Environmental or Transportation Engineering Streams in the 4th year of the program. An enrolment cap for the Environmental or Transportation Streams will be similar to that mentioned above.

Students who commenced the program prior to Fall 2014, should refer to the Program Overview as published in the 2013-2014 Ryerson University Undergraduate Calendar. http://www.ryerson.ca/calendar/2013-2014/pg1147.html

The Civil Engineering program curriculum focuses mainly on four areas: environmental, geomatics, structural/materials and transportation engineering. The subjects include environmental sustainable development, impact of civil engineering, water and wastewater management, soil mechanics, geomatics measurement, remote sensing and digital mapping, satellite navigation, structural analysis and design, concrete and highway materials, highway design, transportation planning, road safety, traffic and transit operation, pavement design and project management.

The curriculum of the Structural Engineering option provides further focus on structural analysis, computer-aided structural analysis, structural building systems, structural design of concrete, steel, timber and masonry, bridge design and construction, and renovation/repair of existing structures.

A student graduating from the Civil Engineering program will earn a Bachelor of Engineering (BEng) degree in Civil Engineering. A student graduating from the Structural Engineering option will earn a BEng in Civil Engineering with a Structural Engineering option.

A student graduating with a BEng in Civil Engineering may apply for registration by the Professional Engineers Ontario (PEO) as a Professional Engineer (PEng).
FIRST YEAR TRANSITION PROGRAM

The objective of the transition program is to provide the first year students, who may need more time to adapt to the demanding university curriculum, with an immediate opportunity to upgrade their academic standing. In the second semester, Phase I of the transition program offers all first semester core courses: CHY 102, MTH 140, MTH 141, and PCS 211 in parallel with the second semester regular program courses. Students who have failed and/or are missing these courses at the end of the first semester are required to upgrade their Academic Standing through enrolling in the transition program. During the condensed Spring term (May-July) Phase II of the transition program offers all second semester core courses: AER222, BME 100, CHE 200, CHY 211, CPS 125, CVL 207, ELE 202, MEC 222, MTH 240, MTL 200, and PCS 125. These courses represent a repeat of the second semester regular program courses that were not taken by students enrolled in Phase I of their transition program. These courses will be offered subject to adequate enrollment.

WRITING SKILLS RESOURCE PATH

All new engineering students are automatically enrolled in CEN 199: Writing Skills.

CEN 199 is graded on a Pass/Fail basis and is used to track the results of the Writing Skills Test (WST).

All students admitted into engineering are required to write the mandatory Writing Skills Test (WST) during Orientation Week. Students who pass the WST (by achieving a grade of ‘B’ or higher) will receive a PASS in CEN 199 and therefore may enroll in the lower level Liberal Studies course of their choice (subject to availability).

Students who do not pass the WST, or achieved a ‘C’ level remedial pass on the RTEP, will receive an INP (In Progress Grade) in CEN 199 and will be required to enroll in one of LNG 111, LNG 112, LNG 113, or LNG 121 as their first-year lower level Liberal Studies course. These courses, which count towards lower level Liberal Studies requirements, are writing-intensive humanities and social science courses designed to give students the opportunity to strengthen their foundations in communication. These students will then have three additional opportunities to write and pass the WST:

- In May, following Semester 2.
- During Orientation Week prior to Semester 3.
- In May, following Semester 4.

A PASS in CEN 199: Writing Skills is required to enroll in all third-year engineering courses. Students with a grade of INP in CEN 199 will not be allowed to enroll in any third-year engineering course.

Detailed information is available from the First-Year Engineering Office. Room ENG-340A.

OPTIONAL CO-OPERATIVE INTERNSHIP PROGRAM (CIP)

Third year students with CLEAR Academic Standing may opt to enrol in the Co-op Internship Program. If they are selected by one of the partner corporations, they spend a period of 12-16 months, from May to September of the following year, as engineering interns at the corresponding corporations. After the completion of the Co-op Internship, students return to the academic program to complete their final year of studies. Enrolment in the Co-op Internship extends the program to five years.
The Co-op Internship students enrol in the course WKT 90A/B Co-operative Internship Program during the academic year in which they work as interns. This course is graded on a Pass/Fail basis. Completion of the Co-operative Internship Program will be identified on the student's transcript as WKT 90A/B: Co-operative Internship Program, with the appropriate grade achieved.

OPTIONAL SPECIALIZATION IN ENGINEERING INNOVATION AND ENTREPRENEURSHIP (OS EIE)

This option provides students with a solid foundation in innovation and entrepreneurship theory as well as the immersive experience of advancing and shaping an idea into a business. The lecture courses cover principles of engineering economics, entrepreneurship and innovation management, and technology based new venture creation. The practicum will guide students through the process of identifying a new business concept, developing their technology, and preparing their business for market readiness. For eligibility, registration and course information see Optional Specialization in Engineering Innovation and Entrepreneurship (OS EIE) in the 2019/2020 Ryerson Calendar.

OPTIONAL SPECIALIZATION IN MANAGEMENT SCIENCES (OSMS)

Students can enrich their studies and hone their management skills with the Optional Specialization in Management Sciences. Courses within the optional specialization cover four major areas in management sciences: Strategic Engineering Management, Operations Management/Operations Research, Finance, and Organizational Behaviour. For eligibility, registration, and course information see Optional Specialization in Management Sciences (OS MS).

ENGINEERING TRANSFER CREDITS

Applicants approved into an Engineering program cannot expect to receive any transfer credits in Engineering discipline or Engineering related discipline courses if their applicable post-secondary education was not completed at a program accredited by The Canadian Engineering Accreditation Board (CEAB). Refer to www.ccpe.ca/e/index.cfm for a listing of CEAB accredited institutions.

Core and professional engineering course transfer credits will ONLY be granted at the time of admission. An Offer of Admission will notify the applicant of transfer credit decision(s) subject to acceptance of their Offer.

Liberal Studies discipline courses taken at CEAB accredited or non-accredited schools will be considered for either lower- or upper-level liberal studies transfer credit. College courses, in general, are not eligible for transfer credit except in the case of lower-level liberal studies courses.

LIBERAL STUDIES AND MINORS

Liberal Studies

Students must complete two lower level liberal studies courses and two upper level liberal studies courses to graduate. Students must not choose courses that are restricted for their program or major.
Minors

Students may pursue any Minor offered by Ryerson with exceptions. Please refer to the Minors Policy section of the Calendar for further information on individual Minor requirements and exclusions.

The G. Raymond Chang School of Continuing Education Certificates

Undergraduate students wishing to pursue a continuing education certificate program should be aware of possible exclusions. Please refer to the Curriculum Advising website at www.ryerson.ca/curriculumadvising for complete details.

Accelerated Master of Applied Science (MASc) Pathway

The Accelerated Master of Applied Science (MASc) Pathway is open to undergraduate engineering students who have demonstrated academic excellence and/or research potential by the end of the third year of their undergraduate program. Students can enrol in a maximum of two graduate level courses in addition to their regular undergraduate course requirements in the final year of their undergraduate program and commence their Master’s research such that the MASc program can be completed in approximately one year. The Accelerated MASc Pathway does not change the degree requirements for the existing BEng or MASc programs. For more information about and application to this pathway, please contact the Associate Dean, Graduate Studies, Faculty of Engineering and Architectural Science.
REQUIRED CRITERIA FOR STUDENTS ENTERING THIRD YEAR IN FALL 2020 / WINTER 2021 TO CONTINUE IN THE CIVIL ENGINEERING PROGRAM OR JOIN THE STRUCTURAL ENGINEERING OPTION:

Selection of students to continue in the Civil Engineering Program or enter the Structural Engineering Option after the second year of the Program will be made on a competitive basis subject to program capacity. Enrollment in either the third year Civil Engineering Program or the third year Structural Engineering Option cannot exceed 60% of total students entering third year in Fall 2020.

1. In order to enroll in their first choice of either the third year Structural Engineering Option or Civil Engineering Program, students should complete all second year courses by May 29, 2020 with a clear academic standing and minimum CGPA of 2.50 in addition to also meeting the following criteria to either continue in the Civil Engineering Program or join the Structural Engineering Option:

i) For the Civil Engineering Program: achieve a minimum grade of C- in first attempt in each of the following courses: CVL 323, CVL 316, and CVL 400.

ii) For the Structural Engineering Option: achieve a minimum grade of C- in first attempt in each of the following courses: CVL 320, CVL 420, and CVL 434.

Note: A required CGPA higher than 2.50 may be applied to maintain the sixty per cent enrolment cap in either the Civil Engineering Program or the Structural Engineering Option.

If a student is missing one or more courses from the second year, placement in the student's preferred option will be subject to space availability based on the 60% criterion.

2. Students who do not meet the above criteria will be ranked according to their cumulative performance in their first attempt in the relevant courses (CVL 323, CVL 316, and CVL 400 for the Civil Engineering Program or CVL 320, CVL 420, and CVL 434 for the Structural Engineering Option), for admission consideration to the option of their first choice. This is also subject to the 60% cap for enrolment in either the Civil Engineering program or the Structural Engineering option.

3. Ranking and selection of students' eligibilities for continuing in the Civil Engineering Program or joining the Structural Engineering Option will be finalized on May 29, 2020. Students who do not meet the above listed required criteria on or before May 29, 2020 will not be considered for their first choice of either continuing in the Civil Engineering Program or joining the Structural Engineering option.

4. The above criteria are for students admitted to the Program in Fall 2014 or later and entering third year in Fall 2020/Winter 2021 and are subject to change in future academic years.
REQUIRED CRITERIA FOR CIVIL ENGINEERING PROGRAM STUDENTS ENTERING FOURTH YEAR CIVIL ENGINEERING IN FALL 2020 / WINTER 2021:

After completing the third year of the Civil Engineering Program, students will have the option of pursuing either the Environmental or Transportation Engineering Stream for their fourth year of the program. Enrollment in either the Environmental or Transportation Engineering Stream cannot exceed 60% of total students entering fourth year in Fall 2020.

1. Students who complete the third year of the Civil Engineering program at the end of the academic year Fall 2019/Winter 2020 with a clear academic standing and a minimum CGPA of 2.67 will be considered for admission to their preferred stream for their fourth year of the program starting in Fall 2020. In addition, students should also have completed all of the third year courses by the end of Winter 2020 semester. If a student is missing one or more courses from the third year, placement in the student's preferred stream will be subject to space availability based on the 60% criterion. However, successful completion of the Stream prerequisite courses is required for admission to either Stream.

Note: A required CGPA higher than 2.67 may be applied to maintain the 60% enrollment cap in either the Environmental or Transportation Engineering Stream.

2. In the Seventh Semester (Fall 2020), fourth year students will be admitted to either the Environmental or the Transportation Stream based on the academic criteria and maximum enrollment capacity described above. In the Eighth Semester, students must continue in that same Stream. Students will complete only one Stream.

3. Ranking and selection of students’ eligibilities for the fourth year Civil Engineering Program Streams will be finalized on May 29, 2020. Students who do not meet the above listed required criteria on or before May 29, 2020 will not be considered for their first choice of Stream.

4. The above criteria are for students admitted to the Program in Fall 2014 or later and entering fourth year in Fall 2020/Winter 2021 and are subject to change in future academic years.
**NEW CURRICULUM: FALL 2019/ WINTER 2020**
**FOR STUDENTS ADMITTED IN FALL 2014 OR LATER**

**FIRST SEMESTER (NEW CURRICULUM)**

Common to Aerospace, Biomedical, Chemical, Civil, Computer, Electrical, Industrial and Mechanical Engineering Programs

Common to the Civil Engineering Program and the Structural Engineering Option

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMON ENGINEERING: Introduction to Engineering</td>
<td>CEN 100</td>
<td>1</td>
<td>2</td>
<td>1 Tut</td>
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</tr>
<tr>
<td>COMMON ENGINEERING: Writing Skills</td>
<td>CEN 199*</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
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<tr>
<td>CHEMISTRY: General Chemistry</td>
<td>CHY 102</td>
<td>1</td>
<td>3</td>
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</tr>
<tr>
<td>MATHEMATICS: Calculus I</td>
<td>MTH 140</td>
<td>1</td>
<td>4</td>
<td>2</td>
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<tr>
<td>MATHEMATICS: Linear Algebra</td>
<td>MTH 141</td>
<td>1</td>
<td>4</td>
<td>1</td>
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<tr>
<td>PHYSICS: Physics: Mechanics</td>
<td>PCS 211</td>
<td>1</td>
<td>3</td>
<td>1 Tut 1 Lab</td>
<td></td>
</tr>
<tr>
<td>LIBERAL STUDIES: One course required from Table A (Lower Level Liberal Studies)</td>
<td></td>
<td>1</td>
<td>3</td>
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<td></td>
</tr>
</tbody>
</table>

*Graded on a pass/fail basis.

**SECOND SEMESTER (NEW CURRICULUM)**

Common to the Civil Engineering Program and the Structural Engineering Option

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPUTER SCIENCE: Digital Computation and Programming</td>
<td>CPS 125</td>
<td>1</td>
<td>3</td>
<td>2</td>
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</tr>
<tr>
<td>CIVIL: Graphics</td>
<td>CVL 207</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ECONOMICS: Principles of Engineering Economics</td>
<td>ECN 801</td>
<td>1</td>
<td>3</td>
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<tr>
<td>MATHEMATICS: Calculus II</td>
<td>MTH 240</td>
<td>1</td>
<td>4</td>
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</tr>
<tr>
<td>MECHANICAL: Materials Science Fundamentals</td>
<td>MTL 200</td>
<td>1</td>
<td>3</td>
<td>1*</td>
<td></td>
</tr>
<tr>
<td>PHYSICS: Physics: Waves and Fields</td>
<td>PCS 125</td>
<td>1</td>
<td>3</td>
<td>1 Lab 1 Tut</td>
<td></td>
</tr>
</tbody>
</table>

*Two hour lab every other week
### THIRD SEMESTER (NEW CURRICULUM)

Common to both the Civil Engineering Program and the Structural Engineering Option

#### REQUIRED

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CIVIL</strong>: Environmental Science and Impact Assessment</td>
<td>CVL 300</td>
<td>1</td>
<td>3</td>
<td>1 Tut</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Strength of Materials I</td>
<td>CVL 320</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Fundamentals of Surveying</td>
<td>CVL 323</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Probability and Statistics for Engineers</td>
<td>CVL 405</td>
<td>1</td>
<td>3</td>
<td>2 Tut</td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong>: Differential Equations and Vector Calculus</td>
<td>MTH 425</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note:* All required core courses in first and second semesters are prerequisites to all required core courses in third semester.

### FOURTH SEMESTER (NEW CURRICULUM)

Common to both the Civil Engineering Program and the Structural Engineering Option

#### REQUIRED

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMMUNICATION</strong>: Communication in the Engineering Professions</td>
<td>CMN 432</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Transportation Engineering</td>
<td>CVL 316</td>
<td>1</td>
<td>3</td>
<td>1 Tut</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Hydrology and Water Resources</td>
<td>CVL 400</td>
<td>1</td>
<td>3</td>
<td>1 Lab</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Strength of Materials II</td>
<td>CVL 420</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Geology for Engineers</td>
<td>CVL 423</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>CIVIL</strong>: Geotechnical Properties of Soils</td>
<td>CVL 434</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
### FIFTH SEMESTER (NEW CURRICULUM)

**Civil Engineering**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIL: Geomatics Measurements Techniques</td>
<td>CVL 352</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Introduction to Structural Design</td>
<td>CVL 500</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Fluid Mechanics and Hydraulics</td>
<td>CVL 501</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Concrete Materials</td>
<td>CVL 533</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>MATHEMATICS: Numerical Analysis</td>
<td>MTH 510</td>
<td>1</td>
<td>3</td>
<td>1</td>
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<tr>
<td>LIBERAL STUDIES:</td>
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<tr>
<td>One course required from Table A (Lower Level Liberal Studies)</td>
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### SIXTH SEMESTER (NEW CURRICULUM)

**Civil Engineering**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
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</thead>
<tbody>
<tr>
<td>CIVIL: Remote Sensing and Image Analysis</td>
<td>CVL 354</td>
<td>1</td>
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<tr>
<td>CIVIL: Wastewater Engineering</td>
<td>CVL 601</td>
<td>1</td>
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<tr>
<td>CIVIL: Civil Engineering Systems</td>
<td>CVL 609</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Highway Materials</td>
<td>CVL 633</td>
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<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Highway Design</td>
<td>CVL 735</td>
<td>1</td>
<td>3</td>
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<tr>
<td>LIBERAL STUDIES:</td>
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<td>3</td>
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<tr>
<td>One course required from Table B (Upper Level Liberal Studies)</td>
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</tbody>
</table>

**NOTE:** Students who have a CLEAR Academic Standing may opt to enroll in the Co-Operative Internship Program. Please contact the Department of Civil Engineering.
SEVENTH SEMESTER (NEW CURRICULUM)

Civil Engineering

In the seventh semester, students select either the Environmental or the Transportation Stream.
In the eighth semester, student must continue in that same Stream.
Students will complete only one Stream.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUIRED:</td>
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<tr>
<td>CIVIL: Geospatial Information Systems</td>
<td>CVL 736</td>
<td>1</td>
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<tr>
<td>REQUIRED: GROUP 1:</td>
<td></td>
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<td></td>
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<tr>
<td>Students must complete one Capstone</td>
<td></td>
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<tr>
<td>Design Project from their selected stream:</td>
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</tr>
<tr>
<td>CIVIL: Environment Capstone Design Project</td>
<td>CVL 71A/B*</td>
<td>1</td>
<td>1</td>
<td>3 Tt.</td>
</tr>
<tr>
<td>CIVIL: Transportation Capstone Design Project</td>
<td>CVL 72A/B*</td>
<td>1</td>
<td>1</td>
<td>3 Tt.</td>
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<tr>
<td>PROFESSIONAL:</td>
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<tr>
<td>Students complete two courses from ONE of</td>
<td></td>
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<tr>
<td>the Streams listed below.</td>
<td></td>
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<tr>
<td>In the 8th Semester, students must</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>continue in that same Stream. Students</td>
<td></td>
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</tr>
<tr>
<td>will complete only one Stream.</td>
<td></td>
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</tr>
<tr>
<td>ENVIRONMENTAL STREAM – TWO OF:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CIVIL: Water Resources Engineering</td>
<td>CVL 903</td>
<td>1</td>
<td>3</td>
<td>1 Tt/</td>
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<tr>
<td>CIVIL: Water Supply Engineering</td>
<td>CVL 913</td>
<td>1</td>
<td>3</td>
<td>1 Lab</td>
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<tr>
<td>TRANSPORTATION STREAM – TWO OF:</td>
<td></td>
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<tr>
<td>CIVIL: Traffic Operations and Management</td>
<td>CVL 902</td>
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<tr>
<td>CIVIL: Transportation Planning</td>
<td>CVL 910</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>LIBERAL STUDIES:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>One course required from the following:</td>
<td></td>
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</tr>
<tr>
<td>ENGLISH: Science Fiction</td>
<td>ENG 503</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEOGRAPHY: Technology and the Contemporary Environment</td>
<td>GEO 702</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HISTORY: Scientific Technology and Modern Society</td>
<td>HST 701</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHILOSOPHY: Religion, Science and Philosophy</td>
<td>PHL 709</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>POLITICS: Power, Change and Technology</td>
<td>POL 507</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*CVL 71A/B and CVL 72A/B are two-term courses. Students must continue the same Capstone Design project they started in the Fall semester.
EIGHTH SEMESTER (NEW CURRICULUM)

Civil Engineering

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUIRED:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMMON ENGINEERING: Law and Ethics in Engineering Practice</td>
<td>CEN 800</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIVIL: Satellite Geodesy</td>
<td>CVL 650</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Project Management</td>
<td>CVL 742</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>REQUIRED: GROUP 1: Students continue with the Capstone Design Project started in the Fall term:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIVIL: Environment Capstone Design Project</td>
<td>CVL 71A/B*</td>
<td>1</td>
<td>1</td>
<td>3 Tut.</td>
</tr>
<tr>
<td>CIVIL: Transportation Capstone Design Project</td>
<td>CVL 72A/B*</td>
<td>1</td>
<td>1</td>
<td>3 Tut.</td>
</tr>
<tr>
<td>PROFESSIONAL: In the 8th Semester, students must continue in that same Stream as chosen in 7th semester. Students complete one course from ONE of the Streams listed below. Students will complete only one Stream.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVIRONMENTAL STREAM:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIVIL: Municipal Solid Waste Management</td>
<td>CVL 901</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>TRANSPORTATION STREAM:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CIVIL: Pavement Design and Management</td>
<td>CVL 900</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

*CVL 71A/B and CVL 72A/B are two-term courses. Students must continue the same Capstone Design project they started in the Fall semester.
# STRUCTURAL ENGINEERING OPTION

## FIFTH SEMESTER (NEW CURRICULUM)

### Structural Engineering Option

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIL: Structural Analysis</td>
<td>CVL 313</td>
<td>1</td>
<td>3</td>
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<tr>
<td>CIVIL: Introduction to Structural Design</td>
<td>CVL 500</td>
<td>1</td>
<td>3</td>
<td>2</td>
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<tr>
<td>CIVIL: Concrete Materials</td>
<td>CVL 533</td>
<td>1</td>
<td>3</td>
<td>2</td>
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<tr>
<td>CIVIL: Foundation Engineering</td>
<td>CVL 600</td>
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<td>3</td>
<td>2</td>
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<tr>
<td>MATHEMATICS: Numerical Analysis</td>
<td>MTH 510</td>
<td>1</td>
<td>3</td>
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<tr>
<td>LIBERAL STUDIES: One course required from Table A (Lower Level Liberal Studies)</td>
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## SIXTH SEMESTER (NEW CURRICULUM)

### Structural Engineering Option

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
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</thead>
<tbody>
<tr>
<td>CIVIL: Computer Aided Structural Analysis</td>
<td>CVL 312</td>
<td>1</td>
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<tr>
<td>CIVIL: Structural Concrete Design I</td>
<td>CVL 410</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Structural Steel Design</td>
<td>CVL 411</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Civil Engineering Systems</td>
<td>CVL 609</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Highway Materials</td>
<td>CVL 633</td>
<td>1</td>
<td>3</td>
<td>2</td>
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<tr>
<td>LIBERAL STUDIES: One course required from Table B (Upper Level Liberal Studies)</td>
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</tbody>
</table>

**NOTE:** Students who have a CLEAR Academic Standing may opt to enroll in the Co-operative Internship Program. Please contact the Department of Civil Engineering.
### SEVENTH SEMESTER (NEW CURRICULUM)

#### Structural Engineering Option

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
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<th>Lab</th>
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<tbody>
<tr>
<td><strong>REQUIRED:</strong></td>
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<tr>
<td>CIVIL: Structural Capstone Design Project</td>
<td>CVL 70A/B*</td>
<td>1</td>
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<tr>
<td>CIVIL: Structural Concrete Design II</td>
<td>CVL 904</td>
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<tr>
<td>CIVIL: Bridge Design and Construction</td>
<td>CVL 905</td>
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<td>3</td>
<td>2</td>
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<tr>
<td>CIVIL: Structural Building Systems</td>
<td>CVL 908</td>
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#### LIBERAL STUDIES: One course required from the following:

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<tr>
<th>Subject</th>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
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</thead>
<tbody>
<tr>
<td>ENGLISH: Science Fiction</td>
<td></td>
<td>ENG 503</td>
<td>1</td>
<td>3</td>
<td></td>
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<tr>
<td>GEOGRAPHY: Technology and the</td>
<td></td>
<td>GEO 702</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Contemporary Environment</td>
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<tr>
<td>HISTORY: Scientific Technology</td>
<td></td>
<td>HST 701</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>and Modern Society</td>
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<td></td>
</tr>
<tr>
<td>PHILOSOPHY: Religion, Science</td>
<td></td>
<td>PHL 709</td>
<td>1</td>
<td>3</td>
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<tr>
<td>and Philosophy</td>
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<tr>
<td>POLITICS: Power, Change and</td>
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<td>POL 507</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Technology</td>
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### EIGHTH SEMESTER (NEW CURRICULUM)

#### Structural Engineering Option

<table>
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<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lecture</th>
<th>Lab</th>
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<tbody>
<tr>
<td><strong>REQUIRED:</strong></td>
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</tr>
<tr>
<td>COMMON ENGINEERING: Law and Ethics in</td>
<td>CEN 800</td>
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<td>3</td>
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<tr>
<td>Engineering Practice</td>
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<tr>
<td>CIVIL: Structural Capstone Design Project</td>
<td>CVL 70A/B*</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>CIVIL: Project Management</td>
<td>CVL 742</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Pavement Design and Management</td>
<td>CVL 900</td>
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<tr>
<td>CIVIL: Renovation/Repair of Existing Structures</td>
<td>CVL 906</td>
<td>1</td>
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</tbody>
</table>

*CVL 70A/B is a two-term course. Students must continue the same Capstone Design project they started in the Fall.*
# FORMER CURRICULUM: FOR STUDENTS ADMITTED FALL 2013 OR EARLIER ONLY

## FIRST SEMESTER (Last Offered in Fall 2013) (FORMER CURRICULUM)

Common to the Regular Program and the Geomatics Engineering Option

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMON ENGINEERING: Introduction to Engineering</td>
<td>CEN 100</td>
<td>1</td>
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<td>1 Tut</td>
</tr>
<tr>
<td>COMMON ENGINEERING: Writing Skills</td>
<td>CEN 199*</td>
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</tr>
<tr>
<td>CHEMISTRY: General Chemistry</td>
<td>CHY 102</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>CHEMISTRY: Calculus I</td>
<td>MTH 140</td>
<td>1</td>
<td>4</td>
<td>2</td>
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<tr>
<td>MATHEMATICS: Linear Algebra</td>
<td>MTH 141</td>
<td>1</td>
<td>4</td>
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<tr>
<td>PHYSICS: Physics: Mechanics</td>
<td>PCS 211</td>
<td>1</td>
<td>3</td>
<td>1 Tut</td>
</tr>
<tr>
<td>LIBERAL STUDIES: One course required from Table A</td>
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</table>

*This course is graded on a pass/fail basis

## SECOND SEMESTER (Last Offered in Winter 2015) (FORMER CURRICULUM)

Common to the Civil Engineering Program and the Geomatics Engineering Option

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPUTER SCIENCE: Digital Computation and Programming</td>
<td>CPS 125</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Graphics</td>
<td>CVL 207</td>
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<td>2</td>
<td>2</td>
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<tr>
<td>ECONOMICS: Principles of Engineering Economics</td>
<td>ECN 801</td>
<td>1</td>
<td>3</td>
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</tr>
<tr>
<td>MATHEMATICS: Calculus II</td>
<td>MTH 240</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>MECHANICAL: Materials Science Fundamentals</td>
<td>MTL 200</td>
<td>1</td>
<td>3</td>
<td>1*</td>
</tr>
<tr>
<td>PHYSICS: Physics: Waves and Fields</td>
<td>PCS 125</td>
<td>1</td>
<td>3</td>
<td>1 Lab</td>
</tr>
</tbody>
</table>

*Two hour lab every other week
THIRD SEMESTER (Last Offered in Fall 2014)  (FORMER CURRICULUM)

Common to the Regular Program and the Geomatics Engineering Option

REQUIRED

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIL: Strength of Materials I</td>
<td>CVL 320</td>
<td>1</td>
<td>4</td>
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<tr>
<td>CIVIL: Fundamentals of Surveying</td>
<td>CVL 323</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Geology for Engineers</td>
<td>CVL 423</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MECHANICAL: Fluid Mechanics</td>
<td>MEC 522</td>
<td>1</td>
<td>3</td>
<td>1*</td>
</tr>
<tr>
<td>MATHEMATICS: Differential Equations and Vector Calculus</td>
<td>MTH 425</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

* Two-hour lab every other week.

Note: All required core courses in 1st and 2nd semester are prerequisites to all required core courses in 3rd semester.

FOURTH SEMESTER (Last Offered in Winter 2015)  (FORMER CURRICULUM)

Common to the Regular Program and the Geomatics Engineering Option

REQUIRED

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect</th>
<th>Lab</th>
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</thead>
<tbody>
<tr>
<td>CIVIL: Strength of Materials II</td>
<td>CVL 420</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Hydrology and Hydraulic Engineering</td>
<td>CVL 425</td>
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<td>3</td>
<td>1 Lab 2 Tut</td>
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<tr>
<td>CIVIL: Geotechnical Properties of Soil</td>
<td>CVL 434</td>
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<td>4</td>
<td>2</td>
</tr>
<tr>
<td>ELECTRICAL: Electric Circuits</td>
<td>EES 512</td>
<td>1</td>
<td>3</td>
<td>2 Tut.</td>
</tr>
<tr>
<td>MATHEMATICS: Statistics</td>
<td>MTH 410</td>
<td>1</td>
<td>3</td>
<td>1</td>
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</tbody>
</table>
### FIFTH SEMESTER (Last Offered in Fall 2015) (FORMER CURRICULUM)

Common to the Regular Program and the Geomatics Engineering Option

<table>
<thead>
<tr>
<th>REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
</tr>
<tr>
<td>CIVIL: Structural Analysis</td>
</tr>
<tr>
<td>CIVIL: Geomatics Measurement and Analysis</td>
</tr>
<tr>
<td>CIVIL: Concrete Materials</td>
</tr>
<tr>
<td>CIVIL: Environmental Science and Engineering</td>
</tr>
<tr>
<td>MATHEMATICS: Numerical Analysis</td>
</tr>
<tr>
<td>LIBERAL STUDIES:</td>
</tr>
</tbody>
</table>

### SIXTH SEMESTER (Last Offered in Winter 2016) (FORMER CURRICULUM)

Common to the Regular Program and the Geomatics Engineering Option

<table>
<thead>
<tr>
<th>REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
</tr>
<tr>
<td>COMMUNICATION: Communication In the Engineering Professions</td>
</tr>
<tr>
<td>CIVIL: Transportation Engineering</td>
</tr>
<tr>
<td>CIVIL: Structural Concrete Design I</td>
</tr>
<tr>
<td>CIVIL: Highway Materials</td>
</tr>
<tr>
<td>CIVIL: Civil Engineering Systems</td>
</tr>
<tr>
<td>LIBERAL STUDIES:</td>
</tr>
</tbody>
</table>

**NOTE:** Students who have a CLEAR Academic Standing may opt to enroll in the Co-operative Internship Program (CIP). Please contact the Department of Civil Engineering.
SEVENTH SEMESTER (Last Offered in Fall 2016) (FORMER CURRICULUM)

CIVIL ENGINEERING

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUIRED:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CIVIL: Structural Steel Design</td>
<td>CVL 411</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Capstone Design Project I</td>
<td>CVL 755*</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

*Both CVL 755 and CVL 855 must be taken within the same academic year. In CVL 855 students will continue to work on the same project started in CVL 755.

PROFESSIONAL: In the 7th Semester, students select one of the Environmental, Structural and Materials, or Transportation Streams. In the 8th Semester, students must continue in that same Stream. Students will complete only one Stream. Students complete two courses from any ONE of the Streams listed below. Not all courses will be offered every semester.

ENVIRONMENTAL STREAM – TWO OF:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIL: Waste Water Treatment Design</td>
<td>CVL 638</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Municipal Solid Waste Management</td>
<td>CVL 901</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Water Resources Engineering</td>
<td>CVL 903</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Environmental Impact Assessment</td>
<td>CVL 912</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

STRUCTURAL AND MATERIALS STREAM – TWO OF:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIL: Computer Aided Structural Analysis</td>
<td>CVL 312*</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Foundation Engineering</td>
<td>CVL 600</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Pavement Design and Management</td>
<td>CVL 900</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Structural Concrete Design II</td>
<td>CVL 904</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Bridge Design and Construction</td>
<td>CVL 905</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Renovation/Repair of Existing Structures</td>
<td>CVL 906</td>
<td>1</td>
<td>3</td>
<td>2 Tut.</td>
</tr>
<tr>
<td>CIVIL: Behaviour and Design of FRP Structures</td>
<td>CVL 907</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Structural Building Systems</td>
<td>CVL 908</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

*CVL 312 must be selected in Structural and Materials Stream.

TRANSPORTATION STREAM – TWO OF:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIL: Pavement Design and Management</td>
<td>CVL 900</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Traffic Operations and Management</td>
<td>CVL 902</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Non-Highway Transportation Systems</td>
<td>CVL 909</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Transportation Planning</td>
<td>CVL 910</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

LIBERAL STUDIES: One course required from the following:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH: Science Fiction</td>
<td>ENG 503</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GEOGRAPHY: Technology and the Contemporary Environment</td>
<td>GEO 702</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HISTORY: Scientific Technology and Modern Society</td>
<td>HST 701</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHILOSOPHY: Religion, Science and Philosophy</td>
<td>PHL 709</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>POLITICS: Power, Change and Technology</td>
<td>POL 507</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
EIGHTH SEMESTER (Last Offered in Winter 2017) (FORMER CURRICULUM)

CIVIL ENGINEERING

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
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<tbody>
<tr>
<td>REQUIRED:</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMMON ENGINEERING: Law and Ethics in Engineering Practice</td>
<td>CEN 800</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIVIL: Project Management</td>
<td>CVL 742</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Capstone Design Project II</td>
<td>CVL 855*</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

*Both CVL 755 and CVL 855 must be taken within the same academic year. In CVL 855 students will continue to work on the same project started in CVL 755.*

PROFESSIONAL: Students must continue in the same stream started in 7th Semester. Complete two courses from any ONE of the Streams listed below. Not all courses will be offered every semester.

| ENVIRONMENTAL STREAM – TWO OF:                  |               |         |       |     |
| CIVIL: Municipal Solid Waste Management         | CVL 901       | 1       | 3     | 1   |
| CIVIL: Water Resources Engineering              | CVL 903       | 1       | 3     | 1   |
| CIVIL: Environmental Impact Assessment          | CVL 912       | 1       | 3     | 1   |

| STRUCTURAL AND MATERIALS STREAM – TWO OF:       |               |         |       |     |
| CIVIL: Computer Aided Structural Analysis       | CVL 312*      | 1       | 3     | 2   |
| CIVIL: Foundation Engineering                  | CVL 600       | 1       | 3     | 2   |
| CIVIL: Pavement Design and Management           | CVL 900       | 1       | 3     | 2   |
| CIVIL: Structural Concrete Design II            | CVL 904       | 1       | 3     | 2   |
| CIVIL: Bridge Design and Construction           | CVL 905       | 1       | 3     | 2   |
| CIVIL: Renovation/Repair of Existing Structures | CVL 906       | 1       | 3     | 1   |
| CIVIL: Behaviour and Design of FRP Structures   | CVL 907       | 1       | 3     | 1   |
| CIVIL: Structural Building Systems             | CVL 908       | 1       | 3     | 2 Tut. |

*CVL 312 must be selected in Structural and Materials Stream.*

| TRANSPORTATION STREAM – TWO OF:                 |               |         |       |     |
| CIVIL: Highway Design                           | CVL 735       | 1       | 3     | 2   |
| CIVIL: Pavement Design and Management           | CVL 900       | 1       | 3     | 2   |
| CIVIL: Traffic Operations and Management        | CVL 902       | 1       | 3     | 2   |
| CIVIL: Non-Highway Transportation Systems       | CVL 909       | 1       | 3     | 1   |
| CIVIL: Transportation Planning                 | CVL 910       | 1       | 3     | 1   |
### SEVENTH SEMESTER (Last Offered in Fall 2016) (FORMER CURRICULUM)

#### GEOMATICS ENGINEERING OPTION

**REQUIRED**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIL: Satellite Geodesy</td>
<td>CVL 650</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Photogrammetry and Digital Mapping</td>
<td>CVL 710</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>CIVIL: Geospatial Information Systems</td>
<td>CVL 736</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Data Modeling and Estimation</td>
<td>CVL 737</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

**LIBERAL STUDIES ELECTIVE GROUP:**

One course required from the following:

<table>
<thead>
<tr>
<th>Subject</th>
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<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
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### EIGHTH SEMESTER (Last Offered in Winter 2017) (FORMER CURRICULUM)

#### GEOMATICS ENGINEERING OPTION

**REQUIRED**

<table>
<thead>
<tr>
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<th>Course Number</th>
<th># Terms</th>
<th>Lect.</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMON ENGINEERING: Law and Ethics in Engineering Practice</td>
<td>CEN 800</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIVIL: Remote Sensing and Image Analysis</td>
<td>CVL 354</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Project Management</td>
<td>CVL 742</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>CIVIL: Geomatics Network Design and Analysis</td>
<td>CVL 810</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CIVIL: Capstone Design Project</td>
<td>CVL 899</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
COURSE DESCRIPTIONS

CEN 100 Introduction to Engineering

This course is aimed at familiarizing the first year students with the basic information of the academic structure and expectations. Exposure to public and worker safety and the impact of engineering activities on health as well as safety standards and safety codes will be covered. The course also stresses integration with other first year courses. The principal objectives of the course are to provide a general introduction to the field of engineering; to convey the social, professional, and ethical responsibilities of engineers and why they are important to an engineering education; to introduce the undergraduate engineering programs available at Ryerson University; and to provide a general description of the skills needed to become a practicing engineer. Case studies in engineering are used to illustrate engineering fields and scientific principles.

Weekly Contact: Lect: 2 hrs / Tut: 1 hr.
GPA Weight: 1.00
Billing Units: 1
Custom Requisites: Only available to Engineering and Engineering Special Students.
Count: 1.00

CEN 199 Writing Skills

All engineering students are required to write a mandatory Writing Skills Test (WST) administered during Orientation Week before the beginning of the first semester. Students who pass the WST (grade of 'B' or higher) may enrol in their chosen breadth elective (liberal studies) courses. Those students who do not pass the WST will be required to enrol in LNG 111, LNG 112, LNG 113, or LNG 121 as a breadth elective (lower level liberal studies) course. Students who do not pass the WST will have three additional chances to write the WST. The second test will be scheduled in May following the completion of the first year Engineering curriculum. The third and fourth WST will be administered during the next academic year Orientation Week, and again, in May. This course must be successfully completed prior to enrolling in third-year engineering courses. This course is graded on a pass/fail basis.

Weekly Contact: Lab: 1 hr.
GPA weight: 1.00
Count: 1.00

CEN 800 Law and Ethics in Engineering Practice

Study of the legal and ethical aspects of engineering practice, including Canadian legal system and business organizations, tort liability, business contract law, intellectual and industrial property, principles of arbitration and alternative dispute resolutions, the practice of engineering, occupational health and safety, ethical aspects of engineering practice, ethical dilemmas in project management, sustainable development and ethical behavior, and globalization and international standards for ethical and social responsibility.

Weekly Contact: Lecture: 3 hrs
GPA Weight: 1.00
Billing Units: 1
Count: 1.00
**CHY 102 General Chemistry**

This course is intended for engineering students. This course deals with stoichiometry, gases, liquids and solids, chemical equilibria, thermodynamics, kinetics, nuclear chemistry and electrochemistry. The treatment of these topics will emphasize problem solving and calculation.

Weekly Contact: Lecture: 3 hrs. Lab: 1 hr.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Antirequisites: CHY 103 or CKCH 106

**CMN 432 Communication in the Engineering Professions**

Communication lies at the heart of the engineering professions. This course introduces students to the unique and varied communication challenges of their discipline. Through a combination of lectures, workshops, readings, and online simulations, students are exposed to the types of communication they will engage in as professionals and given the opportunity to refine their analytical, writing, presentation, and problem-solving skills.

Weekly Contact: Lecture: 2 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00

**CPS 125 Digital Computation and Programming**

The C programming language is used to develop good programming techniques. Topics covered include: C program form, language statements, pseudo-code algorithmic representation, numeric data types, flow of control with selection and repetition, standard C libraries, functions and call modes, arrays, pointers, sorting, matrix operations, character and string data types, dynamic storage, structures and linked lists, file I/O. Only regular first year students from the Faculty of Engineering and Architectural Science and the Faculty of Science may preregister for this course.

Weekly Contact: Lecture: 3 hrs. / Lab: 2 hrs.
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

**CVL 70A/B Structural Capstone Design Project A/B**

The Capstone is a design project for all areas of civil engineering. The course involves professional engineers from industry acting as clients for pre-selected teams of typically 4-5 students. Students are required to identify and evaluate at least two design alternatives considering economic, environmental, and other criteria. Detailed design of the selected alternative is conducted, typically in winter. Teams submit preliminary and final reports in the fall and winter semesters, respectively, along with oral presentations.

Weekly Contact: Lecture: 1 hr./1 hr. Tutorial: 3 hrs./3 hrs.
GPA weight: 2.00
Billing Units: 1/1
Count: 2.00
Prerequisites: CVL 313 and CVL 410
CVL 71A/B Environmental Capstone Design Project A/B

The Capstone is a design project for all areas of civil engineering. The course involves professional engineers from industry acting as clients for pre-selected teams of typically 4-5 students. Students are required to identify and evaluate at least two design alternatives considering economic, environmental, and other criteria. Detailed design of the selected alternative is conducted, typically in winter. Teams submit preliminary and final reports in the fall and winter semesters, respectively, along with oral presentations.

Weekly Contact: Lecture: 1 hr./1 hr. Tutorial: 3 hrs./3 hrs.
GPA weight: 2.00
Billing Units: 1/1
Count: 2.00
Prerequisites: CVL 300 and CVL 400 and CVL 501

CVL 72A/B Transportation Capstone Design Project A/B

The Capstone is a design project for all areas of civil engineering. The course involves professional engineers from industry acting as clients for pre-selected teams of typically 4-5 students. Students are required to identify and evaluate at least two design alternatives considering economic, environmental, and other criteria. Detailed design of the selected alternative is conducted, typically in winter. Teams submit preliminary and final reports in the fall and winter semesters, respectively, along with oral presentations.

Weekly Contact: Lecture: 1 hr./1 hr. Tutorial: 3 hrs./3 hrs.
GPA weight: 2.00
Billing Units: 1/1
Count: 2.00
Prerequisites: CVL 316 and CVL 735

CVL 207 Graphics

Principles of traditional descriptive geometry of points, lines, planes and solids, done with modern tools. Selections, auxiliary views, intersections and developments, pictorial drawings. Principles of 2D and 3D computer-aided drafting (AutoCAD) used in areas of civil engineering. Structural drafting pertaining to steel, concrete and timber construction, standards and conventions. Drafting room and computer lab exercises are assigned. Constructed solutions with vector diagram projection; comparison with equivalent vector algebraic methods. Graphical statistics, concurrent force problems including pure axial force plane structures.

Weekly Contact: Lecture: 2 hrs. / Lab: 2 hrs.
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

CVL 300 Environmental Science and Impact Assessment

This course overviews the environmental disturbances and the roles of civil engineers in environmental protection. Concepts of sustainability and pollution prevention are reviewed. In order to achieve sustainable development, it introduces the concepts and methods of environmental impact assessment in Ontario and Canada. It examines the biological, economic, and social impacts that are commonly associated with development activities and the means used to predict, evaluate, and mitigate impacts in human and natural environments. It includes a review of the history of environmental assessment and its relation to environmental planning principles. The course concludes with a review of current practice in impact assessment and the major controversies in the field.
**CVL 312 Computer Aided Structural Analysis**

Flexibility and stiffness methods, applications to trusses, beams and frames; computer analysis of structures; structural analysis programs; formulation of plane stress and plane strain problems; introduction to the finite element method of analysis.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
Prerequisites: CEN 199, CVL 313 and MTH 510
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

**CVL 313 Structural Analysis**


Weekly Contact: Lect: 3 hrs / Tutorial: 2 hrs.
Prerequisites: CEN 199 and CVL 420
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

**CVL 316 Transportation Engineering**

Introductory level course on transportation engineering, including transportation system characteristics, classification, mathematical models, and modes; transportation planning (trip generation, trip distribution, mode choice, and traffic assignment); highway geometric design; traffic flow characteristics; capacity and level of service; queuing and simulation models; and evaluation of transportation impacts.

Weekly Contact: Lecture: 3 hrs / Tutorial: 1 hr.
Prerequisite: (CEN 199 former curriculum students only) and MTH 425
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

**CVL 320 Strength of Materials I**


Weekly Contact: Lecture: 4 hrs. / Lab: 2 hrs.
Prerequisites: CEN 100, MTH 141, MTH 240, MTL 200, PCS 125, PCS 211
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

CVL323 Fundamentals of Surveying

Introduction to surveying theory and techniques; distance, angular and height measurement methods; traversing and traverse adjustments; field calibration of instruments; topographic mapping; coordinate geometry; geometry of horizontal and vertical curves; curves and construction layout; use of surveying software.

Weekly Contact: Lecture: 3 hrs. / Lab: 2 hrs.
Prerequisites: CVL 207 and MTH 240 and PCS 125
GPA Weight: 1.00
Billing Units: 1.
Count: 1.00

CVL 352 Geomatics Measurement Techniques

Introduction to photogrammetry, remote sensing, satellite positioning and geographic information systems; Introduction to the use of various sensors and techniques for the acquisition of precise metric and attribute data. Applications in the field of geomatics and civil engineering.

Weekly Contact: Lecture: 3 hrs. / Lab: 2 hrs.
Prerequisite: CEN199 and CVL 323
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

CVL 354 Remote Sensing and Image Analysis

The course covers an overview of the principles of remote sensing and image analysis from a Geomatics Engineering perspective. Topics include: basic characteristics of electromagnetic radiation, radiation interactions with terrestrial materials and atmospheric effects, remote sensing platforms, active and passive sensors, geometric and radiometric corrections, visual image interpretation, image enhancement and transformation, thematic classification, applications of change detection, environmental monitoring and mapping.

Weekly Contact: Lecture: 3 hrs. / Lab: 2 hrs.
Prerequisites: CEN 199, PCS 125 and (MTH 203 or MTH 410 or CVL 405)
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

CVL400 Hydrology and Water Resources


Weekly Contact : Lecture 3 hrs / Lab: 1 hr / Tut : 1 hr.
Prerequisites: MTL200, PCS125 and CVL405.
GPA Weight: 1
Billing Units: 1
Count: 1.00

**CVL 405 Probability and Statistics for Engineers**


Weekly Contact: Lecture: 3 hrs. / Tutorial: 2 hrs.
Prerequisites: CPS125, MTH141 and MTH240
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

**CVL 410 Structural Concrete Design I (Former Curriculum)**

Limit states of design; Engineering properties of concrete and reinforcement; Design of reinforced concrete beams for shear and flexure; Design of continuous beams and T-beams; Development, anchorage, and splicing of reinforcement; Design of one-way slabs; Design of columns; Design of concrete members for serviceability.

Weekly Contact: Lecture: 3 hrs / Lab: 2 hrs
Prerequisite: CEN 199 and CVL 420
GPA Weight: 1.00
Billing Units: 1

**CVL 410 - Structural Concrete Design I (New Curriculum)**

Limit state design of continuous beams and one-way slabs for flexure, shear and serviceability; shear friction and horizontal shear transfer; development, anchorage, and splicing of reinforcement; bar cut-offs for tension and compression reinforcement; design of short column for combined bending and axial compression; design of slender columns; types of footings; design of strip, isolated and combined footings.

Weekly Contact: Lecture: 3 hrs. Tut: 2 hrs.
Prerequisites: CEN 199 and CVL500
GPA Weight: 1.00
Billing Units: 1

**CVL 411 Structural Steel Design (Former Curriculum)**

Engineering properties of steel; tension members; compression members; beams subjected to bending and shear; composite beams; welded plate girders; beam-column; welded and bolted connections; base plates under axial load and bending; overall stability; fatigue design; introduction to plastic analysis and design; complete design of a one-storey building in steel.

Weekly Contact: Lecture: 3 hrs / Lab: 2 hrs
Prerequisites: CVL 313 and CVL 420
GPA Weight: 1.00
Billing Units: 1
CVL 411 Structural Steel Design (New Curriculum)

Design of continuous beams and Plate girder; Composite floor system; Beam-column design; overall column stability; tension members; welded and bolted connections; base plates under axial load and bending; fatigue design of structural steel; crane girder design; Beams with web openings; Complete design of Gerber girder system.

Weekly Contact: Lecture: 3 hrs / Tutorial: 2 hrs
Prerequisites: CEN 199, CVL 313 and CVL 500
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

CVL 420 Strength of Materials II


Weekly Contact: Lecture: 3 hrs. / Lab: 2 hrs
Prerequisite: CVL 320
GPA Weight: 1.00
Billing Units: 1
Count: 1.00

CVL 423 Geology for Engineers

This course provides Civil Engineering students with an understanding of the physical world in which they work and live. The course deals with the following topics: structure of the earth, plate tectonic theory and continental drift, minerals, rocks and their mode of formation, erosion and weathering, soil formation, folding and fracturing of rocks, earthquakes, volcanoes, glacial landforms and permafrost, ground and surface water, rock mass stability, mass wasting, and the physiography of Canada. The engineering significance of each topic is illustrated by practical examples. Laboratory activities include mineral and rock identification and interpretation of topographic and geological maps.

Weekly Contact: Lecture: 3 hrs. / Lab: 1 hr.
Prerequisites: CHY 102, PCS 125 and PCS 211
Billing Units: 1
GPA Weight: 1.00
Count: 1.00

CVL 434 Geotechnical Properties of Soils

Introduction of structural and glacial geology; rock cycle; mineral and soil identification and classification; clay soil structure; weight-volume relationship; Atterberg limits; relative density; seepage theory; hydraulic conductivity measurements in the field and in the lab; flow nets; and principle of effective stress. Mohr-Coulomb failure criterion; shearing strength of saturated soils; consolidation theory, settlement prediction and computer assisted processing of laboratory test results.

Weekly Contact: Lecture: 3 hrs. / Lab: 2 hrs.
Prerequisite: CVL 320
GPA Weight: 1.00
CVL 500 Introduction to Structural Design

Types of structures; Loads, load factors and load transfer; Properties of structural steel, Behaviour and design of steel compression members and statically-determinate steel beams; Properties of concrete and reinforcing steel; Behaviour of uncracked and cracked reinforced concrete beams; Design of statically-determinate one-way slabs and rectangular, T and L beams for ultimate and serviceability limit states; Design of reinforced concrete short columns. Behaviour and design of timber members subjected to bending, axial compression and combined bending and compression.

Weekly Contact: Lecture: 3 hrs / Tutorial.: 2 hrs.  
Prerequisites: CEN 199 and CVL 420  
GPA Weight: 1.00  
Billing Units: 1  
Count: 1.00

CVL 501 Fluid Mechanics and Hydraulics


Weekly Contact : Lecture : 3 hrs / Lab : 1 hr. / Tutorial : 1 hr.  
Prerequisites: CEN 199 and CVL 400  
GPA Weight: 1  
Billing Unit: 1  
Count: 1.00

CVL 533 - Concrete Materials


Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.  
GPA weight: 1.00  
Billing Units: 1  
Count: 1.00  
Prerequisites: CEN 199 and CVL 320
CVL 600 - Foundation Engineering

Soil exploration, Active and Passive earth pressure calculations. Slope stability, Design of earth retaining structures, open and supported excavations, Design of shallow foundation, Soil bearing capacity and settlement. Design of pile foundation and drilled caissons.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CEN 199 and CVL 434

CVL 601 - Wastewater Engineering


Weekly Contact: Lecture: 3 hrs. Lab: 1 hr.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CEN 199, CVL 501

CVL 609 - Civil Engineering Systems

This course provides an introduction to systems analysis tools that facilitate decision-making in engineering design and management. Particular emphasis is placed on fundamentals of systems approach, linear programming, integer programming, multi-objective programming, dynamic programming, sensitivity analysis, Monte Carlo simulation, and decision-making under uncertainty. Applications of these tools are tailored to design and management of various civil engineering systems depending on whether a student is enrolled in the Civil Engineering program or the Structural Engineering option.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CEN 199, ECN 801 and MTH 510 and (CVL 405 or MTH 410)

CVL 633 - Highway Materials


Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CEN 199, CVL 320 and CVL 434

CVL 650 - Satellite Geodesy

Basic concepts of satellite positioning and applications; datums and coordinate systems; orbital
determination; GNSS signal structure, pseudorange and carrier-phase measurements; GNSS errors
and biases; linear combinations of GNSS observables; GNSS positioning modes, absolute and
relative positioning, static, kinematic and real-time kinematic (RTK) GNSS positioning;
Communication links; GNSS data and correction services.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 352 and CVL 405

CVL 735 - Highway Design

The selection of design elements by explicitly considering design controls, human factors, and the
safety, operational, environmental and other consequences of design decisions is the underlying
philosophy adopted for the following major topics: design of horizontal and vertical alignment and
cross-section elements; alignment coordination; intersection and interchange design; and roadside
design, including barriers and guiderail. Hydraulic design of urban and rural highway drainage
facilities is also covered.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CEN 199, CVL 323

CVL 736 - Geospatial Information Systems

Introduction to geographical information systems (GIS) and science; hardware and software
components; geo-referencing of geospatial data; vector and raster data representation and
topological relationships; GIS databases; vector and raster data exploration, analysis and
processing; data display and visualization; spatial analytical modeling; data quality, integration, and
standards; concepts of web GIS and mapping services; GIS project design and implementation.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Custom Requisites: Prerequisite: CVL 352

CVL 742 - Project Management

Aims to develop a body of knowledge, methods, skills and techniques that are essential for students
to successfully manage future engineering projects within budget, deadline and resource limits.
Topics discussed include: introduction to project management body of knowledge (PMBOK); project
delivery systems and contracting methods; budget estimate and bid cost estimate; project planning,
work breakdown structure; project scheduling: critical path method (CPM) and network diagram,
resource allocation and leveling, line of balance (LOB), integration of CPM and TLOB; project control
and earned value analysis; project risk management, impact of uncertainty on schedule and cost,
PERT; general principles of construction quality, health and safety management. Computer software for cost estimation and scheduling will be practised in laboratory sessions.

Weekly Contact: Lecture: 3 hrs. Lab: 1 hr.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: ECN 801
Antirequisites: EMS 304 and IND 713

CVL 900 - Pavement Design and Management


Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 633
Antirequisites: CV8405

CVL 901 - Municipal Solid Waste Management

Introduction to legislation and authority; integrated solid waste management planning; solid waste generation, characterization, and collection; collection and processing; reduction, reuse, and recycle; landfilling of municipal waste, site selection, development, hydrological factors, leachate and gas collection and control, closure; solid waste incineration.

Weekly Contact: Lecture: 3 hrs. Lab: 1 hr.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 300 or CVL 425

CVL 902 - Traffic Operations and Management

Introductory topics related to the management of traffic on urban and rural road networks, including bicycle and pedestrian facilities. Topics include: capacity analysis for interrupted and uninterrupted flow facilities; deterministic and stochastic models for traffic flow; traffic simulation principles; freeway traffic management; signal timing for isolated intersections, networks and arterials; adaptive traffic control; safety of traffic management and engineering principles and techniques.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 316
Antirequisites: CV8401
**CVL 903 - Water Resources Engineering**

This course focuses on the planning and design of water resources systems. Fundamentals of hydrology and hydraulic engineering; Statistical analysis of hydrologic data and the concept of reliability design; Water management planning process with a focus on watershed, sub-watershed, and site plans; Design of urban drainage systems, flood control and management; Review of water resource economics, methodology of design, system analysis, system design and decision making.

Weekly Contact: Lecture: 3 hrs. Lab: 1 hr.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 400 and CVL 501

**CVL 904 - Structural Concrete Design II**

Truss model and compression field theory for beams failing in shear and torsion; shear friction and horizontal shear transfer; design of deep beams and corbels; Design of shear walls, Design of tilt-up walls. Design of steel anchors in concrete. Introduction to prestressed concrete: Pretensioning vs. post-tensioning technology; prestressing material properties; Behaviour and design of statically-determined prestressed concrete beams in flexure, shear and serviceability; design of precast concrete hollow-core slabs and double-tee beams for building construction.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 410
Antirequisites: CVL8307

**CVL 905 - Bridge Design and Construction**

Types of bridges; bridge loads; load distribution in bridge superstructures; simplified methods of analysis, with reference to the Canadian Highway Bridge Design Code; design of slab bridges; design of slab-beam bridges; Acceleration bridge construction; Bridge evaluation; Bridge Testing; student presentations on selected topics.

Weekly Contact: Lecture: 3 hrs. Tutorial: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 411
Antirequisites: CVL8308

**CVL 906 - Renovation/Repair of Existing Structures**

Rehabilitation of civil infrastructure systems including aspects of deterioration science, nondestructive assessment, maintenance, renovation, rehabilitation and preservation of infrastructure; mechanisms of mechanical, chemical and biological infrastructure degradation; corrosion of steel condition surveys and evaluation of buildings and bridges repair and preservation materials, techniques and strategies; renewal engineering, construction planning, management, public policy, codes and guidelines; case studies.

Weekly Contact: Lecture: 3 hrs. Lab: 2 hrs.
GPA weight: 1.00
Billing Units: 1
CVL 908 - Structural Building Systems


Weekly Contact: Lecture: 3 hrs. Tutorial: 2 hrs.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL312, CVL 410, CVL 411
Corequisite: CVL 904

CVL 910 - Transportation Planning

Treatment of the process and techniques of transportation planning, with emphasis on urban and regional applications. Topics include: historical development of transportation planning in North America; transportation planning framework; surveys and data collection; transportation-land use interaction; analysis and models of transportation demand; analysis and models of transportation performance; development and evaluation of transportation planning options.

Weekly Contact: Lecture: 3 hrs. Lab: 1 hr.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 316

CVL 913 - Water Supply Engineering

Water quality parameters; Drinking water sources, quantity and quality requirements; Water chemistry; Unit processes of water treatment: screening; solids separation; coagulation; flocculation; sedimentation; filtration; softening; disinfection. Treated water distribution: flow in looped pipe network systems; monitoring; applications of computer modelling. Experimental laboratory work involving water quality determination: solids, alkalinity, hardness, BOD, coliform and bacterial analyses.

Weekly Contact: Lecture: 3 hrs. Lab: 1 hr. Tutorial: 1 hr.
GPA weight: 1.00
Billing Units: 1
Count: 1.00
Prerequisites: CVL 501

ECN 801 Principles of Engineering Economics

Engineering economics is concerned with the problem of investment decision making or capital expenditure analysis. An 'investment' problem involves making a decision to allocate financial resources to acquire productive assets that will generate cash flows in future time periods. Engineering economics seeks to develop and apply a logically consistent methodology for evaluating
investment projects. Discounted cash flow methods are used in analyzing such projects. In this course we will assume certain cash flows and ignore taxation implications. After developing the mathematics of cash flow equivalence, absolute and relative measures of project worth will be developed and applied to individual and multiple projects. The emphasis will be on private project decisions, but similar methods will be applied to public sector projects.

Lect: 3 hrs.
GPA Weight: 1.00
Billing Units: 1
Count: 1

**EES 512 Electric Circuits**

This one-semester lecture/lab course covers general electric circuit parameters and laws. Topics include: basic electric circuits, voltage and current sources, resistance, analysis of DC circuits, power considerations. Concepts of capacitance, inductance, and their transient behaviour. Introduction of AC sources, phasors, reactance and impedance, AC analysis of RC, RL, and RCL circuits, the effect of resonance, real and complex power in reactive loads.

Lect: 3 hrs. / Tut: 2 hrs.
Prerequisites: MTH 140 and MTH 141
GPA Weight: 1.00
Billing Units: 1
Count: 1

**MEC 516 Fluid Mechanics I**

Dimensions and units, continuum fluid mechanics. Properties of fluids. Fluid statics, the standard atmosphere. Manometry and pressure measurement. Forces on submerged planes. Flow characteristics: laminar and turbulent flow, steady and unsteady flow, streamlines. Flow analysis: control volume/control system and differential approaches for mass, momentum and energy conservation. Applications of the conservation equation, Euler and Bernoulli equations. Dimensional analysis, similitude and model testing. (2 hr. Lab every other week)

Lect: 3 hrs./Lab 1 hr.
Prerequisites: CEN100, CHY 102, MTH 140, MTH 141, PCS 211, CPS 125, CVL 207, MTH240, PCS125, MTH425 and MTL 200.
GPA Weight: 1.00
Billing Units: 1
Count: 1

**MTH 140 Calculus I**


Lect: 4 hrs. / Lab 2 hrs.
GPA Weight: 1.00
Billing Units: 1
Count: 1
Custom Requisites: Available to Engineering and Engineering Special Students only.

**MTH 141 Linear Algebra**

Lect: 4 hrs. / Lab 1 hr.
GPA Weight: 1.00
Billing Units: 1
Count: 1
Custom Requisites: Available to Engineering and Engineering Special Students only.

**MTH 240 Calculus II**


Lect: 4 hrs. / Lab 1 hr.
Prerequisite: MTH 140
GPA Weight: 1.00
Billing Units: 1
Count: 1
Custom Requisites: Available to Engineering and Engineering Special Students only.

**MTH 410 Statistics**

Description of numerical data. Elements of probability theory. Discrete probability distributions (hypergeometric, binomial, geometric and Poisson distribution). Continuous probability distributions; uniform on an interval, Normal distribution, t-distribution, Exponential distribution, $x^2$ distribution. Confidence interval and hypothesis testing concerning mean, variance and proportion for one and two populations. F-distribution. Correlation. Simple linear regression (if time permits).

Lect: 3 hrs./Lab 1 hr.
Prerequisites: MTH 141 and MTH 240.
GPA Weight: 1.00
Billing Units: 1
Count: 1
Custom Requisites: Available to Engineering and Engineering Special Students only.

**MTH 425 Differential Equations and Vector Calculus**

Review of first-order ordinary differential equations and applications; Higher-order linear differential equations; solution methods series solutions; Laplace Transforms and ODEs. Scalar and vector functions and fields, Chain rule, Directional Derivative, coordinate systems, divergence and curl of vector fields; line, surface and multiple integrals, Divergence theorem; Green's and Stokes' theorems; Applications.

Lect: 4 hrs. / Lab 2 hrs.
Prerequisites: MTH 140, MTH 141 and MTH 240
GPA Weight: 1.00
Billing Units: 1
Count: 1
MTH 510 Numerical Analysis


Lect: 3 hrs. / Lab 1 hr
Prerequisites: MTH 141, MTH 240
GPA Weight: 1.00
Billing Units: 1
Count: 1

MTL 200 Materials Science Fundamentals


Lect: 3 hrs. / Lab 1 hr.
Prerequisite: CHY 102
GPA Weight: 1.00
Billing Units: 1
Count: 1

PCS 125 Physics: Waves and Fields

Simple harmonic motion; motion of mechanical waves, wave speed; sound, Doppler effect, interference, standing waves, beats and resonance; gravitational fields and potential energy; electric fields and potential energy; electric potential; magnetic fields.

Lect: 3 hrs./ Lab 1 hr. / Tut. 1 hr.
GPA Weight: 1.00
Billing Units: 1
Count: 1

PCS 211 Physics: Mechanics


Lect: 3 hrs. / Lab 1 hr. / Tut: 1 hr.
GPA Weight: 1.00
Billing Units: 1
Count: 1

WKT 90A/B: Co-operative Internship Program

An optional 12-16 month Work Term assignment for students in the Civil Engineering program. The selected students will have completed all the academic curricular requirements of the third year of the program and achieved a clear standing. Course enrolment is conditional on the student obtaining
and accepting an internship placement offer from an approved corporate partner. Interns will be visited as required by the course co-ordinator to assess their progress. This course is graded on a pass/fail basis. Grade achieved at the successful completion of the assignment and the submission of an acceptable Work Term report is PSD.

Weekly Contact: Lecture: 1 hr./1hr.
GPA weight: 0.00
Count: 2.00
Consent: Departmental consent required
GLOSSARY / ACADEMIC DEFINITIONS

Extensive information on all core, professional and liberal studies courses will be available to students in their course outline (course management) document. Please refer to these Academic Definitions to understand how to correctly interpret a course description:

Prerequisite - A specific course that must be successfully completed prior to enrolling in an advanced course.

Antirequisite – Courses that contain similar content and therefore cannot both be used towards fulfilling degree requirements.

Billing Units – The measure used to calculate undergraduate tuition fees.

Co-requisite – A course that must be taken concurrently, with or prior to, another course.

Course Hours - The weekly course contact hours associated with a given course may include lecture, seminar, studio and laboratory hours and such activities as unsupervised studio and laboratory work, internship and independent study.

Course Numbers – All current Ryerson courses are identified by a unique alpha-numeric code. The first three letters identify the subject area. The digits indicate whether the course is a one- or two-term course; three digits signifies a one-term course and two digits plus the "A/B" qualifier signifies a two-term course.

Course Substitution/Course Directive - The assessment and approval of a curriculum exception where one course is used as a replacement for another course or is used to fulfill the requirements of an elective group.

Credit Course – A course for which a grade is assigned and for which one semester or year of course credit is granted towards a certificate, diploma or degree.

Curriculum - The prescribed plan of study, approved by Ryerson Senate, leading to a certificate, diploma or degree. The courses that must be successfully completed for the fulfillment of a degree

GPA Weight - A numerical co-efficient (multiplier) used to express a course’s relative importance in the calculation of your cumulative grade point average. Single-term courses normally have a GPA weight of 1.00. Multi-term courses normally have a GPA weight of 2.00. GPA weight variances will appear in the individual course descriptions.

Liberal Studies - Studies that develop the capacity to understand and appraise the social and cultural context in which the graduate will work as a professional and live as an educated citizen. Courses are indicated as follows, LL—Lower Level, UL—Upper Level. Some language courses can be both UL and LL. If it does not say either “LL or UL” in the course description, it is not a Liberal Studies Course.

Major/Plan - A scholarly focus in an academic subject area offering both breadth and depth such as Biophysics or Human Resources Management, normally consisting of 25 to 30 core courses.

Minor - A minor is a grouping of 6 or more courses, mainly outside the major, selected by a student from an established minor curriculum. Minors are noted on a student's Official Transcript.

Professional Studies - Studies that induce functional competence by presenting the knowledge and developing the skills characteristic of current practice in the career field.

Program Department - The academic department responsible for the administration of one or more programs.
LIBERAL STUDIES COURSES

IMPORTANT NOTES

Students must complete liberal studies courses as part of the requirements for graduation in all Ryerson programs.

Such studies must be in disciplines outside the student’s field of professional specialization; their purpose is to develop the capacity to understand and appraise the social, cultural and scientific context in which graduates will work as professionals and live as educated citizens.

Certain courses cannot be taken for Liberal Studies credit in the civil engineering program or structural engineering option. Students are responsible for ensuring they do not enroll in a restricted course. Please refer to the Lower Level and Upper Level Liberal Studies restrictions listed in this Student Handbook as well as in the Fall 2019/Winter 2020 Undergraduate Calendar. Please see the course description section for a complete listing of Liberal Studies courses online https://www.ryerson.ca/calendar/2019-2020/liberal-studies/ Courses not identified as either (LL) or (UL) are NOT Liberal Studies courses and will not be used towards the fulfillment of a Liberal Studies Requirement for graduation purposes. Not all courses will be offered every semester to all students. Please refer to RAMSS for the availability of these courses per semester:

TABLE A - LOWER LEVEL LIBERAL STUDIES

ANT 100 Introduction to Anthropology
ARB 101 Introductory Arabic I
ARB 201 Introductory Arabic II
CHN 101 Introductory Chinese I
CHN 201 Introductory Chinese II
CMN 230 Trans Studies and Communication
CRB 100 Introduction to the Caribbean
CRM 101 Understanding Crime in Canadian Society
ECN 110 The Economy and Society
ECN 205 Economics of War, Change and Conflict
ECN 210 Understanding Economics
ECN 340 The Economics of Human Behaviour
ECN 440 Economic Issues in Financial Markets
ENG 101 Laughter and Tears: Comedy and Tragedy
ENG 104 The Short Story
ENG 112 Zap, Pow, Bang: Pop Lit
ENG 201 Myth and Literature
ENG 203 The Literature of Indigenous Peoples
ENG 212 Cultures in Crisis
EUS 180 Global Water Issues
FNU 100 Canadian Cuisine: Historical Roots
FNU 101 Food Practices and Policy
FRE 101 Introductory French I
FRE 201 Introductory French II
FRS 102 Francophone Detective Fiction
GEO 106 Geographies of Everyday Life
GEO 108 Geography of the Global Village
GEO 110 The Physical Environment
GEO 206 Regions, Nations and the Global Community
GEO 208 Geography of the Global Economy
GEO 210 Geography of Danger
GEO 312 Viva Las Vegas!
GEO 322 A Critical Geography of South Asia
HST 110 U.S. History: Colonial Era to 1877
HST 111 World Turned Upside Down: Europe 1350-1789
HST 112 East Meets West: Asia in the World
HST 118 The City in History
HST 119 Rise of Empires: History Through Film
HST 147 Introduction to South Asian Civilization
HST 207 Introduction to Ancient Greece and Rome
HST 210 U.S. History: 1877 to Present
HST 211 Century of Revolution: Europe 1789-1914
HST 219 Decolonization: History Through Film
HST 222 History of The Caribbean
HST 307 Canada to 1885: The Founding Societies
HST 325 History of Science and Technology I
HST 328 Multiple Ontarios: 1784 to the Present
HST 407 Canada from 1885: The Struggle for Identity
HST 425 History of Science and Technology II
HST 426 Major Themes in International Relations
HST 488 Britain since 1815
IRL 100 Intro to World Art I: Pictorial Arts
IRL 200 Introduction to World Textile History
LAT 100 Introduction to Latin
LAT 200 Latin and the Roman World
LIR 205 Greek and Latin Keys to Academic English
LNG 111 Language and Identity
LNG 112 Spoken and Written Language
LNG 113 Language and Public Life
LNG 121 Language and Society
MUS 101 Intro to World and Early European Music
MUS 105 Voices Without Borders: Global Chorus
MUS 106 The Architecture of Music
MUS 201 Introduction to Classical Music
NPF 188 From Page to Screen

PHL 101 Plato and the Roots of Western Philosophy

PHL 110 Philosophy of Religion I

PHL 187 Ancient Greek Philosophy

PHL 201 Problems in Philosophy

PHL 210 Introduction to Indian Philosophy

PHL 214 Critical Thinking I

PHL 306 Freedom, Equality, Limits of Authority

PHL 333 Philosophy of Human Nature

PHL 365 Philosophy of Beauty

PHL 366 Existentialism and Art and Culture

PHL 406 Issues of Life, Death, and Poverty

POL 106 The Politics of Human Needs

POL 128 Politics and Film

POL 129 Immigration and Settlement in Canada

POL 203 Politics of the Environment

POL 208 Globalization and World Politics

PSY 105 Perspectives in Psychology

PSY 304 Psychology of Gender

PSY 308 Psychology of Thinking

REL 100 Introduction to Religious Studies

REL 101 Introduction to World Religions

REL 200 Introduction to Hinduism and Buddhism

REL 205 Introduction to Sikhism

REL 210 Introduction to Chinese Religions
REL 215 Introduction to Judaism
REL 220 Introduction to Christianity
REL 225 Introduction to Islam
RTA 180 Music and Film
RTA 406 Chinese Instrumental Music
RTA 441 Music of India
RTA 474 Gospel Music: Songs for the Spirit
RTA 484 Music of West Africa
SEM 101 Sign, Sense, and Meaning
SOC 102 Human Origins
SOC 103 How Society Works
SOC 108 Indigenous Peoples and Decolonization
SOC 202 Popular Culture
SOC 203 Social Class and Inequality
SOC 221 The Hip Hop Lens of Society
SOC 305 Sociology of Deviance
SPN 101 Introductory Spanish I
SPN 201 Introductory Spanish II
THL 100 Theatre and the Canadian Identity

**LNG: LANGUAGE AND WRITING COURSES**

There are three Lower Level Liberal Studies courses designed for students whose first language is not English:

LNG 111 Language and Identity
LNG 112 Language: Spoken and Written
LNG 113 Language and Public Life

These courses require a placement test, which can be found at the following website:
LNG 111, LNG 112 and LNG 113 are available to students who have been assessed as likely to benefit from intensive language and writing courses. Students for whom English is a second language and who are enrolled in programs that accept ESL courses for credit may take all three ESL courses, LNG 111, 112, and 113. However, a maximum of two credits only may be used towards their degree requirements.

There is one Lower Level Liberal Studies course designed for undergraduate students wishing to improve their writing skills: LNG 121, Language and Society. No Placement test is required for this course.

**TABLE A – LOWER LEVEL LIBERAL STUDIES RESTRICTIONS**

Students may not choose courses that appear on the restriction list under their program or major. These courses do not count towards your degree requirements.

<table>
<thead>
<tr>
<th>Civil Engineering</th>
<th>BLG 181, BMS 150, CHY 182, CHY 183, ITM 277, MEC 110, PCS 111, PCS 181, PCS 182 and SCI courses are not available for credit.</th>
</tr>
</thead>
</table>

http://www.ryerson.ca/llc/currentstudents/placement_tests.html
TABLE B - UPPER LEVEL LIBERAL STUDIES

IMPORTANT NOTES: Students are responsible for ensuring they do not enroll in a restricted course. Please see Table B - Upper Level Restrictions for more information. Not all courses will be offered every semester to all students. Please check RAMSS for the availability of these courses each semester.

ANT 306 Introduction to Linguistic Anthropology
ARB 301 Intermediate Arabic I
ARB 401 Intermediate Arabic II
ARB 501 Advanced Arabic I
ARB 601 Advanced Arabic II
CHN 301 Intermediate Chinese I
CHN 401 Intermediate Chinese II
CHN 501 Advanced Chinese I
CHN 601 Advanced Chinese II
CHS 503 Chinese Literary Traditions
CHS 504 Chinese Cultural Traditions
CLD 500 A Caring World for Children
CMN 601 Visual Communication: A Critical Approach
CRB 500 Families in the Caribbean
CRB 501 Racism and Caribbean Peoples in Canada
CRB 502 Cultural Traditions in the Caribbean
CRM 515 Gendering Society
CRM 601 Violence in Society
DST 500 A History of Madness
DST 508 Crippling the Arts in Canada
DST 605 Disability, Desire and Sexuality
ECN 503 Economic Development
ECN 505 Issues in Canadian Labour Markets
ECN 507 Ethics and Justice in Economics
ECN 509 Development of the Canadian Banking and Financial System
ECN 511 Economy and Environment
ECN 512 The Economics of Sex
ECN 603 Economic Issues in Globalization
ECN 607 Issues in the International Economy
ECN 722 Economic Issues in Professional Sports
ECN 802 The Economies of East Asia
FRE 903 The Francophone Short Story
FRS 501 Women and the Arts in 19th Century France
FRS 502 Feminism and French Literature
FRS 602 French Caribbean Literature and Culture
FRS 606 Francophone Literature, Middle East, North Africa
GEO 505 Regional Analysis of Canada
GEO 507 Explorations of the Urban Environment
GEO 509 Food, Place and Identity
GEO 520 Global Political Geography
GEO 522 Geography of the Middle East
GEO 605 The Geography of the Canadian North
GEO 607 Cities and the Canadian Economic Landscape
GEO 609 cyberspace@geography.ca
GEO 620 Political Geog. of Nations and Localities
GEO 702 Technology and the Contemporary Environment
GEO 716 Geographies of Health
GEO 720 The Inner Landscape of Culture
GEO 793 The Geography of Toronto
GEO 802 The Geography of Recreation and Leisure
GEO 811 Global Environmental Issues
GEO 820 The Outer Landscape of Culture
HST 501 The American Civil War
HST 503 Crime and Punishment in Modern Canada
HST 504 War to War: World Conflict 1900-1945
HST 506 The Ancient Egyptian World
HST 510 The United States after 1945
HST 511 Quebec in Canada: A History
HST 522 The Middle East: 1908 to the Present
HST 523 Colonial South Asia, 1757 - 1947
HST 526 Women and Gender in U.S. History
HST 527 Toronto: Wilderness to Metropolis
HST 532 Elizabethan England
HST 533 Africa Before 1850
HST 540 Espionage: A Modern History
HST 541 Unknown Canada: Rebels, Rioters, Strikers
HST 551 Problems in 20th Century Western Europe
HST 555 Late Qing and Republican China,1839-1949
HST 580 Natives and Newcomers to 1763
PHL 505 Hegel and Marx
PHL 509 Bioethics
PHL 520 Social and Political Philosophy
PHL 521 Personal Identity East and West
PHL 522 Philosophy and Death
PHL 544 Feminist Philosophy
PHL 550 Knowledge, Truth and Belief
PHL 551 Metaphysics
PHL 552 Philosophy of Science
PHL 597 Introduction to Formal Logic
PHL 603 Modern and Contemporary Ethics
PHL 605 Existentialism
PHL 606 Philosophy of Love and Sex
PHL 611 Philosophy of Mind
PHL 612 Philosophy of Law
PHL 614 Philosophy of Human Rights
PHL 622 Classical Arabic Philosophy
PHL 639 Medieval Philosophy
PHL 648 Philosophy and Literature
PHL 661 Marx, Nietzsche and Freud
PHL 708 Introduction to Modern Philosophy
PHL 709 Religion, Science and Philosophy
PHL 710 Philosophy and Film
PHL 808 Language and Philosophy
PHL 922 Religious Belief, Diversity, and Truth
PHL 923 Philosophy of Religion II
PHL 924 Critical Thinking II
POL 501 Women, Power and Politics
POL 507 Power, Change and Technology
POL 510 The Politics of Sexual Diversity
POL 511 Well-being and Opportunity in Canada
POL 540 Issues in Third World Politics
POL 588 Neoliberalism and its Alternatives
POL 601 Social Movements and Politics
POL 607 Politics of Technology and Globalization
POL 609 Global Justice
POL 688 Colonialism and Imperialism
POL 720 Canada in the Continent
PSY 504 Social Psychology
PSY 505 Personality Theory
PSY 604 Issues in Psychology
PSY 606 Abnormal Psychology
PSY 607 Drugs and Human Behaviour
PSY 614 Psychology of Sport
PSY 615 The Psychology of Belief and Skepticism
PSY 620 Psychology of Immigration
PSY 621 Psychology of Human Sexuality
PSY 706 Personal Growth and Positive Psychology
PSY 707 Models of Stress and Adaptation
PSY 713 Psychology of Perception
PSY 807 Psychology of Prejudice
PSY 813 Psychology of Art and Creativity
RTA 530 Chinese Music
SEM 102 Introduction to Visual Semiotics
SOC 501 Making a Living: Sociology of Work
SOC 503 Sociology of Education
SOC 505 Sociology of Sport
SOC 506 Health and Society
SOC 507 Race and Ethnicity in Canadian Society
SOC 601 Control and Resistance at Work
SOC 603 Sociology of Gender
SOC 633 Sex, Gender Identities and Sexualities
SOC 701 Social Change: Canadian Perspectives
SOC 702 Anatomy of Human Conflict
SOC 703 Women, Power and the Global South
SOC 704 Aging, Culture and Society
SOC 705 Law and Justice
SOC 707 Religion, Meaning and Power
SOC 800 Theories of Society
SOC 801 Global Power Relations
SOC 802 Issues in War and Peace
SOC 808 Society of Food and Eating
SOC 880 Information Technology and Society
SOC 885 Women and Islam
SOC 902 Hollywood and Society
SPN 301 Intermediate Spanish I
SPN 401 Intermediate Spanish II
SPN 501 Advanced Spanish I
SPN 503 Gender and Religion in Early Modern Spain
SPN 507 English-Spanish Translation I
SPN 510 Spanish for Native Speakers
SPN 601 Advanced Spanish II
SPN 607 English-Spanish Translation II
SPN 610 Spanish Composition for Native Speakers
SPN 704 Latin American Culture I
SPN 705 The Boom in Latin American Literature
SPN 707 Spanish-English Translation
SPN 708 Contemporary Spanish Fiction
SPN 710 History of the Spanish Language
SPN 803 Latin American Short Story
SPN 804 Latin American Culture II
SPN 810 Cultural Context of Writing
SPS 502 Spanish Caribbean Literature and Culture
SPS 503 Sex in the Early Modern City
SSH 505 Making the Future
SWP 505 Critical Eq and Movements of Resistance

TABLE B - UPPER LEVEL LIBERAL STUDIES RESTRICTIONS

Students may not choose courses that appear on the restriction list under their program or major. These courses do not count towards your degree requirements.

| Civil Engineering | BLG 599, BLG 699, CHY 583, CHY 599, CPS 650, MTH 511, MTH 599, PCS 581 are not available for credit. |
Below are the graded course performance designations for undergraduate studies:

<table>
<thead>
<tr>
<th>Performance Description</th>
<th>Letter Grade</th>
<th>Conversion Range</th>
<th>Ryerson GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>A+</td>
<td>90-100</td>
<td>4.33</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>85-89</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>A-</td>
<td>80-84</td>
<td>3.67</td>
</tr>
<tr>
<td></td>
<td>B+</td>
<td>77-79</td>
<td>3.33</td>
</tr>
<tr>
<td>Good</td>
<td>B</td>
<td>73-76</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>B-</td>
<td>70-72</td>
<td>2.67</td>
</tr>
<tr>
<td></td>
<td>C+</td>
<td>67-69</td>
<td>2.33</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>C</td>
<td>63-66</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>C-</td>
<td>60-62</td>
<td>1.67</td>
</tr>
<tr>
<td></td>
<td>D+</td>
<td>57-59</td>
<td>1.33</td>
</tr>
<tr>
<td>Marginal</td>
<td>D</td>
<td>53-56</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>D-</td>
<td>50-52</td>
<td>0.67</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>F</td>
<td>00-49</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Final academic performance in each course is recorded as one of the above letter grades or as one of the ‘other’ designations listed in the Ryerson Calendar under Other Course Performance Designations.
GRADUATE PROGRAM

Ryerson University, a leader in applied education and research, offers a cutting edge graduate program leading to a PhD, Master of Applied Science (MASc) or Master of Engineering (MEng) degree in Civil Engineering. The state-of-the-art program is designed to prepare high-qualified graduate students to play an active role in enhancing the nation's economic, environmental, and social development. Emphasis is placed on combining both traditional methods and the latest innovative technologies to generate an intellectual environment in which students can broaden their expertise with a variety of challenging problems. The program is a unique multi-disciplinary research program covering a variety of civil engineering fields.

PROGRAM OVERVIEW

The PhD program requires the successful completion of four one-term graduate courses, the PhD Research Seminar, Candidacy Examination and a dissertation based on original research. The supervisor must approve both the course selections and the thesis research proposal submitted in writing by the student. With the approval of the supervisor, one of the four courses may be the directed studies course (CV8100), normally conducted by the supervisor. The student's supervisor, after consultation with the student, will recommend to the Associate Chair, Graduate Studies the appointment of a Candidacy Examination Committee. PhD students are encouraged to complete all courses within their first year of registration. Within 20 months of initial registration, every student in the PhD program will undertake a candidacy examination. The core aspect of the program is the successful defense of the Doctoral Dissertation.

The MASc program requires the successful completion of five one-term courses, the MASc Research Seminar and a research thesis. No undergraduate credits may be taken towards the degree. Not less than three of the required five courses must be taken at Ryerson. The supervisor for each graduate student must approve the graduate course selection. The supervisor must also approve the proposed thesis plan, which will be presented in writing by the student. Course selections are normally confirmed through a Program of Study agreement between supervisor and student. With the approval of the supervisor, one of the five courses may be the directed studies course (CV8100), normally conducted by the supervisor. MASc students are encouraged to complete all courses in their first year of registration. An oral presentation of the research thesis, and results, will be arranged in a seminar format. The examination committee will assess the candidate's research thesis.

The MEng program requires the successful completion of eight one-term courses and a major project. No undergraduate credits may be taken towards the degree. No less than four of the required eight courses must be taken at Ryerson. The faculty advisor for each graduate student must approve the graduate course selection. The faculty advisor must also approve the proposed project plan, which will be presented in writing by the student. Course selections are normally confirmed through a Program of Study agreement between faculty advisor and student. With the approval of the faculty advisor, one of the eight courses may be the directed studies course (CV8100), normally conducted by the faculty advisor. An oral presentation of the project report, and results, may be arranged in a seminar format. The examination committee will assess the candidate's project report.

Award winning professors conduct research and teach courses in the major fields of Environmental Engineering, Geomatics Engineering, Structural Engineering, and Transportation Engineering, which are described below, as well as in Geotechnical Engineering, Materials Engineering, and Construction and Project Management.
AREAS OF SPECIALIZATION

Environmental Engineering

The field of Environmental Engineering covers: urban facilities, infrastructure and environment, environmental informatics, urban water and waste systems, environmental geomatics technologies including environmental remote sensing and GIS-based environmental decision support systems, monitoring, modelling and optimization of innovative stormwater management techniques.

Geomatics Engineering

Geomatics Engineering research includes the areas of geospatial information and GIS, photogrammetry and digital mapping, remote sensing and image processing, satellite positioning and navigation, as well as in some new emerging directions such as mobile mapping, geospatial cloud computing, knowledge discovery, LiDAR, and innovative geomatics applications.

Structural Engineering and Materials

This field focuses directly on the various civil engineering means by which the country can deal with the matter of deteriorating built infrastructure. The main components of the field are structural engineering, construction materials and pavements, geotechnical engineering, and construction project management.

Transportation Engineering

Graduate study in transportation at Ryerson prepares students for a professional research career in road safety, highway design, urban transportation systems, planning, design and management of transportation systems with emphasis on the road and transit infrastructure.

In addition to the above specialization areas, the students can also conduct research in the areas of Construction and Infrastructure Management and Geotechnical Engineering, where specialized faculty members are available to supervise.

ADMISSION REQUIREMENTS

PhD:  
- Completion of Master's degree in a related Engineering or Applied Science field
  - Minimum B+ (3.33/4.33) average
  - 2 Letters of Recommendation, both must be academic

MASc  
- Completion of a 4 year Bachelor's degree in Civil Engineering or a related field
  - Minimum B (3.00/4.33) average
  - 2 Letters of Recommendation, one of which must be academic

MEng  
- Completion of a 4 year Bachelor's degree in Civil Engineering or a related field
  - Minimum B (3.00/4.33) average
  - 2 Letters of Recommendation, one of which must be academic

All applicants who have not completed their previous degrees in English will be required to complete an English Language test, such as TOEFL or IELTS, to be considered for admissions.

More information and forms for admissions can be found at Yeates School of Graduate Studies Admissions located at 1 Dundas Street West on the 11th floor or please see www.ryerson.ca/graduate/admissions.
EXPENSES AND FINANCIAL SUPPORT

MASc and PhD students are eligible to compete for a number of scholarships offered by Ryerson, as well as academic and research assistantships. All candidates applying before the published first-consideration deadline on our website are automatically entered in the competition as part of the application process. Students are encouraged to apply for scholarship support from the Natural Sciences and Engineering Research Council (NSERC) and the Ontario Graduate Scholarship (OGS) programs. These scholarships require separate application. More information on financial assistance is available on the Yeates School of Graduate Studies Admissions web site at https://www.ryerson.ca/graduate/future-students/financing-your-studies/.

RESEARCH AREAS

Four research areas exist in the Graduate Program in the Department of Civil Engineering at Ryerson University.

Construction and Infrastructure Management

- Project management
- Infrastructure resiliency
- Asset management
- Risk & reliability

Environmental Engineering

- Anaerobic digestion
- Biogas production
- Bioaccumulations of toxins in aquatic space
- Eco-hydrology and eco-hydraulic engineering
- Green engineering
- Industrial oil/chemical spill management
- Innovative wastewater treatment technologies
- Modelling of watershed and landfill design
- Resources recovery from wastes
- Urban storm water management practices
- Urban water and waste systems

Geomatics Engineering

- 3D/4D city modeling, building information management and visualization
- Big geospatial data analytics for smart cities
- Multi-sensor integration for mobile mapping and intelligent transportation systems
- Photogrammetry, 3D imaging, deformation monitoring and metrology
- Real-time and collaborative geographical information systems
- Remote sensing and image processing (e.g., automated object extraction and LiDAR data processing)
- Satellite positioning and navigation
- UAV sensor integration and real-time mapping

Geotechnical Engineering

- Reliability design of geo-structures
- Ground improvement techniques
- Geotechnical characteristics of glacial deposits
- Design and risk mitigations of urban tunneling
Transportation Engineering

- Disruptive/transformative transportation technologies and services
- Highway design
- Intelligent transportation systems
- Road Safety and Human Factors
- Traffic operations/control/management
- Transportation planning
- Travel demand and behavior
- Transportation informatics

Structural Engineering

- Aggregate reactions: Oxidation of sulphide minerals and alkali-aggregate reactions
- Applications of advanced composite materials in bridges and structures
- Behavior of structures and properties of concrete materials
- Bridge design, construction, repair and rehabilitation
- Deterioration and rehabilitation of infrastructures
- Earthquake-resistant steel buildings with self-centering systems/materials
- Evaluation and development of test methods for concrete durability under harsh environment
- High-strength/performance concrete and reactive powder concrete
- Offshore structures
- Performance based design of concrete liquid containing structures including liquid-structure-soil interaction effects
- Response of structures to wind actions using experimental wind tunnel testing and computational fluid dynamics
- Seismic analysis, design, and performance-based assessment of structures
- Strength of steel and composite concrete-steel members
- Structural Health Monitoring
- Sustainable development of self-consolidating concrete
- Tall building and long span bridge aerodynamics
- Thunderstorm wind speeds suitable for structural design
- Use of industrial by-products in concrete and asphalt
MONETARY TIMES BUILDING

The Monetary Times Building was purchased by Ryerson University in 1966 and underwent construction to become the Department of Civil Engineering. It was originally a printing house for the production of the Canadian Monetary Times and Insurance Chronicle founded in August 1867 by William A. Foster and Hugh Scott. This weekly newspaper in its early days included reports of stockholders' meetings, company reports, quotations of stocks and bonds, market and price reports, advertisements and editorials on business subjects. In 1870 its name changed to The Monetary Times. The Canadian financial newspaper The Monetary Times provided information on Canadian historical financial, political, social and biographical events in the late 19th and early 20th century.

COMPUTER LABS

General Information:

- Computer lab accounts are for labs located in EPH-230, MON-207, MON-314 and in the Graduate Studies Offices of the Monetary Times Building only.
- Valid until 30 days after graduation and then all account information and data WILL BE erased.
- Printing for undergraduate students is as follows:
  - 1st Year, 200 pages per semester
  - 2nd Year, 200 pages per semester
  - 3rd Year, 300 pages per semester
  - 4th Year, 400 pages per semester
- Printing for graduate students is 600 pages per semester.
- Balance will be carried over to the following semester.
- Passwords will be changed each semester.

Lab Rules:

The civil engineering staff monitors the activity on any workstation in the civil domain. No food/beverages are permitted in the labs. Violation of this rule will result in the student being asked to leave the lab.

The following actions may subject the student to penalties listed in the Academic Integrity Policy and/or the Non-academic Conduct Policy (see reference to these Senate Policies in this Student Handbook):

1. Giving your account’s name and password to someone else.
2. Attempting to hack into the server or the workstations.
3. Moving, tampering, or damaging the workstations.
4. Loading illegal software, data, or any other material onto the server or the workstations.
5. Taking data and software is theft. Anyone found downloading software, data, or any other material from the server or the workstations without proper authority.
6. Using the Civil Engineering Department computer facilities for tasks other than those assigned during a civil engineering program course.
7. Using the lab for word-processing, recreational computer games use, and web surfing except on assigned sites and topics, printing personal material, or executing non-civil engineering program work.
8. Failing to obey requests of faculty members, staff, or lab assistants on matters pertaining to lab operation.
9. Boisterous behavior, excessive noise, or using obscene/profane file names.
10. Using the WWW browsers for the purposes of surfing unauthorized sites, sending e-mail from the workstations, or attempting in any way to hack into sites on or off campus.

PHYSICAL LABS

The primary purpose of the physical labs is to offer educational and research activities; however, priority is given to instructional use. When the labs are not being used for instructional purposes, they are available for approved research use by students.

List of Physical Labs:

The following is a list of the physical labs and their locations in the Department of Civil Engineering:

<table>
<thead>
<tr>
<th>Department of Civil Engineering Physical Labs</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Asphalt Concrete Testing Facility</td>
<td>ENG-LG23-B</td>
</tr>
<tr>
<td>Advanced Cement-Based Materials Lab</td>
<td>ENG-LG22-B</td>
</tr>
<tr>
<td>Advanced Sustainable Construction Materials Lab</td>
<td>ENG-LG-19</td>
</tr>
<tr>
<td>Civil Engineering National/International Student Competition Lab</td>
<td>MON-106A</td>
</tr>
<tr>
<td>Concrete Lab</td>
<td>ENG-LG-23</td>
</tr>
<tr>
<td>Digital Mapping Lab</td>
<td>MON-314 (East Side)</td>
</tr>
<tr>
<td>Enzyme-Linked Immunosorbent Assay (ELISA) Lab</td>
<td>MON-104</td>
</tr>
<tr>
<td>Environmental Research for Resource Recovery Lab</td>
<td>MON-412</td>
</tr>
<tr>
<td>Flushability Lab at Ryerson Urban Water</td>
<td>CUI</td>
</tr>
<tr>
<td>Geology Engineering Lab</td>
<td>MON-102</td>
</tr>
<tr>
<td>Geo-Optical Research Lab</td>
<td>KHN-101B</td>
</tr>
<tr>
<td>Geotechnical Lab</td>
<td>KHN-101</td>
</tr>
<tr>
<td>GIS and Geo-Collaboration Lab</td>
<td>MON-304</td>
</tr>
<tr>
<td>Hydraulics Engineering Lab</td>
<td>MON-104</td>
</tr>
<tr>
<td>Hydrology Engineering Laboratory</td>
<td>MON-106</td>
</tr>
<tr>
<td>Laboratory of Innovations in Transportation (LiTrans)</td>
<td>CUI-330</td>
</tr>
<tr>
<td>Remote Sensing Lab</td>
<td>MON-314</td>
</tr>
<tr>
<td>Road Safety Research Lab</td>
<td>MON-404</td>
</tr>
<tr>
<td>Ryerson Institute for Infrastructure Innovation (RIII)</td>
<td>GER-306</td>
</tr>
<tr>
<td>Ryerson University Boundary Layer Wind Tunnel</td>
<td>KHS-037</td>
</tr>
<tr>
<td>Satellite Navigation Lab</td>
<td>MON-314 (West Side)</td>
</tr>
<tr>
<td>Sicoma Concrete Mixing Lab</td>
<td>ENG-115</td>
</tr>
<tr>
<td>Strength of Materials Lab</td>
<td>MON-414</td>
</tr>
<tr>
<td>Structures Lab</td>
<td>ENG-LG-26</td>
</tr>
<tr>
<td>Toronto and Area Road Builders Association Highway Materials Lab</td>
<td>ENG-LG-22</td>
</tr>
</tbody>
</table>

Access to Labs, Lab Hours and Availability:

With signed approval from the Department of Civil Engineering and Ryerson University, students may use the labs during business hours (9:00 am - 5:00 pm) when the technicians will be available to assist them. Students conducting degree research projects in the labs must complete online WHMIS, an online introduction to Environmental Health and Safety Training and fill out Risk
Assessment forms with their faculty technical advisor. For the forms, please go to www.ryerson.ca/ehs and click in appropriate Quick Links. The password for all online quizzes is “aa”. After business hours, a buddy system takes effect where another individual who also has signed approval must accompany a student working in a lab. Students may have access to the labs on weekends with the approval of the Chair of the Department of Civil Engineering.

Access to the physical laboratories for research activities and during paid work periods is administered by your Faculty Advisor and the Civil Engineering Office in MON-221 and can ONLY be given when the proper forms have been completed, signed, and submitted. If you are working with a faculty member / supervisor on a research project that requires you to have access to any physical lab and/or you are receiving monetary compensation while working in the lab(s), you MUST follow these procedures:

1. Discuss with your Faculty Advisor / Supervisor the lab access that is required.

2. The faculty member will provide each student a copy of the Young Worker Information handout available at this link: http://ryerson.ca/irm/programs_policies/young_workers_program.html
   The student will review the orientation material, sign the last page and return it to your attention.
   If available, students will register for in-house session training: environmental health and safety orientation sessions. http://ryerson.ca/irm/programs_policies/young_workers_program.html

3. The faculty member will complete the ‘Preliminary Risk Assessment’ form (single page) electronically, print it and sign it. You may be required to collectively complete the form with your Faculty Advisor. www.ryerson.ca/cehsm/forms/index.html

4. If applicable, the faculty member will also complete the ‘Risk Assessment’ form (multiple pages) electronically, print it and authorize it. You may be required to collectively complete the form with your Faculty Advisor. www.ryerson.ca/cehsm/forms/index.html

5. Complete both the WHMIS and EHS Ryerson Orientation Quiz. The password to access the quizzes is aa and also, print your certificate. www.ryerson.ca/ehs/training/whmis www.ryerson.ca/ehs/training/ehs-orientation

6. Submit the above mentioned forms to your Faculty Advisor / Supervisor or Principal Investigator.

7. Upon approval from the Chair of the Department of Civil Engineering, access to the required physical lab(s) will be activated on your Ryerson One Card by the Department of Civil Engineering Administrative Assistant.

Health and Safety Rules:

In Ontario, we are governed by The Occupational Health and Safety Act of Ontario for Industrial Establishments. Each individual within the Ryerson University community shares responsibility for the identification of environmental health and safety hazards and managing the related risks.

Along with the following rules, all of us are obliged to conduct ourselves in accordance to the Ryerson University’s Integrated Risk Management Policies, Programs and Guidelines and these can be found at the Ryerson University website: www.ryerson.ca/ehs/
The Department of Civil Engineering is developing an extensive Health and Safety Manual. The expected completion date of the Manual is Winter 2018.

Here are some general rules that every lab user **MUST** observe and follow:

(a) **Eye Wear**

Safety glasses with side shields must be worn at all times in designated areas. Contact lenses should never be worn in areas where chemicals or solvents are used.

(b) **Protective Equipment**

Some lab processes require students and researchers to dispense and/or manipulate a multiplicity of concentrated hazardous chemicals. Several of these chemicals display highly corrosive characteristics with the potential to destroy skin tissues. All needed equipment will be provided, except footwear which is to be purchased by the students due to its personal nature. Some labs require hard hats for head protection.

(c) **Protective Clothing**

All lab personnel and students involved with hazardous chemicals in a teaching or research lab must do at least the minimum of:

- Wear closed-toe shoes at all times in areas where hazardous chemicals are stored or used. Perforated shoes, sandals or flip-flops must not be worn.
- Wear splash goggles or face shields that have splash proof sides when protection from harmful chemical splash is required.
- Wear appropriate protective gloves whenever the potential for contact with corrosive or toxic materials or materials of unknown toxicity exists.
- Wear pants, full coverage lab coats, or aprons. Scanty (e.g. shorts, mini-skirts, tank tops and/or halter tops) or torn clothing and unrestrained long hair is not allowed.

(d) **Housekeeping**

Work areas, aisles and passageways must be kept clean and free from obstructions that could create a hazard. Lab floors must be maintained, as much as practicable, in a dry condition. Where emergency wet processes may be required (e.g. emergency showers), drainage must be provided and maintained and false floors, platforms, mats and other dry standing places must be provided. Where practicable or appropriate, waterproof foot gear must be provided. All solid or liquid wastes, glass or metal chemical containers, and excessive combustible materials must be removed in such a manner as to avoid creating a menace to safety and health, and as often as necessary or appropriate to maintain the place of employment in a sanitary condition.

(e) **Labeling**

Be certain all chemicals are correctly and clearly labeled according to WHMIS. Post warning signs when unusual hazards, such as radiation, flammable materials, biological hazards, or other special problems exist. Note that MSDS (Material Safety Data Sheet) is available for each chemical in each lab.

(f) **Spills**

Spilled materials must be cleaned promptly and completely with paper towels, rags, or absorbent. Promptly dispose of oily or solvent-saturated clean-up materials in a safety container. If a chemical, radiological or biohazard spill threatens the safety and/or health of faculty, staff or student, call 911 to report an emergency involving hazardous materials.
(g) Sharp Objects

Safe lab practice requires that sharp objects be protected to avoid accidental injection into the skin. All sharp objects are collected in a labeled, rigid puncture proof container and disposed according to type and use. Chemical contaminated glassware must be triple rinsed and the label defaced prior to placement in the broken glass receptacle.

(h) Equipment Use

Use equipment only for its designed purpose. The use of makeshift tools and shortcut methods leads to equipment damage and injuries. If you are in doubt, seek the help of the Departmental Technician or your Faculty Supervisor. Report broken or unusable equipment to the designated Departmental Technician responsible for his respective lab. Lab personnel are prohibited from running equipment unless proper safety precautions have been taken.

(i) Prudent Lab Practices

It is prudent to avoid working in a laboratory alone. During business hours, and under normal working conditions, a student must make arrangements with another individual to cross check periodically. Experiments known to be hazardous must not be undertaken by a worker who is alone in a laboratory. After business hours, a student cannot work in a lab alone and a buddy system must be adopted.

(j) General Lab Safety

Be alert to unsafe conditions and actions and correct them immediately. If major maintenance or repairs are needed, call attention to them so corrections can be made as soon as possible. Someone else's accident can be as dangerous to you as though you had the accident. Avoid distracting or startling any other worker. Practical jokes or horseplay cannot be tolerated. Persons with medical alert bracelets should inform the lab technicians so that special arrangements can be made.

(k) Chemical Storage

All chemicals must be organized and stored on shelves or in cabinets where they will not be knocked over. Chemical storage cabinets are available in each lab.

(l) Food & Drink in Research and Lab Areas

Consumption or storage of food or beverages, application of cosmetics or smoking is not permitted in labs, research or workrooms where chemicals are used or stored. Contamination of food, drink, smoking materials and cosmetics is a potential route for exposure to toxic substances. No alcoholic beverages or illegal drugs will be tolerated.

(m) Lab Security Policy

- Report any suspicious activity to Campus Security, Ext. 80.
- All labs must be locked when not in use; it is highly recommended to lock and secure all doors at all times
- Avoid providing building access to unauthorized individuals.
- Secure doors behind you.
- See Ryerson University Integrated Risk Management website www.ryerson.ca/ehs
FACTS FROM A - Z

ABBREVIATIONS

AAS: Academic Accommodation Support
ACI: American Concrete Institute
AOLS: Association of Ontario Land Surveyors
CEAB: Canadian Engineering Accreditation Board
CESAR: Continuing Education Students’ Association of Ryerson
CGPA: Cumulative Grade Point Average
CSCE: Canadian Society for Civil Engineering
GPA: Grade Point Average
FEAS: Faculty of Engineering and Architectural Science
ISS: International Services for Students
ITE: Institute of Transportation Engineers
LL: Lower Level Liberal Studies
LSS: Learning Success Seminars
MON: Monetary Times Building
MSDS: Material Safety Data Sheet
OLS: Ontario Land Surveyor
OSAP: Ontario Student Assistance Program
PEng: Professional Engineer
PEO: Professional Engineers Ontario
PR: Professionally-related Courses
RAC: Recreation and Athletics
RAMSS: Ryerson’s Administrative Management Self Service
RCES: Ryerson Civil Engineering Society
RESS: Ryerson Engineering Student Society
RSU: Ryerson Students’ Union
SLS: Student Learning Support
TGPA: Term Grade Point Average
UL: Upper Level Liberal Studies

ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES

The University provides academic accommodations for students with disabilities in accordance with the terms of the Ontario Human Rights Code. This occurs through a collaborative process that acknowledges a collective obligation to develop an accessible learning environment that both meets the needs of students and preserves the essential academic requirements of the University’s courses and programs. Senate Policy 159 reflects the shared responsibility of students with disabilities, instructors, Departments/Schools, Faculties, Academic Accommodation Support (AAS) and administrative staff to exercise flexibility and creativity in the provision of academic accommodations.

The University is committed to the fostering of an inclusive climate of equitable access, understanding and mutual respect which recognizes the dignity and worth of all persons, provides equal rights and opportunities without discrimination, and protects the privacy, confidentiality, comfort, autonomy and self-esteem of students with disabilities.

This policy applies to academic accommodations involving undergraduate and graduate students in full-time and part-time programs, certificates, and continuing education courses.
For further information, please see Senate Policy 159 – Academic Accommodation of Students With Disabilities at website: www.ryerson.ca/senate/policies/pol159.pdf

ACADEMIC ACCOMMODATION SUPPORT (AAS)

Academic accommodation support staff - facilitators, specialists, and administrators offer support with academic accommodation and related academic supports and the processes involved with these. Students eligible for Academic Accommodation Support have singular and multiple disabilities, such as learning disabilities, sensory impairments, acquired brain injuries, ADHD, and mental health, medical, and mobility issues. Students seeking accommodation can contact the Academic Accommodation Support main office to register and submit health documentation. Active students can view their accommodation letters and send them electronically to professors, and submit test or exam booking requests online.

Before the first graded work is due, students registered with the Academic Accommodation Support office (AAS) should provide their instructors with an Academic Accommodation letter that describes their academic accommodation plan.

- Develop your Academic Accommodation Plan
- Get guidance on the use of adaptive technologies
- Connect with RU-Noted – the student note-taking program
- Apply for the Bursary for Students with Disability
- Learning Specialist consultations

Academic Accommodation Support is located on the 4th floor of the new Student Learning Centre: 341 Yonge Street. Tel: 416.979.5290 Fax: 416.979.5094 Email: aasadmin@ryerson.ca

Web site: http://www.ryerson.ca/studentlearningsupport/academic-accommodation-support/

ACADEMIC ADVISEMENT REPORT

The Academic Advisement Report is a tool for Undergraduate degree students that shows all the courses that you have taken or are enrolled in as well as those courses needed for you to graduate.

You can use the Advisement Report to:

- check the accuracy of your academic record, including approved transfer credits, challenge credits and course substitutions or directives
- assist you during the Course Intention and course enrolment process to determine outstanding requirements
- ensure that your course selections fulfill your requirements
- see extra courses completed that are not being applied to meeting degree requirements.

As you work your way towards graduation, this report reflects your progress and gives details of the courses you still need to take in order to graduate.
The Advisement Report is unofficial, may contain inaccuracies and is subject to change. It does not represent an irrevocable contract between the student and the university.

If you are enrolled in your final course, semester or year of study and are planning on graduating, you must submit an Application to Graduate by the deadline date published in ‘Significant Dates’ in the Undergraduate Calendar.

The Advisement Report is only a tool to aid you in selecting courses appropriate to your program. You are ultimately responsible for ensuring that you have met all university requirements for graduation as set out in the official Ryerson University Undergraduate calendar. If you have any problems understanding your Advisement Report or have questions or concerns about fulfilling these requirements or about any limits, restrictions and variations applicable to your program, please contact your Program Department – Civil Engineering in Room MON-221.

ACADEMIC CONSIDERATION REQUESTS

Requests for academic consideration not related to health or religious observation must be submitted to the Civil Engineering Office MON-221 in addition to your online Academic Consideration on https://www.ryerson.ca/senate/StudentInfo/AcademicConsiderationRequest/pdf within three working days of the missed course obligation. Your instructor(s) will be notified of your academic accommodation requests.

ACADEMIC INTEGRITY

Intellectual freedom and honesty are essential to the sharing and development of knowledge. In order to demonstrate Ryerson’s adherence to these fundamental values, all members of the Ryerson community must exhibit integrity in their teaching, learning, research, evaluation and personal behaviour. As a member of the Ryerson community and as a future engineer, it is your responsibility to understand and adhere to Ryerson’s Academic Integrity policy.

The Ryerson University Policy of Academic Integrity, Policy 60, clearly defines academic misconduct, the processes the University will follow when academic misconduct is suspected, and the consequences that can be imposed if students are found to be guilty of misconduct. It is every student’s responsibility to know about Academic Integrity and to always do the right thing. Students who have any concerns about academic integrity should discuss them with the Academic Integrity Officer (AIO) and/or the appropriate instructor if applicable.

Ryerson’s Policy 60 (the Academic Integrity policy) applies to all students at the University. Forms of academic misconduct include plagiarism, cheating, supplying false information to the University, and other acts. The most common form of academic misconduct is plagiarism – a serious academic offence, with potentially severe penalties and other consequences. It is expected, therefore, that all examinations and work submitted for evaluation and course credit will be the product of each student’s individual effort (or an authorized group of students). Submitting the same work for credit to more than one course, without instructor approval, can also be considered a form of plagiarism.
Students are advised that suspicions of academic misconduct may be referred to the Academic Integrity Office (AIO). Students who are found to have committed academic misconduct will have a Disciplinary Notation (DN) placed on their academic record (not on their transcript) and will normally be assigned one or more of the following penalties:

- A grade reduction for the work, include a grade of zero for the work.
- Where the component of academic work is worth 10% or less of the final course grade, an additional penalty (i.e. in addition to a grade of “zero” (0) on the work) may be assigned. The additional penalty cannot exceed 10% of the final course grade. Students must be given prior notice that such a penalty will be assigned (e.g. on the course outline, on the assignment handout, etc.).
- An F in the course
- More serious penalties up to and including expulsion from the University, please refer to Academic Integrity Policy.

The unauthorized use of intellectual property of others, including your professor, for distribution, sale, or profit is expressly prohibited, in accordance with Policy 60 (Sections 2.8, 2.10) http://www.ryerson.ca/senate/policies/pol60.pdf. Intellectual property includes, but is not limited to:

- Slides
- Lecture notes
- Presentation materials used in and outside of class
- Lab manuals
- Course packs
- Exams

For more detailed information on these issues, please refer to the full online text for the Academic Integrity policy and to the Academic Integrity website.

Important Resources Available at Ryerson
Use the services of the University when you are having problems writing, editing or researching papers, or when you need help with course material:

The Library (LIB 2nd floor) provides research workshops and individual assistance. Inquire at the Reference Desk or at www.ryerson.ca/library/info/workshops.html

Student Learning Support offers group-based and individual help with writing, math, study skills and transition support, and other issues. http://www.ryerson.ca/studentlearningsupport/

Appeals Process
Please refer to Senate Policy # 60 for details on Academic Integrity Appeals process.

ACADEMIC STANDINGS

In undergraduate degree programs, each student's Academic Standing will be established from the student's formal course grades at the end of each academic term on the basis of the following categories and criteria for overall academic performance:

CLEAR - a cumulative grade point average (CGPA) of at least 1.67 (except where the student has violated the terms of their Probationary Contract). Students with CLEAR
Standing may continue their program studies with no restrictions except for the obligation to satisfy prerequisite requirements.

PROBATIONARY - a cumulative grade point average (CGPA) of 1.00 to 1.66. Students with Probationary standing are required to have a developmental Probationary Contract outlining a specific plan for studies and academic supports authorized by their Program Department, and signed by the student. Students who fail to have such a Probationary Contract within five (5) working days of the first day of the semester will have their course registrations and course intention requests cancelled for the term in question.

Students with a Probationary standing at the start of any semester will be eligible to continue their studies in a subsequent semester as long as they achieve a term grade point average (TGPA) of 1.67 or higher and provided they meet the terms of their Probationary Contract and do not violate approved Department/School standing variations. Failure to meet the terms of the Probationary Contract as set out by the School or Department will result in the student being RTW from their Ryerson program.

Except for students who follow the Student Success Program outlined below, who may attain a Clear standing, students who are reinstated to their program after an RTW standing return on Probation. Some programs may reinstate students with a probationary contract which may significantly restrict course load and require successful completion of specific program course. Programs may also specify grades which must be achieved.

REQUIRED TO WITHDRAW - Students will be REQUIRED TO WITHDRAW from their program for one of the following reasons:

i. A CGPA of less than 1.00 (except students enrolled in their first semester); or

ii. A term GPA below 1.67 while on probation; or

iii. Violation of any approved Department/School Standing variation; or

iv. Violation of a PROBATIONARY Contract (including unauthorized changes to the contract or failure to negotiate a Probationary Contract).

No student in their first semester at Ryerson will be REQUIRED TO WITHDRAW (RTW) in December. Students with a GPA of less than 1.00 in their first semester will be advised about their prospects for success. Such students who continue in their program for the subsequent Winter semester will do so on PROBATION.

Schools/Departments, at their discretion, may issue a special contract in cases where the program judges the student to have a realistic chance of achieving a CLEAR Standing in the semester following assignment of RTW by taking up to two (2) courses. Students remain RTW during this semester. If the student fails to achieve a CGPA of 1.67 at the end of that semester, s/he will remain RTW. If the student is successful, s/he will return as CLEAR.

Procedures for RTW students who wish to be considered for reinstatement to their program. Please refer to Senate Policy #46: Undergraduate Grading, Promotion, and Academic Standing
http://www.ryerson.ca/content/dam/senate/policies/pol46.pdf

PERMANENT PROGRAM WITHDRAWAL - Students will be permanently withdrawn from their program for the following reasons:
i. Any academic performance that would result in 'REQUIRED TO WITHDRAW' Standing for a second time; or

ii. Failure of a course required by their program for a third time; or

iii. Failure to meet the terms of a Probationary Contract following return after a REQUIRED TO WITHDRAW Standing

Students who are permanently withdrawn from a program may not apply for reinstatement into that program. Students who are Permanently Withdrawn from a program may apply to a different program for the Fall semester of the following calendar year.

**DISCIPLINARY SUSPENSION** - Students who have been placed on DISCIPLINARY SUSPENSION (DS) for Student Code of Conduct violations will not be permitted to enroll in any course at the University during their period of DISCIPLINARY SUSPENSION. Students who have served their period of DISCIPLINARY SUSPENSION must contact their program department to make arrangements for reinstatement.

**ADDRESS CHANGES**

Please update your information online on RAMSS www.my.ryerson.ca when there are any changes to your address and/or phone number.

**APPEALS**

The Appeals policy (Senate Policy #134) is available in its entirety at www.ryerson.ca/senate and at www.ryerson.ca/essr/appeals and further information is also available in the Ryerson University Student Guide for Undergraduate Programs www.ryerson.ca/studentguide

Ryerson University is committed to promoting academic success and to ensuring that students’ academic records ultimately reflect their academic abilities and accomplishments. The University expects that academic judgments by its faculty will be fair, consistent and objective, and recognizes the need to grant academic consideration, where appropriate, in order to support students who face personal difficulties or events. It is also expected that students will deal with issues which may affect academic performance as soon as they arise. It should be understood that students can only receive grades which reflect their knowledge of the course material.

Students should refer to the Ryerson University Student Guide, the Senate and the Registrar’s Offices websites for detailed information on the various academic considerations that may be requested; as well as necessary documents such as appeal forms, health certificates and forms for religious accommodation; and procedural instructions. Information is also available from the Departments and Schools, Dean’s Offices and the Senate.

It is the student's responsibility to notify and consult with either the instructor, or the Chair/Director of the teaching or program department/school, depending on the situation, as soon as circumstances arise that are likely to affect academic performance. It is also the student’s responsibility to attempt to resolve all course-related issues with the instructor as soon as they arise, and then, if necessary, with the Chair/Director of the teaching Department/School. Failure to do so may jeopardize the success of an appeal made at a later date. It is the instructor’s responsibility to respond in a timely fashion when students raise grading or management issues.
Students who believe that an assignment, test or exam, either in whole or part, has not been appropriately graded, or that there has been a miscalculation of a grade due to an omission, improper addition, etc., must contact the instructor to resolve the issue within ten working days of the date when the graded work is returned to the class. Grades not questioned within this period will not be recalcualted at a later date.

Students may be required to submit a written request for regrading, stating why the work warrants a higher grade. The instructor must respond within five working days. A reassessment may result in the grade remaining the same, being raised or being lowered. Students must receive feedback that addresses their rationale for requesting a regrading of the work. Students may request a formal regrading of their work if: i) they do not accept an instructor's regrading of the work; or ii) the instructor has not responded to the student; or iii) the instructor has not regraded the work within five working days or iv.) they do not feel they can discuss the matter with the instructor. Please see the Appeals Policy Section IC for more information about requesting formal regrading of work.

Students are responsible for reviewing all pertinent information prior to the submission of a formal academic appeal. Incomplete appeals will not be accepted. Students are responsible for ensuring that a formal appeal is submitted by the deadline dates published in the Undergraduate Calendar, and must adhere to the timelines established in the policy. The deadline for appealing a grade or academic standing after the term has ended is clearly noted in the Ryerson Calendar. The ryerson.ca website also contains the appropriate forms and instructions. All Departmental appeals must normally be submitted in person to the Department of Civil Engineering, Room MON-221 by the deadline stated in the Ryerson Calendar. The Undergraduate Studies Associate Chair of the Department of Civil Engineering will adjudicate the appeal and respond to the student by e-mail within five working days of the receipt of the appeal whether the appeal was granted or denied. Students are responsible for contacting the Department/School if they have not received a response in the specified time period.

There are two types of Departmental Level appeals that may be filed:

(1) Grade Appeal - must be submitted to the Department/School in which course is taught

(2) Standing Appeal - must be submitted to the student’s program department (first year students must submit standing appeals to the First-Year Engineering Office).

NOTE: Since the appeal of a grade may have an effect upon your standing, you must attach a copy of any grade appeal to the standing appeal.

Grounds for Appeal

There are five grounds that may be considered grade and academic standing appeals: Compassionate; Medical; Prejudice; or Procedural Error. In addition, Course Management may also be considered as grounds for grade (but not academic standing) appeals. Before filing an appeal, a student must determine if one or more of the grounds apply. With the exception of Procedural Error, no new grounds may be introduced at subsequent levels.

Students who have attempted to have work reassessed or grades recalculated and have not had the matter resolved prior to the appeal deadline, or who have not yet received a response from an instructor or a Chair/Director, and who wish to appeal, may submit a formal appeal by the deadline. This appeal may be withdrawn at a later date if the issue is resolved.

Students who wish to appeal a final course grade must first consult with the instructor and/or Chair/Director. Academic Appeals are reserved for issues related to grades and academic standings that could not be resolved informally with an instructor or a Chair/Director. Where
appropriate, appeals may be filed at any time during the term. Your academic standing is
cconnected to your grade point average. In order to appeal a standing, you must provide
substantial reasons why your standing should be changed.

Appeal Forms www.ryerson.ca/senate/Forms

ASSIGNMENTS

An assignment drop-box is located near the Civil Engineering Office, Room MON-221. You
may submit your assignments by dropping it into this box if it has been specified for you to do
so in the course management document or by your Professor or GA. Please follow your
Professors’ and GA’s instructions about the date and location for submitting your labs and
assignments, i.e. lecture room, lab, etc. Please be sure to use the required cover pages for
submitting all of your labs and assignments which can be downloaded from the website:
www.ryerson.ca/civil/undergrad/

AWARDS & SCHOLARSHIPS

Awards and scholarships are awarded annually to students. The majority of awards and
scholarships are designated by the Departmental Awards Committee and determined
according to academic excellence and other criteria. Details about awards and scholarships
can be found at the following websites: www.ryerson.ca/currentstudents/financialaid and Civil
Engineering website www.ryerson.ca/civil and www.ryerson.ca/currentstudents/awards

CALENDAR AND STUDENT GUIDE

The Undergraduate Calendar (www.ryerson.ca/calendar) is your official source for
curriculum and course information at Ryerson. The Student Guide
(www.ryerson.ca/studentguide) is a companion to the Calendar that lists the policies, fees,
services and administrative procedures that you’ll need to know as a Ryerson student.

CANADIAN SOCIETY FOR CIVIL ENGINEERING – (CSCE)

The Canadian Society for Civil Engineering is a learned society intended to develop and
maintain high standards of civil engineering practice in Canada and to enhance the public
image of the civil engineering profession. The Society has local sections across Canada
and its mission is to promote the development, acquisition and exchange of professional
knowledge in the field of Civil Engineering. Supportive of the work of academics and private
institutions and different organizations that deal with Civil Engineering since 1887 and
working with sister organizations, the CSCE also promotes Civil Engineering among the
general public and governmental institutions in Canada and abroad. Student Chapters offer
undergraduate technical programs, often in conjunction with local CSCE Sections,
opportunities to meet with practicing Civil Engineers in the community (www.csce.ca)

You may contact the CSCE Directors of Ryerson’s Student Chapter at ryecivil@ryerson.ca.
To obtain your CSCE Student Membership, please visit www.csce.ca and follow the Student
Membership link to fill in the Student Membership application form.
CAPSTONE DESIGN PROJECTS DATABASE

The Department of Civil Engineering maintains a database of undergraduate Capstone Design projects completed by undergraduate students.

To access the database of all civil engineering and geomatics engineering Capstone Design projects, you need a Civil Engineering computer account and a user ID. You may access the database at following link: http://www.civil.ryerson.ca/Degree Projects
At this site, please search for the project that you would like to see and then request to borrow the project at the Civil Engineering Office, Room MON-221. When you come to the Civil Engineering Office, you will need to complete a form that requires the name of the author, the title and year of the project. Priority of project loans will be given to fourth year students who are registered in the Capstone Design Project courses. Capstone and degree projects can be borrowed for a maximum of one month’s time and normally not more than two projects can be borrowed at one time.

CAREER DEVELOPMENT AND EMPLOYMENT CENTRE

The Career Development and Employment Centre at Ryerson offers employment and career-related services including job-search skills workshops, job postings, a career resource Library, computer access to campus Work Link, and individual counselling. The Career Centre is open year-round to Ryerson students and they are located at Lower Ground Podium (POD 60A), please visit www.ryerson.ca/career

CODES OF CONDUCT

Information on Academic Integrity can be found at the following website:
www.ryerson.ca/academicintegrity and in this Handbook in the Academic Integrity section.

Student Code of Non-Academic Conduct: Senate Policy #61

The Ryerson Student Code of Non-Academic Conduct reflects an expectation that students conduct themselves in a manner consistent with the educational objectives of the University, in accordance with generally accepted standards of behaviour, and in accordance with published University regulations and policies. The Code in its entirety is intended to identify behaviour which the University considers to be inappropriate, to outline the procedures the University will use to respond to such behaviour and to indicate the possible consequences of such behaviour. Ryerson students are responsible for familiarizing themselves with this Senate policy which can be found in the Ryerson Calendar or at the following website:
www.ryerson.ca/senate/policies/pol61.pdf

COMPLAINTS

When you have questions or encounter difficulties or problems at Ryerson University, please bring it to the attention of the faculty or staff member involved at Ryerson University. It is essential that you deal with situations that affect your academic performance as early as possible. Unresolved problems can generally get worse over time.

Specific information concerning complaints can be obtained by contacting the Department of Civil Engineering Office in Room MON-221 or this Handbook. When you have questions or
encounter difficulties, it is best to talk it over with the Chair or Associate Chair of the Department or faculty or staff member involved. If questions or issues remain, you have the option to consult with the Chair of the Department, faculty members or other departments at Ryerson. You have the right to complain without fear of jeopardizing your academic evaluation. If you are not sure how to deal with a complaint of a non-academic nature, you may also seek help from: Ryerson Student Union’s Student Issues and Advocacy Coordinator: Student Campus Centre SCC 311-(416) 979-5255, ext. 2322, email: advocacy@rsuonline.ca or the Ombudsperson: Oakham House, 2nd Floors, Rooms 214, 215, and 216 , Ph: 416-979-5000, ext. 7450, email: ombuds@ryerson.ca or Student Services 416-979-5187. For more information, please refer to the Ryerson University Student Guide: www.ryerson.ca/studentguide

CO-OPERATIVE INTERNSHIP PROGRAM (CIP)

The Co-Operative Internship Program is offered to civil engineering students who have completed three years of the undergraduate civil engineering program or the Structural Engineering Option and gives them the opportunity to work in an industrial setting for 12 to 16 months before returning to complete their fourth year. Students must be in a clear academic standing with a CGPA of 1.67 or higher to participate.

This option adds one additional year to a student’s academic program. The employers pay internship students their salaries. At the end of the placement term, a performance evaluation is requested from the employer. At the end of the internship, the student is required to submit a report for evaluation by the Department of Civil Engineering.

The Co-operative Internship Program is a three-way partnership of employers, students, and educational institutions that has benefits for all participants. Students gain valuable work experience. Employers benefit from highly motivated students who are available for special projects and peak work-load periods. Ryerson University enhances its reputation for providing career-oriented applied education. For further information and forms regarding the internship program, please visit www.ryerson.ca/civil and see the Co-operative Internship Program information in the Undergraduate Program section.

COUNSELLING CENTRE

If you are in crisis and in need of immediate attention, please go to the Student Development and Counselling Centre in Jorgenson Hall (JOR 07C) Lower Ground Floor or call the receptionist at 416-979-5195 Monday to Friday, 9 am to 5 pm and indicate the urgent nature of your concern. Their “on call” appointments are available daily to respond to emergency situations. An emergency may involve your safety and well-being or that of another person being at risk including thoughts and plans about harming yourself or someone else.

If you require assistance for an urgent concern outside of Ryerson Counselling Centre’s regular operating hours (Monday to Friday, 9 am to 5 pm) call Ryerson Security & Emergency Services: 416-979-5040; dial 911 or go to the emergency department of your closest hospital. If you are on or nearby campus, St. Michael’s Hospital is located at 30 Bond Street (the emergency department is at the intersection of Victoria Street and Shuter Streets).

Alternatively, you may wish to call one of the following local crisis lines:

Dial 911 or the nearest emergency room of your local hospital; Ryerson Security & Emergency Services: 416-979-5040; Good2Talk, a 24-hour confidential telephone support line for post-secondary students at 1-866-925-5454. Distress Centre of Toronto: 416-408-
The Student Development and Counselling Centre offers free and confidential counselling services in a professional and friendly environment. While their services are predominantly short term in nature, the duration of counselling is determined on a case by case basis depending on need and resources availability. Services are provided by a team of psychologists, counsellors, and master’s and doctoral interns. The Centre is located in the Lower Ground Jorgenson, Room JOR-07C and they provide a wide range of free services to students relating to developmental, personal, and transition issues. Professional counsellors provide individual counseling and/or group sessions to help you make satisfying career and educational choices (416) 979-5195, www.ryerson.ca/healthandwellness/counselling/

The Centre’s services, programs and resources are intended to assist students not only to solve immediate problems, but also to define their personal, educational and career goals, and to acquire the self-confidence and transferable skills necessary for professional success and individual growth. They provide these services on a one-to-one basis or in a group format.

**COURSE INTENTIONS**

Course Intentions is the process where returning students indicate the courses they wish to take in the next academic year.

The Course Intention process occurs in early March via RAMSS (my.ryerson.ca).

Course Intentions are essential in assisting faculties and staff with their course planning for the next academic year. The number of classes of a particular subject are established based on the courses students choose during the course intention period.

When participating in the Course Intention process, students must ensure that they complete the transaction in their Shopping Cart (by selecting "Finish Enrolling"). Course Intention selections added to a student’s Shopping Cart but not completed will not be recorded and therefore will not be taken into consideration when preparing a student’s schedule.

Students will not be allowed to enrol in courses unless they have passed the prerequisite courses. Other program-specific restrictions may also apply. Students with outstanding fees from previous terms will be prohibited from further enrolment, until satisfactory payment arrangements have been made.

**COURSE MANAGEMENT OVERVIEW**

Students will be provided at the beginning of every course with an outline or syllabus that includes, as a minimum, information on the following items:

- Name and number of course; semester and year, prerequisites, and exclusions, if any.

- Faculty member’s name; office location and scheduled student consultation hours; office telephone number; e-mail address; faculty/course web site(s) if available.

- A synopsis that informs students of the course’s academic focus and scope, course objectives and/or intended learning outcomes, and topics with their tentative sequence and schedule.

- Texts, reading lists, and other course materials or equipment.
• A description of the teaching method(s) that will be used (e.g., lecture, lab, studio, cases, problem-based learning, seminar, fieldwork, in-class debates, oral presentations or combinations of these) and schedule of any field trips or required activities outside of class time.

• Assignment due dates, to whom the assignments should be delivered, mid-term exam dates and paper return dates.

Evaluation – A list and tentative schedule of all assignments, tests, exams, and other work to be graded, and general descriptions of these. (More specific information on each assessment will be provided by the course instructor as early in the semester as possible.) The weighting of each assignment, test, and/or other unit of evaluation. The inclusion of snap tests or other unscheduled evaluations as part of the grading scheme, if applicable. Policies on deadlines for the acceptance of assignments and/or take-home examinations, and on any penalties that will be assessed when such deadlines are not met.

Ryerson has developed an academic integrity website link http://www.ryerson.ca/academicintegrity/ for students that contains valuable information along with tutorials and quizzes to help you learn about various types of misconduct, how to avoid misconduct and resources available to assist you. See www.ryerson.ca/academicintegrity. As a Ryerson student, you are responsible for familiarizing yourself with the Academic Integrity Policy found at www.ryerson.ca/senate/policies/pol60.pdf

Accommodation of Students with Disabilities – The Academic Accommodation Support Centre supports students by arranging accommodations for academic study. All members of the Ryerson community play an important role in providing accommodations that maximize the participation and independence of students with disabilities. (Senate Policy 159) To register for please contact the Civil Engineering Department and/or the Academic Accommodation Support located on the 4th floor of the new Student Learning Centre, 341 Yonge Street. Tel: 416.979.5290 Fax: 416.979.5094 Email: aasadmin@ryerson.ca

• Student Email Policy - Students are required to activate and maintain their Ryerson email address as their official communication with Ryerson University. (Senate Policy 157).

• Non-Academic Conduct - The Ryerson Student Code of Non-Academic Conduct reflects an expectation that students conduct themselves in a manner consistent with the educational objectives of the University, in accordance with generally accepted standards of behaviour, and in accordance with published university regulations and policies. (Senate Policy 61)

• For more information about Course Management Policy, please see Senate Policy 145 online at www.ryerson.ca/senate/policies

COURSE REPEATS

The grade earned for a repeated course is substituted for the previous grade in calculating subsequent cumulative grade point average even if the later grade is lower, but both attempts are recorded on your transcript.
No course can be repeated more than twice (three completions in total when the original attempt is included). If at least one of the course attempts results in a passing grade, the course will count towards graduation requirements irrespective of the sequence of grades earned. A student will receive a PERMANENT PROGRAM WITHDRAWAL Standing after three failures in the same required course. Equivalent courses taken elsewhere under Letter of Permission and where a 'Failed' grade has been received will also be included in the three failure count.

CURRICULUM COURSE SUBSTITUTION

A curriculum (course) substitution assesses the suitability of substituting a Ryerson course that is not part of the normal curriculum for a course within a student’s program. In some cases, the required course is not being offered in the term requested by the student, or it may be as a result of changes to a program’s curriculum. Course Substitution forms are available from the Civil Engineering MON-221 Office or the website: www.ryerson.ca/currentstudents/forms/course_sub_ugrd.pdf

Approved substitutions will be reflected on the student’s Advisement Report through RAMSS. Students whose applications are denied will be notified via their Ryerson email address.

DEAN’S LIST CRITERIA

Undergraduate students in the Faculty of Engineering and Architectural Science who have achieved the highest level of academic excellence in a given academic year will be placed on the Dean’s List. Dean’s lists will be published annually on the Faculty website. To be eligible for consideration for the Dean's List in the Faculty of Engineering and Architectural Science, undergraduate students must:

1. Carry an average unit load of 4.0 billing units or higher for the two terms of the academic year under consideration (fall and winter).
2. Obtain a minimum GPA of 3.5 for the academic year under consideration. The minimum GPA applies for both the fall and winter terms exclusively, in addition to the student's overall GPA for the year.
3. Obtain passing grades in all courses and a clear academic standing for both terms.
4. Not have received any Disciplinary Notation(s) (DNs) while at Ryerson

DEPARTMENTAL COUNCIL AND BY-LAWS

The Department of Civil Engineering Departmental Council is made up of the Chair, faculty, staff and student representatives from the Department of Civil Engineering. The purpose and objective of Council is to recommend academic policies relevant to the Department. Objectives of the Council include promoting effective teaching, learning and research in a collegial environment within the Department. The Departmental Council also works with the administration and other groups within the University around areas of common concern. The By-Laws of Departmental Council are available for viewing in the Department of Civil Engineering Office, Room MON-221. Students who are interested in becoming members of the Departmental Council should contact the Civil Engineering Administrative Office in MON-221 for further information.
E-MAIL ACCOUNT POLICY

All students in full and part-time graduate and undergraduate degree programs and all continuing education students are required to activate and maintain their Ryerson online identity in order to regularly access Ryerson's Email (Rmail), RAMSS, my.ryerson.ca portal and learning system, and other systems by which they will receive official University communications.

Students are required to monitor and retrieve messages and information issued to them by the University via Ryerson online systems on a frequent and consistent basis. Students have the responsibility to recognize that certain communications may be time-critical. Students may forward their Ryerson E-mail account to another electronic mail service provider address but remain responsible for ensuring that all University electronic message communication sent to their official Ryerson E-mail account is received and read.

Procedures for student activation and use, as well as the Ryerson Student Computing Guidelines, shall be available on the Ryerson University website. Students may communicate with Ryerson and Ryerson faculty, instructors, teaching and graduate assistants and staff in a variety of ways: in-person; telephone; letters (either hand-delivered, by regular Canada Post, courier or registered mail) or electronically. Ryerson requires that any electronic communications by students to Ryerson faculty or staff be sent from their official Ryerson E-mail account. This information is from Senate Policy 157 and it can be found in its entirety at www.ryerson.ca/senate/policies.

ENGLISH LANGUAGE SUPPORT

English Language Support is offered by Student Learning Support for students who use English as an additional language looking for help with their writing, reading, listening, and speaking skills.

- Individual appointments & group sessions available
- Meet with a member of the English Language Support student staff to:
  - Improve your written and oral communication
  - Revise a written assignment
  - Practice and get feedback on an upcoming presentation

Contact information: www.ryerson.ca/studentlearning support
Email: sls@ryerson.ca  Phone: 416-598-5978

EXAMS POLICY & SCHEDULE

You are responsible for making sure you are in the right place at the right time to write your exam. Please refer to the exam schedule on Ryerson University website. You must be prepared to identify yourself with your Ryerson One Card at any time during the examination. If you do not have your Photo ID for whatever reason, the One Card Office can give you a temporary ID.

See Ryerson University Student Guide for rules and proper conduct in exams and penalties for misconduct. Refer to Ryerson website www.ryerson.ca or www.ryerson.ca/senate for Academic Integrity Policy and non-Academic code of conduct as well as the Senate Policy # 135: Exam Policy at www.ryerson.ca/senate/policies/pol135.pdf. Please see the Ryerson Calendar Significant Dates for Fall and Winter exam period dates and further information regarding the Exam Policy.
FACULTY ADVISORS

The following Department of Civil Engineering Professors are your Faculty Advisors for Fall 2019 / Winter 2020 and their contact information can be found in the Departmental Directory of this Student Handbook:

ACI American Concrete Institute - Construction Competition – Dr. M. Shehata
ACI American Concrete Institute - Design Competition – Dr. Reza Kianoush
AOLS Association of Ontario Land Surveyors – Dr. Mike Chapman
Canadian Institute of Geomatics – Dr. Songnian Li
CSCE Student Chapter – Dr. Arnold Yuan
Concrete Canoe Competition – Dr. Medhat Shehata
Concrete Toboggan Competition - Dr. Medhat Shehata
ITE Institute of Transportation Engineers – Dr. Bilal Farooq
National Popsicle Bridge Competition – Dr. Anwar Hossain
RSCE Student Chapter – Dr. Khaled Sennah
Steel Bridge Competition – Dr. Khaled Sennah
Student Faculty Mentor – Dr. Jinyuan Liu
Timber Fever – Dr. Khaled Sennah

FORMS

Forms related to academic matters listed below can all be found at the following website:
http://www.ryerson.ca/registrar/students/forms.html

Admission, Enrolment and Withdrawal
Curriculum Advising, Transfer Credits, Substitutions and Adjustments
Academic Consideration, Health Certificates and Petitions Related to Missed Work
Academic Probation, Reinstatement and Redeemable Failures
Academic Appeals
Requests for Documentation (eg.Transcripts, RESP, Proof of Enrolment)
Graduation and Convocation

F-S GRADE (FAILURE-SUPPLEMENTARY)

Students who have an F-S designation for course(s) on their transcript must apply to write a supplementary examination that will be scheduled prior to the end of the second week of classes during the next academic term. The F-S grade will be converted only to a ‘D-’ or to an ‘F’, depending on performance. Meanwhile, the F-S grade is treated as an interim failed grade and is calculated in the grade point average at zero grade points. The resulting grade point average is normally considered provisional until the end of the period during which the redeemable failure would be written. If an Academic Standing cannot change because an F-S grade has cleared, the provisional standing will automatically become the formal standing.

If you have F-S grade for any of your course(s) on your transcript, please be sure to fill out and submit Redeemable Failure Request form to the Service Hub and contact your Professors(s) regarding dates of your supplementary exams.
Here is the link for the Redeemable Failure Request form:
http://www.ryerson.ca/content/dam/currentstudents/forms/RedeemableFailure.pdf
GRADE POINT AVERAGE

A cumulative grade point average (CGPA) is calculated as an indicator of overall academic performance and is used as a criterion for graduation requirements, honours graduation, other academic distinctions and for determining academic standing during study in a program.

The grade point average is calculated as the sum of the products of course weights and earned grade points, divided by the sum of the course weights, and rounded up to the next higher second decimal place.

GRADE POINT AVERAGE ADJUSTMENT

Only students who are active in a program for which a CGPA is calculated, may submit a GPA Adjustment request. Forms are available online at www.ryerson.ca/essr/forms and must be submitted no later than the final date to add a course for the term in which the GPA Adjustment will apply. Only the CGPA for the current term will be adjusted. Academic Standings and CGPAs from previous terms will not be adjusted.

A GPA Adjustment can occur under one of the following conditions:

1) **Course Replacement**: Permits a student to use a new course to replace, for GPA purposes only, a previously graded Professional, or Liberal Studies course, both of which belong to the same group or table.

2) **Course Exclusion**: Permits a student to request that certain courses be excluded from his/her CGPA calculation, if the course is a course that is not applicable to the student's program of study; OR there is an extra course that was taken in addition to the student's program requirements.

The GPA Adjustment Request Form can be found at this link: http://www.ryerson.ca/content/dam/currentstudents/forms/gpaadjust.pdf

HEALTH CERTIFICATE

If a student misses the deadline date for submitting an assignment, or missing an exam or other evaluation component for health reasons, they should notify their instructor as soon as possible, and must submit a Ryerson Student Health Certificate AND the Online Academic Consideration Request (ACR) form at this link: https://www.ryerson.ca/senate/StudentInfo/AcademicConsiderationRequest/ within 3 working days of the missed date to the Department of Civil Engineering.


If you have extenuating and documented reasons for not being able to submit required your online ACR form and health certificate within three working days, please contact the Civil Engineering Office as soon as is possible by phone (416) 979-5345 or email: civil@ryerson.ca
HUMAN RIGHTS SERVICES

Ryerson’s Office of Human Rights Services works with members of the Ryerson community to promote a study, work and living environment free of discrimination and harassment. Our services are available to all Ryerson employees, students, alumni and visitors.

The Office advocates for fairness and for a community where the dignity and human rights of all its members are respected and upheld.

Human Rights Office contact: humanrights@ryerson.ca, Ph: 416-979-5349, POD-254A located in the Podium. Website: https://www.ryerson.ca/humanrights/

INCOMPLETE GRADE (INC)

Incomplete coursework or a missed final examination due to documented medical or compassionate grounds is recorded as Incomplete (INC) on transcript at the end of a term. An INC grade can be awarded only when some work remains to be completed and when the completion of the outstanding work or an alternate final examination may result in a passing grade. An INC will be assigned to students who have not completed a required Academic Integrity Tutorial for educational purposes as defined in Policy 60, the Student Code of Academic Conduct. The outstanding work or alternate examination must be completed by a specified date within three months of the submission of the INC unless alternative arrangements have been made with the program’s Chair/Director.

The INC will be replaced by an official course grade when the work is completed. If the work is not completed by the deadline, the INC will become a grade of F. The designation INC is not included in calculating the grade point average nor is it counted as a transfer credit or failed course. An INC can be changed to an AEG (see below) by a Dean under exceptional circumstances.

INTERNATIONAL SERVICES FOR STUDENTS

International Services for Students (ISS) provides many support services for registered international students, facilitating their transition to Canadian university life and promoting cultural awareness to the Ryerson Community. ISS strives to provide helpful and comprehensive support to all international students throughout their time at Ryerson. Some of the essential services that ISS provides include international student orientation, immigration advising and support, health insurance, status letters, work opportunities, events, workshops, peer support and much more. For further information please visit the following website www.ryerson.ca/internationalservices The ISS Office is located in POD-50A, Phone Number is (416) 979-5000 ext. 6655, email address is issask@ryerson.ca

LETTER OF PERMISSION APPLICATION

Students who wish to take courses at another accredited university for credits towards their Bachelor of Engineering degree must apply with a Letter of Permission application form in advance of registering in the course to ensure that the course if completed successfully will count towards their degree. Application forms are available online www.ryerson.ca/currentstudents/forms/lop.pdf Requests must be submitted and approved prior to taking the courses at the other institution.
MATH SUPPORT

Student Learning Support offers comprehensive support to all Ryerson students looking for help with math, guidance in their math-related courses, or simply to develop their math skills. Individual tutoring, course specific group tutoring, and facilitated study groups are available to improve your math skills and support your success in math-related courses across all faculties. The Math Centre is located on the fourth floor of the Student Learning Centre, Phone No. is (416) 979-5000 ext. 2993. Email is sls@ryerson.ca

MEDICAL CENTRE

The Ryerson University Health Center is a medical clinic staffed by physicians, a lab technician and receptionist. Appointments can be made by calling 416-979-5070, email medicalct@ryerson.ca or dropping by the Centre located in West Kerr Hall, Room KHW 181, 350 Victoria Street. Services are similar to those you receive from your family doctor. The clinic also provides services such as form completion, HIV/STD testing, sexual education, counseling and treatment, psychosocial counseling and referrals and prescription refills. Please bring your health card to every visit or you will be charged for services. Hours of operation vary throughout the year. Please see www.ryerson.ca/healthservices for details.

MENTORING PROGRAM (DEPARTMENTAL)

The Department of Civil Engineering has established a student mentoring program in which students are encouraged to meet with designated faculty member to discuss general issues that may arise and may be affecting your studies. The Student Faculty Mentor would not provide advice on specific academic matters, such as curriculum advising, course addition/deletion, probationary contracts, etc. as such matters are handled by the Associate Chair of the Undergraduate Program, Dr. Ahmed Shaker. The Department hopes that this program will give students an opportunity for positive growth both personally and professionally. Dr. Jinyuan Liu is the Student Faculty Mentor for Fall 2019/Winter 2020 and his office is in MON311, email address jinyuan.liu@ryerson.ca Ph: 416-979-5000 ext. 6469.

OFFICE OF THE OMBUDSPERSON

The Office of the Ombudsperson at Ryerson University is a safe place to get advice and assistance with resolving a problem, concern or conflict fairly, or to obtain information that you were not able to obtain elsewhere.

The Ombudsperson and Assistant Ombudsperson will work with students, faculty and staff to seek an expeditious and just resolution to problems and conflicts at the University that they have not been able to resolve themselves.

You can reach the Office of Ombudsperson at Tel: 416-979-5000, ext. 1-7450, or email ombuds@ryerson.ca

Their office is located at Oakham House, 2nd Floor, Rooms OAK 214/215/216, 63 Gould St. (at the corner of Church St.) The Ombudsperson’s Office Website address is www.ryerson.ca/ombuds/
POLICIES (SENATE)

For a complete list of Ryerson University's Senate Policies, please see:
www.ryerson.ca/senate/policies

<table>
<thead>
<tr>
<th>Senate Policy Name</th>
<th>Senate Policy Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Accommodation of Students with Disabilities</td>
<td>159</td>
</tr>
<tr>
<td>Accommodation of Student Religious, Aboriginal and Spiritual Observance Obligations</td>
<td>150</td>
</tr>
<tr>
<td>Undergraduate Academic Consideration and Appeals Policy</td>
<td>134</td>
</tr>
<tr>
<td>Course Management Policy</td>
<td>145</td>
</tr>
<tr>
<td>Examination Policy</td>
<td>135</td>
</tr>
<tr>
<td>Grade Reassessment and Grade Recalculation</td>
<td>162</td>
</tr>
<tr>
<td>Undergraduate Grading, Promotion, and Academic Standing, the &quot;GPA&quot; Policy</td>
<td>46</td>
</tr>
<tr>
<td>Ryerson University Email Accounts</td>
<td>157</td>
</tr>
<tr>
<td>Academic Integrity</td>
<td>60</td>
</tr>
<tr>
<td>Student Code of Non-Academic Conduct</td>
<td>61</td>
</tr>
</tbody>
</table>

PRIVACY STATEMENT/INFORMATION PROTECTION AND ACCESS POLICY

The University has a policy on access to information and protection of personal information. The policy can be found at www.ryerson.ca/privacy. The University's Information and Privacy Coordinator has been appointed as the administrator responsible for such issues. Please direct any questions to fippa@ryerson.ca or call 416.979.5000 ext 4676.

PROBATIONARY CONTRACT

PROBATIONARY ACADEMIC STANDING- a cumulative grade point average (CGPA) of 1.00 to 1.66. Students with Probationary standing are required to have a developmental Probationary Contract outlining a specific plan for studies and academic supports authorized by their program Department and signed by the student. Students who fail to have such a Probationary Contract within five (5) working days of the first day of the semester will have their course registrations and course intention requests cancelled for the term in question.

Students with a Probationary standing at the start of any semester will be eligible to continue their studies in a subsequent semester as long as they achieve a term grade point average (TGPA) of 1.67 or higher and provided they meet the terms of their Probationary Contract and do not violate approved Department/School standing variations. Failure to meet the terms of the Probationary Contract as set out by the Department of Civil Engineering will result in the student being Required to Withdraw from their Ryerson program.

RAMSS – RYERSON’S ADMINISTRATIVE MANAGEMENT SELF SERVICE
RAMSS is a web-based support tool for students and is accessible through the my.ryerson.ca web portal with your Ryerson e-mail account and password. RAMSS offers enhanced levels of services that are provided by Enrolment Services.

You may access RAMSS via www.my.ryerson.ca to:

- View and print your class schedule
- Check for course schedule, availability and location
- Add, drop, and swap classes
- Update your address and other contact information including your email address
- View your financial student account
- View your grades and academic standing
- View your academic advising report

RCES – RYERSON CIVIL ENGINEERING SOCIETY

The Ryerson Civil Engineering Society (RCES) is the representative student chapter for Civil Engineering students at Ryerson University. It is a student-run organization that provides peer support, builds connections to industry, plans social and extra-curricular engineering competition events and other special projects. The Society also offers many academic and extra-curricular activities throughout the year. The RCES Office is located in MON-101. The President of Ryerson Civil Engineering Society for Fall 2019/ Winter 2020 is Tazrian Hassan and he can be reached at ryecivil@ryerson.ca, phone (416) 979-5000, ext. 6454.

RELIGIOUS, ABORIGINAL AND SPIRITUAL OBSERVANCE

It is the policy of Ryerson University to accommodate the sincerely held religious beliefs of all students. Ryerson is a community which celebrates diversity and places a high value on inclusion and respect for differences. Ryerson recognizes that the religious, Aboriginal or spiritual observances of students may conflict with their academic obligations and could potentially lead to a disadvantage if an accommodation is not arranged. Ryerson also accepts that sincerely held beliefs by members of the same religious group or Aboriginal peoples (from different nations) often engender different types of commitments for observance practices. In accordance with the principles of the Ontario Human Rights Code, which requires accommodations based on creed, this policy outlines how accommodations for the religious, Aboriginal or spiritual observances of Ryerson students will be determined.

If a student needs accommodation because of religious, Aboriginal or spiritual observance, they must submit a Request for Accommodation of Student Religious, Aboriginal and Spiritual Observance AND an Academic Consideration Request form within the first 2 weeks of the class or, for a final examination, within 2 weeks of the posting of the examination schedule. If the requested absence occurs within the first 2 weeks of classes, or the dates are not known well in advance as they are linked to other conditions, these forms should be submitted with as much lead time as possible in advance of the absence. Both documents are available at http://www.ryerson.ca/senate/forms/relobservforminstr.pdf. Both forms must be submitted to the Department of Civil Engineering.

The Student Declaration of Religious Observance form is available at the above-mentioned websites, which are linked to Religious Observance calendars through the Discrimination
and Harassment Prevention Services website, providing students and faculty with a comprehensive description of some observance obligations.

RESEARCH ASSISTANTSHIPS

Ryerson University offers a Research Assistant Program for undergraduate students. In this program, research assistantships are awarded to faculty members to hire students during the academic semesters to conduct research on specific proposed topics. If you are interested, please contact the faculty member (faculty contact information is listed in the Departmental Directory of this Handbook) related to your area of research interest.

RESS – RYERSON ENGINEERING STUDENT SOCIETY

Ryerson Engineering Student Society (RESS) represents all undergraduate engineering students at Ryerson. Their mandate is to provide quality programming throughout the year that allows Ryerson Engineering students an avenue for extracurricular involvements.RESS is a member of the Engineering Student Society Council of Ontario (ESSCO) as well as the Canadian Federation of Engineering Students (CFES). Please see the website www.ress.ca for upcoming events, news and announcements.

RITE – RYERSON INSTITUTE OF TRANSPORTATION ENGINEERS

Ryerson University's Institute of Transportation Engineers student chapter (RITE) is a forum for students in transportation engineering programs or other students interested in the transportation field. Their goals are to introduce students to and advance their knowledge of the transportation engineering profession; to promote professional spirit; and to host interesting educational events and discussions. www.civil.ryerson.ca/RITE/

RSU – RYERSON’S STUDENT UNION

Representing all full-time Ryerson University undergraduate students, as well as full and part-time graduate students, the RSU builds campus community by organizing events and supporting student groups, course unions, equity groups and graduate students' associations. The Executive and staff advocate on behalf of students to meet their needs with an aim to improve access to and the quality of post-secondary education. The RSU also provides cost-saving services to benefit Ryerson students.

The Ryerson Students’ Union main office is located at SCC311, Student Campus Centre, third floor, 55 Gould Street, Phone (416) 979-5255, Email info@rsuonline.ca, Website www.rsuonline.ca

SCHEDULES

Student schedules are available on the RAMSS www.my.ryerson.ca

SCHOLARSHIPS & AWARDS

Ryerson University offers many scholarships and awards to new and returning students. Details can be found on the Ryerson University website at this web address: www.ryerson.ca/currentstudents/awards as well as on the Civil Engineering website: www.ryerson.ca/civil and the Faculty of Engineering and Architectural Science website
www.feas.ryerson.ca. Information on awards and scholarships is also available from the Financial Aid and Awards Office located in POD-59.

SENATE

The Senate is the academic policy-making body of Ryerson University. It is responsible for determining the curricula for all programs, admission and graduation requirements, conducting examinations, awarding certificates, diplomas, and all degrees. All the Senate policies and by-laws can be found in their entirety at the Ryerson University Senate website: www.ryerson.ca/senate/policies

Much of Senate's work is done through its Standing Committees. These Committees include Academic Governance & Policy, Scholarly Research & Creative Activity, Senate Appeals, Academic Standards, Awards & Ceremonials, Learning and Teaching, and the Research Ethics Board.

The Senate consists of 52 elected representatives of the faculty, librarians, students and alumni, and 22 ex-officio members of the administration, including the Chancellor. Senate is chaired by the President. Much of Senate's work is carried out through its committee structure, and students are especially encouraged to serve on one or more committees to get first-hand knowledge of how the University sets academic policies and makes decisions. Membership and active involvement on Senate and/or its committees can be an impressive addition to a student's resume.

Information on Senate, its membership, committees, policies, elections, etc., can be found at www.ryerson.ca/senate. If you require further information, please contact Donna Bell, Secretary of Senate, at dbell@ryerson.ca or Lucia Stewart, Assistant to the Secretary of the Senate at lstewart@ryerson.ca or call ext. 5011.

SERVICE HUB / CLIENT SERVICES

ServiceHub/Client Services in POD-150 provides front-line support, information and advising via the ServiceHub for the Office of the Registrar (RO) for questions about undergraduate program choices, admission requirements, application procedures and the selection process, submission and/or pick-up of documents (e.g. official transcripts) and completed forms (e.g. third party letters, degree certificates); student financial assistance (e.g. OSAP and scholarships); enrolling in courses, Continuing Education course registration; class schedules and exams; applying to graduate, RAMSS support; tuition, fees and more. ServiceHub representatives are often the first point-of-contact for prospective, current and former students, applicants, parents, and guidance counsellors, as they respond to in-person, telephone, email and social media inquiries.

- ServiceHub Location: Podium Building (POD) Room 150 | 380 Victoria Street, Toronto
  Nearest intersection: Yonge/Gerrard

- Phone: (416) 979-5036 service available Mondays to Thursdays 9 am to 5 pm and Fridays 10 am to 4 pm.

- Mailing Address: Ryerson University, Client Services, Office of the Registrar,
  350 Victoria Street, Toronto, ON, M5B 2K3
SIGNIFICANT DATES

For important deadline dates information regarding tuition fee refunds schedule, semester start and end dates, course drops, program withdrawals deadline, etc. please refer to Significant Dates section of current Fall 2019/Winter 2020 Undergraduate Calendar:
http://www.ryerson.ca/calendar/2019-2020/dates.html

STUDENT LEARNING SUPPORT

Student Learning Support (SLS) is a group of services and programs aimed at helping students engage more effectively in their academic studies. They teach essential academic skills and study techniques that help students to more effectively express their intelligence, apply their knowledge and communicate their ideas.

Support areas include the following: Academic Accommodation, English Language, Graduate Student, Math, Study Skills and Transition, Writing, and Test Centre.

The Student Learning Support is located on the fourth floor of the new Student Learning Centre at the corner of Yonge and Gould Streets. Please contact their main office in person or by phone at 416.598.5978 or by email sls@ryerson.ca.

Website: www.ryerson.ca/studentlearningsupport

TEST CENTRE

The Test Centre is a student and faculty service designed to assist in facilitating the scheduling of make-up and accommodated tests and exams at Ryerson University. Make-up tests are scheduled according to University policy and only with the approval from your Instructor. Ph: (416) 979 5000 ext. 7932 Email: testcentre@ryerson.ca

TRANSFER CREDITS

Transfer Credits refer to the number of course equivalencies that are granted towards a program of study based on previous academic course work from an accredited university.

Students who are eligible or are planning to apply for transfer credits for courses that they completed at other accredited post-secondary institutions must collect officially certified transcripts, course description and course outlines as early as possible. These documents along with your application for transfer credits must be submitted to the Office of Curriculum Advising.

Applicants approved into an Engineering program cannot expect to receive any transfer credits in Engineering discipline or Engineering related discipline courses if their applicable post secondary education was not completed at a program accredited by the Canadian Engineering Accreditation Board (CEAB). Refer to www.ccpe.ca/e/index.cfm for a listing of CEAB accredited institutions. Core and Professional Engineering course transfer credits will ONLY be granted at the time of admission. An Offer of Admission will notify the applicant of transfer credit decision(s) subject to acceptance of their Offer.

Liberal Studies discipline courses taken at CEAB accredited or non-accredited schools will be considered for either lower- or upper-level liberal studies transfer credit. College courses,
in general, are not eligible for transfer credit except in the case of lower-level liberal studies courses.

For further information about transfer credits, please see the following website: www.ryerson.ca/currentstudents/transfercredits/

TRI-MENTORING PROGRAM

The Tri-Mentoring Program is a centralized model that offers mentorship opportunities to students of all identities across all faculties. The program matches first year students with upper year students in the same program or with similar interests in order to help incoming students successfully transition into their first year at Ryerson. Mentors then have the opportunity to be matched with an industry professional and will gain guidance and encourage students to progress towards their goals. For more information please see www.ryerson.ca/studentlife/trimentoring/
Office location is POD-54 and ph. number is 416-979-5000 ext. 6634.

TUTOR REGISTRY

The Tutor Registry is a tutor database that matches a student who needs assistance with the material in a Ryerson course with a student who successfully completed the course.

Student Learning Support verifies that the potential tutor is a current Ryerson student, that he/she has achieved at least a B+ in the course for which they are offering tutoring services, and that the potential tutor’s CGPA (Cumulative Grade Point Average) is above 3.0. For more information regarding the Tutor Registry contact sls@ryerson.ca or phone (416) 598-5978.

WOMEN IN ENGINEERING

Women in Engineering (WIE) is dedicated to providing education and outreach for female students considering a rewarding engineering career, and to promoting a friendly, supportive and inclusive environment in which women can pursue their engineering studies.

You can attend special evenings, listen to guest speakers, or get involved with a female mentor working in the engineering industry. For further information, please see http://www.ryerson.ca/feas/wie/ The contact information for Women in Engineering is email address feassci@ryerson.ca

WRITING SUPPORT PROGRAM

The Writing Support offers programs both in-person and online that will help you develop your academic writing skills and your approach to the writing process. Writing Support for students looking to improve their writing skills and receive help with their writing assignments.

- Book or drop-in for individual writing support
- Understand the expectations of university-level writing
- Discuss your ideas and clarify your thinking
- Learn to integrate sources and paraphrase correctly

Writing Support is located on the fourth floor of the Student Learning Centre at 341 Yonge Street.
# DIRECTORY OF STUDENT RESOURCES

<table>
<thead>
<tr>
<th>INQUIRY</th>
<th>CONTACT NAME</th>
<th>CONTACT INFO</th>
<th>AREA/LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information for Prospective Students:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office of the Registrar (RO):</td>
<td>Client Service Ambassador</td>
<td>416-979-5036</td>
<td>RO ServiceHub POD 150</td>
</tr>
<tr>
<td>- undergraduate application and admission process</td>
<td></td>
<td>ask.ryerson.ca</td>
<td></td>
</tr>
<tr>
<td>- transfer credits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- scholarships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate School Application and Inquiry</td>
<td>Client Services Rep</td>
<td>416-979-5150</td>
<td>Graduate Admissions</td>
</tr>
<tr>
<td>- G. Raymond Chang School of Continuing Education Calendars</td>
<td></td>
<td><a href="mailto:grdadmit@ryerson.ca">grdadmit@ryerson.ca</a></td>
<td>Office YDI-1102</td>
</tr>
<tr>
<td>Campus Tours</td>
<td>Student Recruitment Coordinator</td>
<td>416-979-5036</td>
<td>Student Recruitment</td>
</tr>
<tr>
<td>- Money Matters:</td>
<td></td>
<td>ask.ryerson.ca</td>
<td>POD-144</td>
</tr>
<tr>
<td>- Office of the Registrar (RO)</td>
<td>Client Service Ambassador</td>
<td>416-979-5036</td>
<td>RO ServiceHub POD-150</td>
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<tr>
<td>- OSAP and Student Access Guarantee</td>
<td></td>
<td><a href="mailto:finaid@ryerson.ca">finaid@ryerson.ca</a></td>
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</tr>
<tr>
<td>- Work Study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Scholarships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Tuition and fees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Project's Funding</td>
<td>Client Services Rep</td>
<td>416-979-5050 x7352</td>
<td>P-FACS Student Projects Fund POD-61</td>
</tr>
<tr>
<td>- RSU Bursary</td>
<td>Client Services Rep</td>
<td>416-979-5255</td>
<td>RSU SCC-311</td>
</tr>
<tr>
<td>- Continuing Education</td>
<td>Administrative</td>
<td>416-979-5193</td>
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</tr>
</tbody>
</table>

- 91 - Last Updated: November 19, 2019
<table>
<thead>
<tr>
<th>Service</th>
<th>Location</th>
<th>Contact Information</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Association of Ryerson</td>
<td>Assistant</td>
<td><a href="mailto:info@mycesar.org">info@mycesar.org</a></td>
<td>SCC-301</td>
</tr>
<tr>
<td><strong>Learning Assistance:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Learning Support</td>
<td>SLS Reception</td>
<td>416-598-5978 <a href="mailto:sls@ryerson.ca">sls@ryerson.ca</a></td>
<td>Student Learning Support SLC 4th floor</td>
</tr>
<tr>
<td>Study Skills and Transition Support</td>
<td>SLS Reception</td>
<td>416-598-5978 <a href="mailto:sls@ryerson.ca">sls@ryerson.ca</a></td>
<td>Student Learning Support SLC 4th floor</td>
</tr>
<tr>
<td>English Language Support</td>
<td>SLS Reception</td>
<td>416-598-5978 <a href="mailto:sls@ryerson.ca">sls@ryerson.ca</a></td>
<td>Student Learning Support SLC 4th floor</td>
</tr>
<tr>
<td>Tutor Registry</td>
<td>SLS Reception</td>
<td>416-598-5978 <a href="mailto:sls@ryerson.ca">sls@ryerson.ca</a></td>
<td>Student Learning Support SLC 4th floor</td>
</tr>
<tr>
<td>Math Support</td>
<td>SLS Reception</td>
<td>416-598-5978 <a href="mailto:sls@ryerson.ca">sls@ryerson.ca</a></td>
<td>Student Learning Support SLC 4th floor</td>
</tr>
<tr>
<td>Graduate Student Support</td>
<td>SLS Reception</td>
<td>416-598-5978 <a href="mailto:sls@ryerson.ca">sls@ryerson.ca</a></td>
<td>Student Learning Support SLC 4th floor</td>
</tr>
<tr>
<td>Writing Support</td>
<td>SLS Reception</td>
<td>416-598-5978 <a href="mailto:sls@ryerson.ca">sls@ryerson.ca</a></td>
<td>Student Learning Support SLC 4th floor</td>
</tr>
<tr>
<td>Reference Material and Research Assistance</td>
<td>Circulation and Reference</td>
<td>416-979-5055 Online form</td>
<td>Library LIB 2nd floor</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>Kelly Abraham, Associate Director Campus Retail, Printing &amp; Duplicating Services</td>
<td>416-979-5116 <a href="mailto:bookstor@ryerson.ca">bookstor@ryerson.ca</a></td>
<td>17 Gould St.</td>
</tr>
</tbody>
</table>
### Academic Services:

<table>
<thead>
<tr>
<th>Service</th>
<th>Location</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Counselling related to Educational</td>
<td>Counselling Centre Assistant</td>
<td>416-979-5195 <a href="mailto:csdc@ryerson.ca">csdc@ryerson.ca</a></td>
</tr>
<tr>
<td>decision-making</td>
<td></td>
<td>Centre for Student Development and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Counselling JOR-07</td>
</tr>
<tr>
<td>Advocacy</td>
<td>Student Issues &amp;</td>
<td>416-979-5255 x2322 <a href="mailto:advocacy@rsuonline.ca">advocacy@rsuonline.ca</a></td>
</tr>
<tr>
<td></td>
<td>Advocacy Coordinator</td>
<td>RSU SCC-311</td>
</tr>
<tr>
<td>Advocacy</td>
<td>CESAR Student Rights</td>
<td>416-979-5000 x5193 <a href="mailto:info@mycesar.org">info@mycesar.org</a></td>
</tr>
<tr>
<td></td>
<td>Coordinator</td>
<td>SCC-301</td>
</tr>
<tr>
<td>Academic Difficulties</td>
<td>Client Services Rep</td>
<td>416-5255 x2322</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SCC-311 Refer to Undergraduate Student</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guide</td>
</tr>
<tr>
<td>Suspension/Required to Withdraw</td>
<td>Department of Civil</td>
<td>416-979-5345 <a href="mailto:mendonca@ryerson.ca">mendonca@ryerson.ca</a></td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td>MON-221</td>
</tr>
<tr>
<td>Policies, Procedures, Appeals &amp; Complaints</td>
<td>Assistant Ombudsperson</td>
<td>416-979-5000 x7450 <a href="mailto:ombuds@ryerson.ca">ombuds@ryerson.ca</a></td>
</tr>
<tr>
<td></td>
<td>Ombudsperson</td>
<td>Ombudsperson OAK-214/215/216</td>
</tr>
<tr>
<td>Graduation Eligibility</td>
<td>Client Services Rep</td>
<td>416-979-5151 <a href="mailto:gradinfo@ryerson.ca">gradinfo@ryerson.ca</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curriculum Management - Curriculum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advising, POD-355</td>
</tr>
</tbody>
</table>

### Registrar's Office:

| Office of the Registrar (RO)                | Client Service Ambassador   | 416-979-5036 ask.ryerson.ca                |
|                                              | in ServiceHub or specific   | RO ServiceHub POD-150                      |
|                                              | to unit                     |                                            |
| - campus tours                               |                              |                                            |
| - application and admission processes        |                              |                                            |
| - submission and/or pick up of documents     |                              |                                            |
| (e.g. transcripts) and completed forms       |                              |                                            |
| (e.g. third party letters, degree certificates) |                        |                                            |
| - curriculum advising                        |                              |                                            |
| - graduation eligibility                     |                              |                                            |
- transfer credits
- financial aid (e.g. OSAP, scholarships)
- tuition and fees- help with RAMSS

**Accommodations for a Disability:**

<table>
<thead>
<tr>
<th>Service</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Accommodation Support</td>
<td>Front Desk/Assistant 416-979-5290 <a href="mailto:aasadmin@ryerson.ca">aasadmin@ryerson.ca</a></td>
</tr>
<tr>
<td>Test Centre Coordinator</td>
<td>416-979-5000 x7932 <a href="mailto:testcentre@ryerson.ca">testcentre@ryerson.ca</a></td>
</tr>
<tr>
<td>Advocacy Co-ordinator</td>
<td>416-979-5255 x4504 <a href="mailto:access@rsuonline.ca">access@rsuonline.ca</a></td>
</tr>
</tbody>
</table>

**Computer Services:**

<table>
<thead>
<tr>
<th>Service</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Support Lab Advisors</td>
<td>416-979-5000 x6840 <a href="mailto:help@ryerson.ca">help@ryerson.ca</a></td>
</tr>
</tbody>
</table>

**Career Services:**

<table>
<thead>
<tr>
<th>Service</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Centre</td>
<td>Ian Ingles, Operations Manager 416-979-5177 <a href="mailto:career@ryerson.ca">career@ryerson.ca</a></td>
</tr>
<tr>
<td>On Campus Jobs</td>
<td>Christina Liang, Work Student Program Coordinator 416-979-5177 <a href="mailto:ccswp@ryerson.ca">ccswp@ryerson.ca</a></td>
</tr>
<tr>
<td>Off-Campus Work Permits for International Students</td>
<td>Inquiry Assistant 416-979-5000 x6655 <a href="mailto:issask@ryerson.ca">issask@ryerson.ca</a></td>
</tr>
<tr>
<td>Career and Educational Decision-Making</td>
<td>Counselling Centre Assistant 416-979-5195 <a href="mailto:csdc@ryerson.ca">csdc@ryerson.ca</a></td>
</tr>
<tr>
<td>Advocacy &amp; Workers Rights Co-ordinator</td>
<td>416-979-5255 x4503 <a href="mailto:workingstudents@rsuonline.ca">workingstudents@rsuonline.ca</a></td>
</tr>
</tbody>
</table>
### Personal Safety/Crisis Intervention:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Contact Name</th>
<th>Phone</th>
<th>Department</th>
<th>Office Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrimination, Harassment</td>
<td>Katie Scarcello, Intake and Admin Assistant</td>
<td>416-979-5000 x7494</td>
<td>Human Rights Services</td>
<td>POD-254A</td>
</tr>
<tr>
<td>Safe House</td>
<td>Counselling Centre Assistant</td>
<td>416-979-5195</td>
<td>Centre for Student Development and Counselling</td>
<td>JOR-07</td>
</tr>
<tr>
<td>Security</td>
<td>Security Officer</td>
<td>For emergency x80 or 416-979-5001</td>
<td>Security</td>
<td>CPF-100</td>
</tr>
<tr>
<td>Non-Academic Code of Conduct</td>
<td>Mark Atia, Student Conduct Officer</td>
<td>416-979-5000 x2741</td>
<td>POD-62</td>
<td></td>
</tr>
<tr>
<td>Ryerson Crisis Team</td>
<td></td>
<td>416-979-5195</td>
<td>Centre for Student Development and Counselling</td>
<td>JOR-07</td>
</tr>
</tbody>
</table>

### Health and Wellness:

<table>
<thead>
<tr>
<th>Service</th>
<th>Contact Name</th>
<th>Phone</th>
<th>Department</th>
<th>Office Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation and Athletics Centre (RAC)</td>
<td></td>
<td>416-979-5096</td>
<td>Recreation and Athletics Centre (RAC)</td>
<td></td>
</tr>
<tr>
<td>Intramurals</td>
<td>Randy Pipher, Intramural and Camps Co-ordinator</td>
<td>416-979-5000 x7360</td>
<td>Recreation and Athletics Centre (RAC)</td>
<td></td>
</tr>
<tr>
<td>Aids Education, Nutrition, Physical Health, Stress Mgmt.</td>
<td>Health Promotion Nurse</td>
<td>416-979-5000 x4295</td>
<td>Health Promotion</td>
<td>POD-448A</td>
</tr>
<tr>
<td>Physicians, flu shots, medical notes</td>
<td>Medical Centre</td>
<td>416-979-5070</td>
<td>Medical Centre</td>
<td>KHW-181</td>
</tr>
<tr>
<td>Health &amp; Dental Plan</td>
<td>Dawn Murray, Administrator</td>
<td>416-979-5255 x2311</td>
<td>RSU</td>
<td>SCC-311</td>
</tr>
</tbody>
</table>
UHIP Inquiry Assistant 416-979-5000 x4189 issask@ryerson.ca International Services for Students POD-61

Student Health Certificate Online Accommodation Requests https://www.ryerson.ca/senate/resources/ Dianne Mendonca 416-979-5345 civil@ryerson.ca Civil Engineering Department MON-221

Massage Therapy Client Services Rep 416-979-5096 rac@ryerson.ca Recreation and Athletics Centre (RAC) RAC-12B

Counselling:

Personal, Career, and Educational Counselling Counselling Centre Assistant 416-979-5195 csdc@ryerson.ca Centre for Student Development and Counselling JOR-07

Legal Advice:

Free legal advice 416-979-5255 x2315 legal@rsuonline.ca RSU Legal Advocacy Services

Immigration and Legal Advising for International Students Inquiry Assistant 416-979-5000 x4189 issask@ryerson.ca International Services for Students POD-61

Connecting with Other Students:

Become a Mentor Mentoring Program Assistant 416-979-5000 x6634 tmentor@ryerson.ca Tri-Mentoring POD-54

Cultural Groups and Course Unions Campus Groups Administrator 416-979-5255 x2323 campusgroups@rsuonline.ca RSU Campus Groups SCC-311

Women's Advocacy and Support Co-ordinator 416-979-5255 x2350 womenscentre@rsuonline.com Women's Centre, RSU SCC-210
LGBTTIQQ2S Advocacy and Support
Outreach Coordinator
416-979-5255 x7527
ryepride@rsuonline.ca
RyePride, RSU SCC-209

Office of International Affairs
Inquiries Assistant
416-979-5000 x6655
issask@ryerson.ca
International Services for Students POD-50-A

Metis, Inuit, status and non-status, Aboriginal
Sheila Saikkon, Co-ordinator
416-979-5000 x7699
ssaikkon@ryerson.ca
Aboriginal Student Services KHW-389

Student Events:
First Year Orientation
416-979-5000 x7352
orientation@ryerson.ca
Student Community Life POD-61

Booking a Room
Facilities Rentals
416-979-5000 x5009
s1chong@ryerson.ca
Theatre & Facilities KHW-185

Risk Assessment Forms
416-979-5000 x7352
event@ryerson.ca
Student Community Life POD-61

Convocation Ceremonies
Administrative Assistant
416-979-5234
convocation@ryerson.ca
Convocation and Awards Office KHW-47

Leadership Experience:

Become a Mentor
Mentoring Program Assistant
416-979-5000 x6634
tmentor@ryerson.ca
Tri-Mentoring Program POD-54

RU Leadership
Kait Taylor-Asquini, Leadership Development Facilitator
416-979-5000 x2128
k8taylor@ryerson.ca
L.E.A.D. Certificate Program JOR-04
**Food at Ryerson:**

<table>
<thead>
<tr>
<th>Service</th>
<th>Contact Person</th>
<th>Phone Number</th>
<th>Email</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Food Centre Co-ordinator</td>
<td>416-979-5255 x2319</td>
<td><a href="mailto:foodcentre@rsuonline.ca">foodcentre@rsuonline.ca</a></td>
<td>RSU SCC-209</td>
<td></td>
</tr>
<tr>
<td>Food on Campus</td>
<td></td>
<td></td>
<td></td>
<td>HUB (1st floor Podium Building), ILLC (133 Mutual St), Pitman (Pitman Hall)</td>
</tr>
<tr>
<td>Catering/Ordering Food Co-ordinator</td>
<td>416-979-5000 x6956</td>
<td><a href="mailto:silvana_babikian@aramark.ca">silvana_babikian@aramark.ca</a></td>
<td>Ryerson Food Services</td>
<td></td>
</tr>
</tbody>
</table>

**Student Identification:**

<table>
<thead>
<tr>
<th>Identification</th>
<th>Contact Person</th>
<th>Phone Number</th>
<th>Email</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student ID Card</td>
<td>Client Services Rep</td>
<td>416-979-5000 x7565</td>
<td><a href="mailto:onecard@ryerson.ca">onecard@ryerson.ca</a></td>
<td>OneCard Office JOR-02</td>
</tr>
<tr>
<td>Go Transit Student ID Discount Card</td>
<td>Client Services Rep</td>
<td>416-979-5000 x7565</td>
<td><a href="mailto:onecard@ryerson.ca">onecard@ryerson.ca</a></td>
<td>OneCard Office JOR-02</td>
</tr>
<tr>
<td>Proof of Enrolment</td>
<td>Client Services Rep</td>
<td>416-979-5136</td>
<td><a href="mailto:ask@ryerson.ca">ask@ryerson.ca</a></td>
<td>ServiceHub POD-150</td>
</tr>
</tbody>
</table>

**Housing:**

<table>
<thead>
<tr>
<th>Housing Service</th>
<th>Contact Person</th>
<th>Phone Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-campus Housing</td>
<td>Housing Services Assistant</td>
<td>416-979-5284</td>
<td>Student Housing Services PIT-100</td>
</tr>
<tr>
<td>On-campus Housing</td>
<td>Housing Services Assistant</td>
<td>416-979-5284</td>
<td>Student Housing Services PIT-100</td>
</tr>
</tbody>
</table>

**Parking:**

<table>
<thead>
<tr>
<th>Service</th>
<th>Contact Person</th>
<th>Phone Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Permits</td>
<td>Susan Hum-Poon</td>
<td>416-979-5000 x5008</td>
<td>University Business Services</td>
</tr>
<tr>
<td>START DATE</td>
<td>END DATE/DEADLINE/ SINGLE DATE</td>
<td>CATEGORY</td>
<td>TITLE</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>Tuesday,</td>
<td>Session Start and End Dates,</td>
<td>First Day of Fall Undergraduate Classes</td>
<td>Classes begin for undergraduate programs.</td>
</tr>
<tr>
<td>September</td>
<td>Holidays</td>
<td>(Including Engineering)</td>
<td></td>
</tr>
<tr>
<td>03, 2019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wednesday,</td>
<td>Graduation and Convocation</td>
<td>Last day to clear all outstanding academic</td>
<td>Last day to clear all outstanding academic</td>
</tr>
<tr>
<td>September</td>
<td></td>
<td>graduation requirements to be eligible for</td>
<td>graduation requirements to be eligible for</td>
</tr>
<tr>
<td>04, 2019</td>
<td></td>
<td>Fall Convocation</td>
<td>Fall Convocation</td>
</tr>
<tr>
<td>Friday,</td>
<td>Graduation and Convocation</td>
<td>Last Day to Cancel An Application to Graduate</td>
<td>Last day to cancel an Application to Graduate for</td>
</tr>
<tr>
<td>September</td>
<td></td>
<td>for Fall 2019</td>
<td>Fall 2019 Convocation</td>
</tr>
<tr>
<td>06, 2019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday,</td>
<td>Graduation and Convocation</td>
<td>Last Day to Change Name to Appear on All Fall</td>
<td>Last day to change name to appear on all Fall</td>
</tr>
<tr>
<td>September</td>
<td></td>
<td>Graduation Information (Including Award</td>
<td>graduation information (including award document).</td>
</tr>
<tr>
<td>06, 2019</td>
<td></td>
<td>Document)</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday, September 13, 2019</td>
<td><strong>Session Start and End Dates, Holidays</strong> First Week of Fall Chang School Classes Saturday classes begin September 7, 2019.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment, Appeals and Fees Dates</td>
<td><strong>Appeal Deadline:</strong> Spring/Summer Grades and Standings (4 P.M.) Last day to appeal Spring/Summer final undergraduate grades (including Summer classes in Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences) and the Chang School class grades, or Academic Standing. Students have until 4 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday, September 13, 2019</td>
<td><strong>Last Day to Pay Fall Undergraduate Tuition Fees</strong> Full-Time and Part-Time program students must pay the total Fall 2019 fees by September 13, 2019. See Fee Payments for details.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment, Appeals and Fees Dates</td>
<td><strong>Last Day to Request Missing Spring/Summer 2019 Undergraduate Grades</strong> Students should contact, in writing, the faculty member or teaching department.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment, Appeals and Fees Dates</td>
<td><strong>Last day to Add a Class for Fall 2019 Term</strong> Last day to Add or Swap Fall undergraduate classes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment, Appeals and Fees Dates</td>
<td><strong>Last day to Drop a Course In Drop Period for a Full Refund</strong> Last day to drop an undergraduate class for undergraduate students to be eligible for a full refund of fees (if a course drop results in a lower fee range). See Refund Schedule. See The Chang School <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang classes deadlines.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment, Appeals and Fees Dates</td>
<td><strong>Last day to Submit Fall GPA Adjustment Request</strong> Last day to submit a GPA Adjustment request for undergraduate program and The Chang School certificate students for a Fall 2019 course.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrolment, Appeals and Fees Dates</td>
<td><strong>Program Withdrawal Deadline Full Refund</strong> Last day to withdraw from an undergraduate program and to be eligible for a full refund.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Details</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Friday, October 04,</td>
<td>Fall Course Drop Period, 50% Refund</td>
<td>Undergraduate Course Drop Period for undergraduate students to be eligible for a 50% refund, if class drop results in a lower fee range. See the Chang School, <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for refund deadlines for Chang classes.</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday, October 04,</td>
<td>Fall Program Withdrawal Period, 50% Refund of Fall Fees</td>
<td>During this period, students may withdraw from an undergraduate program and are eligible for a 50% refund of Fall fees. See Refund Schedule. No refunds issued for undergraduate students who drop a Fall undergraduate course in good Academic Standing after this period. See the Chang School, <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for refund deadlines for Chang classes.</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday, September 16,</td>
<td>Winter 2020 Tuition Fee Totals Available on RAMSS</td>
<td>Winter 2020 tuition fee totals will be available on RAMSS. The fees detail page (<a href="http://www.ryerson.ca/registrar/fees/detail/">http://www.ryerson.ca/registrar/fees/detail/</a>) contains the Fee Schedule for each academic program.</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday, September 26</td>
<td>Fall 2019 Graduation Status Confirmation</td>
<td>Ryerson will officially confirm Fall 2019 graduation status, either approved or denied. Students who applied to graduate should check their @ryerson.ca email for information.</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Convocation</td>
<td>Convocation Ceremonies RSVP site opens. Eligible students, who plan to attend convocation, must confirm their attendance.</td>
<td></td>
</tr>
<tr>
<td>Wednesday, October 2,</td>
<td>Last Day to Clear All Outstanding Financial Obligations to the University for Fall 2019 Convocation</td>
<td>Last day to clear all financial and other obligations to the University to receive an official graduation award document at convocation ceremonies.</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Convocation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday, October 3,</td>
<td>Convocation Ceremonies RSVP Site Closes (12:00 Noon)</td>
<td>Convocation RSVP site will close at noon.</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Convocation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday, October 18,</td>
<td>Fall Study Week for All Undergraduate Programs and The Chang School (Except Engineering)</td>
<td>Fall Study Week for all Undergraduate programs (except Engineering) and The Chang School. No Chang School classes on October 12, 2019; classes resume October 19, 2019</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Session Start and End Dates, Holidays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday, October 14,</td>
<td>Thanksgiving (University Closed)</td>
<td>Statutory Holiday (University closed).</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Session Start and End Dates, Holidays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
<td>Details</td>
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</tr>
<tr>
<td>Tuesday, October 15, 2019</td>
<td>Holidays</td>
<td>Bachelor of Engineering program students attend classes.</td>
<td></td>
</tr>
<tr>
<td>Wednesday, October 16, 2019</td>
<td>Graduation and Convocation</td>
<td>Fall 2019 Convocation Ceremonies. Complete details are available on the Convocation website.</td>
<td></td>
</tr>
<tr>
<td>Wednesday, April 15, 2020</td>
<td>Graduation and Convocation</td>
<td>Apply to Graduate Form Opens on RAMSS my.ryerson.ca for Spring (June) 2020 Convocation. No fee applies from November 01, 2019, to March 01, 2020. A non-refundable late fee applies from March 02 to April 15.</td>
<td></td>
</tr>
<tr>
<td>Friday, November 15, 2019</td>
<td>Graduation and Convocation</td>
<td>Last Day for Fall Program Withdrawal (No Refund of Fees) Last day students may withdraw from an undergraduate program for the Fall 2019 term in good Academic Standing (no refund of Fall fees). See Refund Schedule.</td>
<td></td>
</tr>
<tr>
<td>Friday, November 15, 2019</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Drop a Fall Course (No Refund of Fees) Until this date, students may officially drop Fall undergraduate term and the Chang School classes in good Academic Standing (no refund of fees). See Refund Schedule. Nonattendance in Fall classes after this date will result in a failing grade for undergraduate students.</td>
<td></td>
</tr>
<tr>
<td>Sunday, December 01, 2019</td>
<td>Admissions Deadlines</td>
<td>Last day to submit applications and supporting documentation for Winter 2020 with guaranteed consideration for admission, readmission or reinstatement (for students seeking reinstatement 24 months or more after their withdrawal) to a part-time undergraduate degree program, or for Special Student status.</td>
<td></td>
</tr>
<tr>
<td>Sunday, December 01, 2019</td>
<td>Transfer Credit Deadlines</td>
<td>Transfer Credit Application Deadline Last day for students to apply for Transfer Credit to have the results for the start of Winter 2020 Term.</td>
<td></td>
</tr>
<tr>
<td>Monday, December 02, 2019</td>
<td>Session Start and End Dates, Holidays</td>
<td>Last Day of Fall Full-And Part-Time Undergraduate Program Classes Classes end for undergraduate programs. Note: some classes may continue until the week of December 09, 2019 for full- or part-time program students accessing classes through the Chang School.</td>
<td></td>
</tr>
<tr>
<td>Saturday, December 14, 2019</td>
<td>Examination Start and End</td>
<td>Fall Undergraduate Examination Period Examination Period includes Saturdays.</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Dates</td>
<td>Fees Dates</td>
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<tr>
<td>Friday, December 06, 2019</td>
<td>Last day for Clearing All Outstanding Debt to Ensure That Fall Grades Are Not Withheld</td>
<td>Saturday, December 07, 2019</td>
<td>Last Day of The Chang School Distance Education Classes</td>
</tr>
<tr>
<td>Saturday, December 07, 2019</td>
<td>Last Day of The Chang School Distance Education Classes</td>
<td>Saturday, December 14, 2019</td>
<td>Classes end for The Chang School.</td>
</tr>
<tr>
<td>Friday, December 20, 2019</td>
<td>Ryerson will close for business at 4:30 p.m. on the last working day of the year for the mid-year Winter break.</td>
<td>Saturday, December 21, 2019</td>
<td>Fall 2019 grades and academic standings available to students on RAMSS.</td>
</tr>
<tr>
<td>Sunday, January 05, 2020</td>
<td>Ryerson will close for business at 4:30 p.m. on the last working day of the year, Friday, December 20, 2019. Ryerson will reopen for business at 8 a.m. on the first working day of the new year, Monday, January 06, 2020.</td>
<td>Friday, December 27, 2019</td>
<td>Priority Enrolment Appointments for 4th Year Students Begin</td>
</tr>
<tr>
<td>Wednesday, January 15, 2020</td>
<td>Priority Enrolment Appointments for 4th year students begin at 8:00 a.m. Applies to full time undergraduate program students who: Participated in mandatory Course Intentions.</td>
<td>Wednesday, January 22, 2020</td>
<td>Winter Wait List Period</td>
</tr>
<tr>
<td>Wednesday, January 22, 2020</td>
<td>January 15 is the last day for Engineering students to add themselves to a wait-listed class. Engineering students who are successfully enrolled in a class from the wait list are responsible for all academic requirements and resulting tuition and fees.</td>
<td>Winter Wait List Period</td>
<td>January 22 is the last day for all undergraduate (except Engineering) students to add themselves to a wait-listed</td>
</tr>
</tbody>
</table>

Last Updated: November 19, 2019
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, December 30, 2019</td>
<td>Priority Enrolment Appointments for 3rd Year Students Begin</td>
<td>Priority Enrolment Appointments for 3rd year students begin at 8:00 a.m. Applies to full time undergraduate program students who: Participated in mandatory Course Intentions.</td>
</tr>
<tr>
<td>Monday, December 30, 2019</td>
<td>Priority Enrolment Appointments for Part-Time Undergraduate students Begin (Except Business Management and Business Technology management)</td>
<td>Priority Enrolment Appointments for part-time undergraduate program students begin at 8:00 a.m. Applies to all part-time students in all faculties except for Business and Business Technology Management students, who will participate starting January 01.</td>
</tr>
<tr>
<td>Tuesday, December 31, 2019</td>
<td>Priority Enrolment Appointments for 2nd Year Students Begin</td>
<td>Priority Enrolment Appointments for 2nd year students begin at 8:00 a.m. Applies to full time undergraduate program students who: Participated in mandatory Course Intentions.</td>
</tr>
<tr>
<td>Wednesday, January 01, 2020</td>
<td>OSAP deadlines</td>
<td>For details go to <a href="http://www.ryerson.ca/sfa">www.ryerson.ca/sfa</a> for 2018/2019 OSAP deadlines.</td>
</tr>
<tr>
<td>Thursday, January 02, 2020</td>
<td>Priority Enrolment Appointments for 1st Year Students Begin</td>
<td>Priority Enrolment Appointments for all 1st year students begin at 8:00 a.m.</td>
</tr>
<tr>
<td>Friday, January 03, 2020</td>
<td>Open Enrolment Period for Winter Term for All Undergraduate Students (Except Engineering Students)</td>
<td>Open Enrolment period for Winter 2020 term for undergraduate students (Engineering students see above). Add or Swap undergraduate classes, for the Winter term for undergraduate students (except Engineering students).</td>
</tr>
<tr>
<td>Friday, January 03, 2020</td>
<td>Enrolment Appointments for Part-time Undergraduate program students in Business Time Students In The Business and It Management Programs Begin</td>
<td>Enrolment Appointments for part-time undergraduate program students in Business and Business Technology Management.</td>
</tr>
<tr>
<td>Friday, January 17, 2020</td>
<td>Open Enrolment Period for Winter Term for Engineering only</td>
<td>Open enrolment period for Winter 2020 term for undergraduate Engineering students only.</td>
</tr>
</tbody>
</table>

Students who are successfully enrolled in a class from the wait list are responsible for all academic requirements and resulting tuition and fees.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Friday, January 10, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>First Day of Winter Classes: Undergraduate Programs and The Chang School (Except All Engineering and selected Architectural Science classes)</td>
</tr>
<tr>
<td>Monday, January 20, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Appeal Deadline: Fall Grades and Academic Standing (4 P.M.) Last day to appeal Fall final undergraduate grades, The Chang School grades, or Academic Standing. Students have until 4 p.m.</td>
</tr>
<tr>
<td>Monday, January 20, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Request Missing Fall Undergraduate Grades Last day to request missing Fall undergraduate grades. Students should contact, in writing, the faculty member or teaching department.</td>
</tr>
<tr>
<td>Friday, January 24, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Winter GPA Adjustment Request Last day to submit a GPA Adjustment request for undergraduate program and The Chang School certificate students for a Winter course.</td>
</tr>
<tr>
<td>Friday, January 24, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Drop a Winter Course (Full Refund of Fees) Last day to drop a Winter 2020 undergraduate class for students to be eligible for a full refund of fees (if a course drop results in a lower fee range). See Refund Schedule. See the Chang School, <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang class deadlines.</td>
</tr>
<tr>
<td>Friday, January 24, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Full Payment of Undergraduate Tuition Fees Assessed for The Winter Term Full-Time and Part-Time program students must pay the total Winter 2020 fees by January 10, 2020. See Fee Payments page.</td>
</tr>
<tr>
<td>Friday, January 24, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Withdraw from a Program (Full Refund of Fees) Students may withdraw from an undergraduate program and are eligible for a full refund of fees. See Refund Schedule.</td>
</tr>
<tr>
<td>Friday, February 07, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Winter Course Drop Period (50% Refund of Fees) During this period, students may drop a Winter undergraduate class for full and part-time and are eligible for a 50% refund (if a class drop results in a lower fee range). No</td>
</tr>
<tr>
<td>Date</td>
<td>Event/Deadline Details</td>
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</tr>
<tr>
<td>Saturday, February 01, 2020</td>
<td>Enrolment, Appeals and Fees Dates Winter Course Drop Period (No Refund of Winter Fees)</td>
<td></td>
</tr>
<tr>
<td>Saturday, February 01, 2020</td>
<td>Admissions Deadlines Last Day to Submit Applications and Supporting Documentation for Guaranteed Consideration for Fall 2020 Admission, Readmission or Reinstatement (for students seeking reinstatement 24 months or more after their withdrawal).</td>
<td></td>
</tr>
<tr>
<td>Saturday, February 21, 2020</td>
<td>Session Start and End Dates, Holidays Study Week for undergraduate and The Chang School students, including Chang School classes on February 15, 2020 as indicated. The Chang School Saturday classes resume on February 21, 2020. Statutory Holiday (University closed)</td>
<td></td>
</tr>
<tr>
<td>Monday, February 17, 2020</td>
<td>Session Start and End Dates, Holidays Family Day (University Closed)</td>
<td></td>
</tr>
<tr>
<td>Sunday, March 01, 2020</td>
<td>Graduation and Convocation Last Day to Apply for Graduation on RAMSS my.ryerson.ca for Spring Convocation. A non-refundable late application fee will apply after this date until the deadline date</td>
<td></td>
</tr>
<tr>
<td>Friday, February 21, 2020</td>
<td>Enrolment, Appeals and Fees Dates Winter Program Withdrawal Period (50% Refund of Fees)</td>
<td></td>
</tr>
<tr>
<td>Friday, February 07, 2020</td>
<td>Enrolment, Appeals and Fees Dates Winter Program Withdrawal Period (50% Refund of Fees)</td>
<td></td>
</tr>
<tr>
<td>Friday, March 27, 2020</td>
<td>Enrolment, Appeals and Fees Dates Winter Program Withdrawal Period (50% Refund of Fees)</td>
<td></td>
</tr>
<tr>
<td>Friday, March 27, 2020</td>
<td>Enrolment, Appeals and Fees Dates Winter Program Withdrawal Period (50% Refund of Fees)</td>
<td></td>
</tr>
<tr>
<td>Friday, February 21, 2020</td>
<td>Session Start and End Dates, Holidays Study Week for undergraduate and The Chang School students, including Chang School classes on February 15, 2020 as indicated. The Chang School Saturday classes resume on February 21, 2020. Statutory Holiday (University closed)</td>
<td></td>
</tr>
<tr>
<td>Family Day (University Closed)</td>
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</tr>
<tr>
<td>Last Day to Apply for Graduation on RAMSS my.ryerson.ca for Spring Convocation. A non-refundable late application fee will apply after this date until the deadline date</td>
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</tbody>
</table>

Refunds issued for undergraduate students who drop Winter undergraduate course in good Academic Standing after this period. See Refund Schedule. See the Chang School www.ryerson.ca/ce for Chang class deadlines.

During this period, students may withdraw from an undergraduate program and are eligible for a 50% refund of Winter fees. No refunds issued after this period. See Refund Schedule.

Last day to submit applications and supporting documentation for Fall 2020 full or part-time programs (including Grades-Only and Grades-Plus) with guaranteed consideration for admission, readmission or reinstatement (for students seeking reinstatement 24 months or more after their withdrawal).

During this period, students may officially drop Winter undergraduate term classes in good Academic Standing (no Refund of Fees). See Refund Schedule. Non--attendance in Winter classes after this period will result in a failing grade. Consult the Chang School for appropriate deadlines for classes that are less than 13 weeks in duration.

During this period, students may withdraw from an undergraduate program for the Winter term in good Academic Standing (no refund of Winter fees). See Refund Schedule.

Study Week for undergraduate and The Chang School students, including Chang School classes on February 15, 2020 as indicated. The Chang School Saturday classes resume on February 21, 2020. Statutory Holiday (University closed)
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, March 09, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Spring Convocation (No Late Fee)</td>
</tr>
<tr>
<td>Wednesday, April 01, 2020</td>
<td>Transfer Credit Deadlines</td>
<td>Course Intentions for Fall 2020 and Winter 2021</td>
</tr>
<tr>
<td>Thursday, April 02, 2020</td>
<td>Graduation and Convocation</td>
<td>Last Day to Clear All Previous Terms’ Outstanding Grades for Graduation At Spring Convocation</td>
</tr>
<tr>
<td>Thursday, April 09, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>Last Day of Undergraduate Classes</td>
</tr>
<tr>
<td>Friday, April 10, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>Good Friday (University Closed)</td>
</tr>
<tr>
<td>Saturday, April 11, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>Last Day of The Chang School Distance Education Classes</td>
</tr>
<tr>
<td>Monday, April 13, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Clearing all Outstanding Debt to Ensure That Winter other borrowed property in excess of $10 to make sure that Winter grades are not withheld.</td>
</tr>
<tr>
<td>Saturday, April 18, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>Last Week of The Chang School Classes</td>
</tr>
<tr>
<td>Saturday, April 25, 2020</td>
<td>Examination Start/End Dates</td>
<td>Winter Undergraduate Examination Period includes Saturdays. Examination Period</td>
</tr>
<tr>
<td>Wednesday, April 15, 2020</td>
<td>Admissions Deadlines</td>
<td>Last Day to Submit Applications and Supporting Documentation for Guaranteed Consideration for Spring 2020 Admission, Readmission or Reinstatement (for students seeking reinstatement 24 months or more after their withdrawal) to a part-time undergraduate degree program, or for Special Student status.</td>
</tr>
<tr>
<td>Wednesday, April 15, 2020</td>
<td>Graduation and Convocation</td>
<td>Last Day to Apply for Last day to apply for graduation on RAMSS</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Details</td>
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</tr>
<tr>
<td>15, 2020</td>
<td>Convocation</td>
<td>Graduation on RAMSS my.ryerson.ca for Spring Convocation (with payment of a non-refundable late application fee).</td>
</tr>
<tr>
<td>Saturday, April 25, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>Official End of Winter Term</td>
</tr>
<tr>
<td>Monday, April 27, 2020</td>
<td>Graduation and Convocation</td>
<td>Last Day to Change Name to Appear on All Graduation Information (Including Award Document).</td>
</tr>
<tr>
<td>Tuesday, April 28, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>First Day of Spring Classes for Full-Time and Part-Time Undergraduate Programs</td>
</tr>
<tr>
<td>Friday, May 01, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Spring Course Add or Swap undergraduate classes in Spring (classes that begin in May) for undergraduate students. See note about the Chang School courses below.</td>
</tr>
<tr>
<td>Friday, May 01, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Payment of Spring Undergraduate Course Fees</td>
</tr>
<tr>
<td>Friday, May 01, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last day to drop a Spring undergraduate class that began in May for undergraduate students to be eligible for a full refund of fees (if a class drop results in a lower fee range). See Refund Schedule. See note about Chang School courses below.</td>
</tr>
<tr>
<td>Sunday, June 21, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>First Week of Spring (May-June) Chang School Classes</td>
</tr>
<tr>
<td>Tuesday, May 05, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Winter 2020 Grades and Standings Released to Students on RAMSS</td>
</tr>
<tr>
<td>Wednesday, Tuesday, May 12, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Fall-Winter Course Intention Adjustment Period</td>
</tr>
<tr>
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<td></td>
<td>Course Intention adjustment period for the coming Fall and Winter terms. May 06, 2019 (6:00 am) to May 12, 2020 (11:59 pm)</td>
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<td>Last Updated: November 19, 2019</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Deadline Description</td>
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</tr>
<tr>
<td>Thursday, May 07, 2020</td>
<td>Graduation and Convocation</td>
<td>Last day to Cancel An Application to Graduate for Spring Convocation.</td>
</tr>
<tr>
<td>Thursday, May 07, 2020</td>
<td>Graduation and Convocation</td>
<td>Last day, by 12:00 p.m. to clear all other outstanding academic graduation requirements to be eligible for Spring Convocation. Last day to clear all financial and other obligations to receive an official award document.</td>
</tr>
<tr>
<td>Friday, May 08, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last day for payment of Spring (May-June) undergraduate course fees. See Fee Payments for details page.</td>
</tr>
<tr>
<td>Friday, May 08, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last day to Add or Swap undergraduate classes in Spring/Summer Session for undergraduate students. See the Chang School <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang School class deadlines.</td>
</tr>
<tr>
<td>Friday, May 08, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last day to drop Spring undergraduate classes (that began in May), for undergraduate students to be eligible for a full refund. See Refund Schedule. See the Chang School <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang class deadlines.</td>
</tr>
<tr>
<td>Friday, May 08, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last day to drop a Spring/Summer (May-August) undergraduate class that began in May for undergraduate students to be eligible for a full refund of fees (if a class drop results in a lower fee range). See Refund Schedule. See the Chang School <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang class deadlines.</td>
</tr>
<tr>
<td>Friday, May 08, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last day to drop Spring/Summer A Portion of an undergraduate multi-term (A and B combination) classes and be eligible for a 50% refund of fees. See Refund Schedule. See The Chang School <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang class deadlines.</td>
</tr>
<tr>
<td>Friday, May 15, 2020</td>
<td>Open Registration for Engineering</td>
<td>Open enrolment for Engineering Transition Program and Optional Specializations in Engineering Innovation &amp; Entrepreneurship and Management Sciences classes only.</td>
</tr>
<tr>
<td></td>
<td>Transition and Optional Specialization in</td>
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<tr>
<td>Date</td>
<td>Event</td>
<td>Description</td>
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</tr>
<tr>
<td>Saturday, May 09, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>First Day of Optional Specialization Classes in Engineering Innovation and Entrepreneurship, and Management Sciences courses.</td>
</tr>
<tr>
<td>Monday, May 11, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>First Day of Engineering Transition Program Classes</td>
</tr>
<tr>
<td>Friday, May 15, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Drop Engineering Transition Program and Optional Specialization Courses (Full Refund of Fees)</td>
</tr>
<tr>
<td>Monday, May 18, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>Victoria Day (University Closed)</td>
</tr>
<tr>
<td>Thursday, May 21, 2020</td>
<td>Graduation and Convocation</td>
<td>Spring 2020 Graduation Status Confirmation</td>
</tr>
<tr>
<td>Thursday, May 21, 2020</td>
<td>Graduation and Convocation</td>
<td>Convocation Ceremonies RSVP Site Opens at 4:30 p.m.</td>
</tr>
<tr>
<td>Friday, May 22, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Appeal Deadline: Winter Grades and Standings (4 P.M.)</td>
</tr>
<tr>
<td>Friday, May 22, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Request Missing Winter Undergraduate Grades</td>
</tr>
<tr>
<td>Friday, May 22, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Course Drop for Engineering Transition Program and Optional Specialization Courses (50% Refund of Fees)</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Details</td>
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</tr>
<tr>
<td>Friday, May 22, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Full Payment of Fees (Engineering Transition Program and Optional Specialization Courses)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day for full payment of fees (Engineering Transition Program, and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences courses only.) See Fee Payments page.</td>
</tr>
<tr>
<td>Friday, May 29, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Spring/Summer Course Drop (No Refund of Fees)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to drop Spring (May-June) undergraduate term and the Chang School classes in good Academic Standing (no refund of fees) for undergraduate students. Non-attendance in Spring/Summer term classes after this date will result in a failing grade.</td>
</tr>
<tr>
<td>Friday, May 29, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Withdraw from an Undergraduate Program (No Refund of Spring/Summer Fees)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to withdraw from an undergraduate program in Spring (May-June) session in good Academic Standing (no refund of Spring/Summer fees).</td>
</tr>
<tr>
<td>Friday, May 29, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day to Drop a Spring/Summer Course (50% Refund)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to drop Spring/Summer undergraduate classes that began in May, for undergraduate students to be eligible for a 50% refund (if class drop results in a lower fee range). See Refund Schedule. See the Chang School <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang classes deadlines.</td>
</tr>
<tr>
<td>Saturday, August 15, 2020</td>
<td>Graduation and Convocation</td>
<td>Apply to Graduate on RAMSS my.ryerson.ca for Fall 2020 Convocation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Application to graduate opens on RAMSS my.ryerson.ca for Fall 2020 Convocation. No fee applies June 01 to July 31. A non-refundable late fee applies August 01 to August 15.</td>
</tr>
<tr>
<td>Sunday, June 14, 2020</td>
<td>Session Start and End Dates, Holidays</td>
<td>Last Week of Spring Session Classes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Classes end for Spring/Summer undergraduate term classes that began in May. Spring Convocation. Complete details are available on the Convocation website.</td>
</tr>
<tr>
<td>Wednesday, June 10, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Course Drop (Engineering Transition Program and Optional Specialization Courses (No Refund of Fees)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to drop courses in good academic standing, no refund (Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences.</td>
</tr>
</tbody>
</table>
Friday, June 19, 2020  Session Start and End Dates, Holidays  Last Week of Spring Session Chang School Classes  Classes end for Spring (May-June) session Chang School classes.

Monday, June 22, 2020  Session Start and End Dates, Holidays  First Day of Summer Classes (June-August) for Undergraduate Programs  Summer session classes begin for undergraduate programs.

Friday, June 26, 2020  Enrolment, Appeals and Fees Dates  Last Day for Summer Course Add or Swap  Final week to add Summer (June-August) undergraduate classes, or change class sections for classes that began in June for undergraduate students. See the Chang School www.ryerson.ca/ce for Chang class deadlines.

Friday, June 26, 2020  Enrolment, Appeals and Fees Dates  Last Day for Summer Course Drop (Full Refund)  Last day to drop a Summer Session undergraduate class (that began in June) for undergraduate students to be eligible for a full refund of fees (if class drop results in a lower fee range). See Refund Schedule. See the Chang School www.ryerson.ca/ce for Chang class deadlines.

Friday, June 26, 2020  Enrolment, Appeals and Fees Dates  Last Day for Summer Course Drop (Full Refund)  Last day to drop a Spring/Summer Session undergraduate class (that began in June) for undergraduate students to be eligible for a full refund of fees (if class drop results in a lower fee range). See Refund Schedule. See the Chang School www.ryerson.ca/ce for Chang class deadlines.

Friday, June 26, 2020  Session Start and End Dates, Holidays  Last Day of Classes Engineering Transition and Optional Specialization Courses  Last day of classes for Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences courses only.

Saturday, June 27, 2020  Session Start and End Dates, Holidays  First Week of (June-August) Chang School Summer Session Classes  Classes begin for The Chang School Spring/Summer, Summer session classes.

Wednesday, July 01, 2020  Session Start and End Dates, Holidays  Canada Day  Statutory Holiday (University closed).

Friday, July 03, 2020  Enrolment, Appeals and Fees Dates  Last Day for Summer GPA Adjustment Request  Last day to submit a GPA Adjustment request for an undergraduate Spring/Summer course or Chang School certificate student course that began in June.

Friday, July 03, 2020  Enrolment, Appeals and Fees Dates  Last Day for Summer  Last day to drop a Summer Session
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Friday, July 03, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Summer GPA Adjustment Request</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to submit a GPA Adjustment request for an undergraduate Spring/Summer course or Chang School certificate student course that began in June.</td>
</tr>
<tr>
<td>Friday, July 03, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Summer Course Drop (50% Refund)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to drop a Summer Session undergraduate class that began in June for undergraduate students to be eligible for a 50% refund (if class drop results in a lower range). See the Chang School <a href="http://www.ryerson.ca/ce">www.ryerson.ca/ce</a> for Chang classes deadlines.</td>
</tr>
<tr>
<td>Friday, July 10, 2020</td>
<td>Enrolment, Appeals and Fees Dates</td>
<td>Last Day for Course</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last day to drop Spring/Summer session (14</td>
</tr>
</tbody>
</table>

- 114 -
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td><strong>Appeals and Fees Dates</strong></td>
</tr>
<tr>
<td>Drop (Spring/Summer Session With May Start) (No Refund of Fees)</td>
<td>week) undergraduate term classes that began in May in good Academic Standing (no Refund of Fees) for undergraduate students. See note about Chang School courses below. Non-attendance in Spring/Summer classes after this date will result in a failing grade.</td>
</tr>
<tr>
<td>Friday, July 10, 2020</td>
<td><strong>Enrolment, Appeals and Fees Dates</strong></td>
</tr>
<tr>
<td>Last Day for Course Drop (Summer/June Start) (No Refund of Fees)</td>
<td>Last day to drop Summer undergraduate term classes that began in June in good Academic Standing (no Refund of Fees) for undergraduate students. See note about Chang School courses below. Non-attendance in Summer classes after this date will result in a failing grade.</td>
</tr>
<tr>
<td>Friday, July 10, 2020</td>
<td><strong>Enrolment, Appeals and Fees Dates</strong></td>
</tr>
<tr>
<td>Last Day for Spring/Summer Program Withdrawal</td>
<td>Last day to withdraw from an undergraduate program, in Summer session in good Academic Standing (no Refund of Fees). See Refund Schedule.</td>
</tr>
<tr>
<td>Friday, July 10, 2020</td>
<td><strong>Enrolment, Appeals and Fees Dates</strong></td>
</tr>
<tr>
<td>Last Day to Drop Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences Summer Courses/Program Withdrawal (Full Refund of Fees)</td>
<td>Last Day to Drop Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences Summer Courses/Program Withdrawal (Full Refund of Fees)</td>
</tr>
<tr>
<td>Friday, July 10, 2020</td>
<td><strong>Enrolment, Appeals and Fees Dates</strong></td>
</tr>
<tr>
<td>Last Day for payment of fees for Summer Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship and Management Sciences Summer classes</td>
<td>Last Day for full payment of fees for Summer Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences Summer classes.</td>
</tr>
<tr>
<td>Wednesday, July 15, 2020</td>
<td><strong>Admissions Deadlines</strong></td>
</tr>
<tr>
<td>Last Day to Submit Applications and Supporting Documentation for Fall 2020 with guaranteed consideration for Special Student status</td>
<td>Last day to submit applications and supporting documentation for Fall 2020 with guaranteed consideration for Special Student status.</td>
</tr>
</tbody>
</table>
Guaranteed Consideration for Fall 2020 Admission as a Special Student

Friday, July 17, 2020
Enrolment, Appeals and Fees Dates

Last Day to Drop a Course in Summer Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences (50% Refund of Fees)

Friday, July 24, 2020
Enrolment, Appeals and Fees Dates

Appeal Deadline: Engineering Transition Program and Optional Specialization Spring Courses (4 P.M.)

Last day to appeal Spring grades and/or academic standing (Engineering Transition Program, and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences courses only). Students, in writing, should contact the faculty member or teaching department.

Friday, July 24, 2020
Enrolment, Appeals and Fees Dates

Last Day to Request Missing Spring Grades (Engineering Transition Program and Optional Specialization Courses)

Last day to request missing Spring 2020 grades (Engineering Transition Program, Optional Specializations in Engineering Innovation & Entrepreneurship and Management Sciences courses only). Students, in writing, should contact the faculty member or teaching department.

Friday, July 31, 2019
Graduation and Convocation

Last Day to Apply for Graduation on RAMSS my.ryerson.ca for Fall 2020 Convocation (no 2020 fee)

Last day to apply for graduation on RAMSS my.ryerson.ca for Fall date until the deadline date of August 15, 2020 Convocation (no 2020 fee)

Friday, July 31, 2020
Session Start and End Dates, Holidays

Ryerson Day 2020 (University Closed)

Ryerson Day 2020 (University Closed)

Monday, August 03, 2020
Session Start and End Dates, Holidays

Civic Holiday (University Closed)

Civic Holiday (University Closed)

Tuesday, August 04, 2020
Transfer Credit Deadlines

Transfer Credit Deadline

Last day for students to file an application for Transfer Credit to have the results for the start of Fall 2020 Term

Tuesday, August 04, 2020
Session Start and End Dates, Spring/Summer

Last Week for Spring/Summer undergraduate term classes that began in
Holidays

Undergraduate Term Classes that began in June, and Spring/Summer Multi-Term (A/B Combination) Classes that started in May (consult the Chang School for deadlines).

Undergraduate full-time program students who enrol in the Chang School classes and are assessed individual Chang School class fees, should visit the Chang School webpage for class end dates.

Friday, August 07, 2020
Enrolment, Appeals and Fees Dates

Last Day to Drop a Summer Course in Good Academic Standing in Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences (No Refund of Fees)

Monday, August 10, 2020
Enrolment, Appeals and Fees Dates

Final date for clearing any outstanding debt to ensure that Spring/Summer grades are not withheld.

Thursday, August 13, 2020
Graduation and Convocation

Last Day to Apply for Graduation on RAMSS my.ryerson.ca for Fall 2020 Convocation (With a Non-Refundable Late Application Fee).

Tuesday, August 18, 2020
Enrolment, Appeals and Fees Dates

Last Day of Summer Classes in Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences
Examination Start/End Dates

Day of Exams for Summer Classes in Engineering Transition Program and Optional Specializations in Engineering Innovation & Entrepreneurship and Management Sciences

Session Start and End Dates, Holidays

Labour Day (University Closed)

Enrolment, Appeals and Fees Dates

Last day to appeal Spring/Summer final undergraduate grades (including Summer classes in Engineering Transition Program and Optional Specializations in Engineering Innovation and Entrepreneurship, and Management Sciences) and The Chang School class grades, or Academic Standing. Students have until 4 p.m.
## DEPARTMENTAL DIRECTORY

<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Phone Ext.</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. K. Sennah</td>
<td>MON 220</td>
<td>6460</td>
<td>ksennah</td>
</tr>
<tr>
<td>Dr. A. Shaker</td>
<td>MON 405</td>
<td>6458</td>
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</tr>
<tr>
<td>Dr. M. Shehata</td>
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<td>6457</td>
<td>mshehata</td>
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<tr>
<td>Dr. H. Aboshosha</td>
<td>ENG 320</td>
<td>2396</td>
<td>habo</td>
</tr>
<tr>
<td>Dr. L. Amleh</td>
<td>ENG 346</td>
<td>6417</td>
<td>lamleh</td>
</tr>
<tr>
<td>Mr. Bilal Baradie</td>
<td>ENG LG 26C</td>
<td>4890</td>
<td>bbardie</td>
</tr>
<tr>
<td>Dr. M. Chapman</td>
<td>MON 403</td>
<td>6461</td>
<td>mchapman</td>
</tr>
<tr>
<td>Dr. S. Easa</td>
<td>MON 409</td>
<td>7868</td>
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</tr>
<tr>
<td>Dr. E. Elbeshbishy</td>
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</tr>
<tr>
<td>Dr. A. El-Rabbany</td>
<td>MON 307</td>
<td>6472</td>
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</tr>
<tr>
<td>Dr. B. Farooq</td>
<td>CUE 337</td>
<td>556456</td>
<td>bilal.farooq</td>
</tr>
<tr>
<td>Dr. R. Hamza</td>
<td>MON 216</td>
<td></td>
<td>rhamza</td>
</tr>
<tr>
<td>Dr. A. Hossain</td>
<td>MON 217</td>
<td>7867</td>
<td>ahossain</td>
</tr>
<tr>
<td>Mr. Nidal Jaalouk</td>
<td>ENG 108</td>
<td>3395</td>
<td>njaalouk</td>
</tr>
<tr>
<td>Dr. D. Joksimovic</td>
<td>MON 303</td>
<td>6462</td>
<td>darkoj</td>
</tr>
<tr>
<td>Dr. R. Kianoush</td>
<td>MON 215</td>
<td>6455</td>
<td>kianoush</td>
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<tr>
<td>Dr. M. Lachemi</td>
<td>JOR 1307</td>
<td>5002</td>
<td>mlachemi</td>
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<tr>
<td>Dr. J.Y. Li</td>
<td>MON 306</td>
<td>6470</td>
<td>jyli</td>
</tr>
<tr>
<td>Dr. S. Li</td>
<td>MON 406</td>
<td>6450</td>
<td>snli</td>
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<tr>
<td>Dr. J. Liu</td>
<td>MON 311</td>
<td>6469</td>
<td>jinyuan.liu</td>
</tr>
<tr>
<td>Mr. Robin Luong</td>
<td>MON 102A</td>
<td>6468</td>
<td>rluong</td>
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<tr>
<td>Dr. H. Marzouk</td>
<td>MON 219</td>
<td>6451</td>
<td>hmarzouk</td>
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<tr>
<td>Ms. Dianne Mendonca</td>
<td>MON 221</td>
<td>7626</td>
<td>mendonca</td>
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<tr>
<td>Dr. Saber Moradi</td>
<td>MON 411</td>
<td>7905</td>
<td>s.moradi</td>
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<tr>
<td>Ms. Rachel Peluso</td>
<td>MON 221</td>
<td>544402</td>
<td>civgrad</td>
</tr>
<tr>
<td>Mr. Dan Peneff</td>
<td>MON 103</td>
<td>6467</td>
<td>dpeneff</td>
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<tr>
<td>Dr. B. Persaud</td>
<td>MON 218</td>
<td>6464</td>
<td>bpersaud</td>
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<tr>
<td>Mr. Des Rogan</td>
<td>EPH 230</td>
<td>4677</td>
<td>drogan</td>
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<tr>
<td>Ms. Helen Rusan</td>
<td>MON 221</td>
<td>544400</td>
<td>hrusan</td>
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<tr>
<td>Mr. Khaleel Stoney</td>
<td>ENG 110</td>
<td>6081</td>
<td>kstoney</td>
</tr>
<tr>
<td>Ms. Tamar Svadjian</td>
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<td>tsvadjia</td>
</tr>
<tr>
<td>Mr. Domenic Valle</td>
<td>ENG 109</td>
<td>4910</td>
<td>d2valle</td>
</tr>
<tr>
<td>Dr. A. Yuan</td>
<td>CUI 331</td>
<td>3477</td>
<td>arnold.yuan</td>
</tr>
</tbody>
</table>
FACULTY MEMBERS

DR. HAITHAM ABOSHOSHA  
Structural Engineering

DR. LAMYA AMLEH  
Structural Engineering

DR. MIKE CHAPMAN  
Geomatics Engineering

DR. SAID EASA  
Transportation Engineering

DR. ELSAYED ELBESHBISHY  
Environmental Engineering

DR. AHMED EL-RABBANY  
Geomatics Engineering
FACULTY MEMBERS

DR. BILAL FAROOQ  
Transportation Engineering

DR. RANIA HAMZA  
Environmental Engineering

DR. ANWAR HOSSAIN  
Structural Engineering

DR. DARKO JOKSIMOVIC  
Environmental Engineering

DR. REZA KIANOUSH  
Structural Engineering

DR. MOHAMED LACHEMI  
Structural Engineering
FACULTY MEMBERS

DR. JAMES LI
Environmental Engineering

DR. SONGNIAN LI
Geomatics Engineering

DR. JINYUAN LIU
Geotechnical Engineering

DR. HESHAM MARZOUK
Structural Engineering

DR. SABER MORADI
Structural Engineering

DR. BHAGWANT PERSAUD
Transportation Engineering
FACULTY MEMBERS

DR. KHALED SENNAH
Structural Engineering

DR. AHMED SHAKER
Geomatics Engineering

DR. MEDHAT SHEHATA
Materials/Transportation Engineering

DR. ARNOLD YUAN
Project Management
ADMINISTRATIVE STAFF MEMBERS

HELEN RUSAN  
Administration Manager

TAMAR SVADJIAN  
Administrative Assistant

DIANNE MENDONCA  
Departmental Assistant

RACHEL PELUSO  
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TECHNICAL STAFF MEMBERS

NIDAL JAALOUK
Lead Technical Officer

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Technical Officer

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DES ROGAN
Network Administrator

KHALEEL STONEY
Civil Technologist

DOMENIC VALLE
Civil/Geomatics Technical Officer