

**RYERSON UNIVERSITY**

**Department of  
Electrical & Computer  
Engineering**

**STUDENT  
HANDBOOK**

**2010-2011**

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## DEPARTMENT DIRECTORY

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## PROGRAM DETAILS

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### **ELECTRICAL, COMPUTER and BIOMEDICAL ENGINEERING**

Electrical and Computer Engineering (ELCE) is a profession that is constantly changing to meet societal needs. The ELCE discipline has created significant impact on human life in the past 50 years or so, and some of the key impacts of the field in our day to day living include: electrification, telephony, television, computers, internet, imaging, consumer electronics devices, home appliances, and medical technologies. The Department of Electrical and Computer Engineering offers highly structured programs that emphasize not only the theoretical fundamentals but also the practical aspects of the engineering profession.

Rewarding career opportunities in the fields of Electrical as well as Computer Engineering will give graduates of these programs a chance to work in research and development, design production engineering or quality control, health care systems, software engineering & applications, information technology or the electronic service industry. As an electrical engineer, you focus on the transfer of both electrical energy and information while a computer engineer analyze, design, and evaluate both hardware and software computer systems.

The first-year courses of the Electrical and Computer Engineering programs provide the students with grounding in engineering science fundamentals such as mathematics, physics, chemistry, computer science and the theory of electric circuits. The second year of the programs introduces discrete mathematics, data structures and engineering algorithms, and electrical engineering related subjects such as analog and digital electronic circuits and systems. In the third year, Electrical and Computer Engineering programs have some common courses like Communication Systems, Control Systems, Signals & Systems, Microcomputer Systems and Electronic Circuits but they also offer specialized courses in their respective fields. At this stage i.e. from 5th semester, these two programs separate and students cannot switch from one program to another. To educate, train, and prepare the next generation engineers to address the technical issues and challenges raised by the emerging technologies, the undergraduate curriculum offered by this department is adaptable, dynamic, relevant, and efficient.

**Electrical Engineering** - In the third year of the Electrical Engineering program, the emphasis will shift to advanced subjects such as electromagnetics, microsystems, electrical devices and systems, and control theory. The fourth year curriculum provides a wide range of technical elective courses. Students can further specialize in Microelectronics and Microsystems, VLSI Design, Communication Systems, Multimedia, Control Systems and Power Systems by selecting appropriate courses in the fourth year of the program. During this final year of the program, all students complete a mandatory group design project.

Department of Electrical and Computer Engineering at Ryerson offers four options in the BEng Electrical Engineering program:

**Energy Systems Option** - One of the most important areas of engineering where topics such as alternative fuels, energy conversion, efficiency and green power take centre stage.

**Microsystems Option** – This option focuses on electronics and integrated circuit design in the nanoscale era which enables the creation of System-on-Chip where hundreds of millions of transistors can be integrated on a single chip. Theory will be supported by laboratory work using industry-class software and equipments.

**Multimedia Systems Option** – This option deals with issues such as digital images, video, audio and multimedia, and will focus on theory, implementation, impact and convergence which is evident in current cutting edge digital technologies and consumer products.

**Robotics and Control Systems Option** – Control systems are found in a broad range of applications, from aircrafts to spacecrafts to automobiles to robots. This option will focus on the design and implementation of control systems and its application to robotics.

These program options are in addition to the regular BEng in Electrical Engineering accredited by the Canadian Engineering Accreditation Board (CEAB).

It should be noted that the first five semesters of the program are common. It is only in the sixth semester that a student will decide on an option, if he or she wishes to pursue one. In the sixth semester, students decide on two of the three courses for an option. This flexibility also ensures that even at the end of the sixth semester if a student is planning to switch an option, he or she can do so without taking any additional courses or spending an additional semester.

The Department of Electrical and Computer Engineering also offers graduate degree programs in Electrical and Computer Engineering. These graduate degree programs allow students to pursue advanced

studies and independent research in the areas of computer networks, computer systems and applications and power electronics.

**Computer Engineering** - Computer engineering graduates often find themselves focusing on problems or challenges which result in "state of the art" devices and products, which integrate computer capabilities. They work on the design, planning, development, testing, and even the supervision of manufacturing of computer hardware -- including everything from chips to embedded controllers. A computer engineer has to deal with the hardware from circuits to architecture in addition to focusing on operating systems and software. In the third year of our Computer Engineering program, students will further study Computer Organization & Architectures, Operating systems, Microprocessor Systems, microelectronics, Object-oriented Analysis and Design along with common courses like Electronic Systems, Communication Systems, Signals & Systems and Control Theory.

In the final year of the program, students will take courses in data communications, digital system engineering, VLSI Design, Embedded Computers, Hardware/Software Co-design, and Software Engineering. Students studying Computer Engineering may choose to focus on specialty areas including VLSI Systems & Integrated Circuits, Computer Design & Engineering, Embedded Computer Systems, Software Engineering & Applications, Computer Networking as well as Signal & Image Processing through extensive technical elective courses. During the final year of the program students must also complete a mandatory computer engineering design project.

**Biomedical Engineering** - The Faculty of Engineering, Architecture and Science (FEAS) through the Department of Electrical and Computer Engineering offers a 4-year BEng degree in Biomedical Engineering. The BEng Biomedical Engineering program is the first standalone undergraduate Biomedical Engineering program in Canada. It takes advantage of the strategic location of Ryerson University in Toronto's Medical Discovery District and seven world-class hospitals.

The Department of Electrical and Computer Engineering in collaboration with the Departments of Aerospace Engineering, Biology, Chemical Engineering, Chemistry, Physics, Computer Science, Industrial and Mechanical Engineering, and Mathematics at Ryerson University deliver the curriculum.

According to the working definition of the US National Institutes of Health (NIH), biomedical engineering integrates physical, chemical, mathematical and computational sciences and engineering principles

to study biology, medicine, behaviour, and health. It advances fundamental concepts, creates knowledge from the molecular to the organ system levels, and develops innovative biologics, materials, processes, implants, devices and informatics approaches for the prevention, diagnosis, and treatment of disease; for patient rehabilitation; and for improving health.

The Biomedical Engineering program has been developed to benefit from, enhance and expand the multidisciplinary collaboration among the various engineering and science programs at Ryerson; to attract more students of higher quality to the University and retain them, as well as to enhance the reputation of engineering education at Ryerson. It offers students excellent opportunities to build strong backgrounds in biomedical engineering and benefit from the collaborative interdisciplinary relationships between engineering and life sciences, being key strategic areas of strength at FEAS, Ryerson.

This program is run within the framework of engineering programs at Ryerson. As with all degree programs associated with engineering, students are initially admitted into the common first year for engineering. During the second year students will study fundamental courses in electronic circuits, biomaterials, cell biology, physiology, engineering algorithms, digital systems, statics and mechanics of materials. In third year the students will focus on microprocessor systems, fluid mechanics, biomedical transducers, bioinformatics, biomechanics, biostatistics, signals and systems, control systems, and biomedical instrumentation. In the fourth year, the students will study a range of state-of-the-art topics in biomedical engineering, and will also be involved in a capstone design project.

For further information about the programs please refer to the Department's home page at [www.ee.ryerson.ca](http://www.ee.ryerson.ca).

### **ENGINEERING DESIGN PROJECT**

In the final year of studies, students must successfully complete an engineering design project in order to graduate. Engineering design projects must be in the field of Electrical Engineering, Computer Engineering, or Biomedical Engineering. Students can either choose a project from the published list by the Engineering Design Project coordinators or submit their own projects to the coordinators for an official approval. A faculty advisor will be assigned to each engineering design project to supervise and guide the project.

The Engineering Design Project consists of two one-term courses: ELE700/COE700 and ELE800/COE800. ELE700/COE700 consists of two essential components-lectures and laboratory. The lectures provide students with specific knowledge and skills on design and project management whereas the laboratory component allows

students to design, prove and verify the prototypes of their design. ELE800/COE800 provides the student with significant engineering design experience. Students will carry out detailed engineering design and implementation of the projects prototyped in ELE700/COE700.

All design projects must be completed and demonstrated operational. An oral presentation of the design project is required at the completion of the project. A final bound project report that conforms to the standards set by the Department of Electrical and Computer Engineering is required. Students must demonstrate their design project at the Open House in May. For more information on engineering design projects, visit [www.ee.ryerson.ca/~courses/ele700/coe700](http://www.ee.ryerson.ca/~courses/ele700/coe700)

### TRANSITION PROGRAMS

**First Year:** The objective of the first year transition program is to provide 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 to the second semester regular program courses. Students who have failed or are missing any one of 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: [BME 100](#), [CHE 200](#), [CHY 211](#), [CPS 125](#), [EES 512](#), [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 the transition program.

**Attention:** Students are also given the opportunity to complete the following courses through The Chang School of Continuing Education during both the Spring and Summer terms: CECN 801, CCMN 432, and appropriate lower- and upper-level liberal studies courses. **Only** these Chang School courses will be counted towards the student's full-time Engineering degree program.

At the completion of the transition program, successful transition program students will be promoted to the second year of the Electrical Engineering program, without losing an academic year.

**Second Year:** The second year transition program is intended to help students who have failed or dropped the second year Fall courses [MTH 312](#) and/or [ELE 302](#) to stay in-phase with their

classmates and still have a chance to be promoted to third year in the following academic year. This is accomplished by allowing such students to enroll in [MTH 312](#) and/or [ELE 302](#) in the Winter semester. The course [MTH 312](#) will replace [ELE 401](#) in the student's Winter timetable and [ELE 302](#) will replace [ELE 404](#). The student will then be able to take [ELE 401](#) and/or [ELE 404](#) in a condensed Spring/Summer semester (May-July).

**Third Year:** Similar to the second year transition program, the third year transition program is intended to help students who have failed or dropped the third year Fall courses [MTH 514](#) and/or [ELE 532](#) to still have a chance to be promoted to fourth year by allowing them to enroll in those courses in the Winter semester. The course [MTH 514](#) will replace [ELE 635](#) in the student's Winter timetable and [ELE 532](#) will replace [ELE 639](#). The student will then be able to take [ELE 639](#) and/or [ELE 635](#) in a condensed Spring/Summer semester (May-July).

#### **EARLY INTERVENTION PROGRAM**

Highly innovative and proactive retention strategies play an important role in helping students build the skills for success in a demanding engineering curriculum. Through the First-Year and Common Engineering Office, the Faculty of Engineering, Architecture and Science has incorporated the Early Intervention Program into the first-year engineering experience. At the semester's mid-point, students who are failing courses in their core curriculum are identified and encouraged to attend an interview with a member of our academic support team (First-Year and Common Engineering Program Director/Academic Advisor and/or the Student Counsellor). Together, they discuss options to help reduce the chances of academic failure.

#### **COMMUNICATIONS PROFICIENCY RESOURCE PATH**

All students admitted into first year engineering are required to write a mandatory Writing Skills Test (**WST**) or the diagnostic Ryerson Test of English Proficiency (RTEP). The **WST** is conducted annually during Orientation Week before the beginning of the first semester. Students who pass the **WST**, by achieving a grade of 'B' or higher, may enroll in their chosen Liberal Studies courses. Those students who do not pass the **WST** and those students who achieve a 'C-' level remedial pass on the RTEP, will be required to enroll in [LNG 100](#), [LNG 101](#), [LNG 200](#) or [LNG 300](#) courses as lower level liberal studies, depending on the outcome of the **WST** assessment. Students who do not pass the first **WST** or who achieve a 'C-' level remedial pass on the RTEP, will have three additional chances to pass the **WST**. The second test will be available in May following the completion of the First-Year Engineering curriculum. The third and

fourth **WST** will be conducted during the following Orientation Week, and in May of the following year, for the next cohort of engineering students.

Students who fail the second **WST** may benefit from a four to six-week intensive ESL/writing program, which will be available during the Spring term. **Students may not proceed into the third year of their engineering program without passing the WST.** Engineering students who need to further develop their language and writing skills, will have access to additional writing-intensive Liberal Studies courses. Students who are required to take the [LNG 100](#), [LNG 200](#), [LNG 300](#) or [LNG 101](#) are strongly encouraged and expected to take these writing-intensive humanities and social science courses. Detailed information is available from the First-Year and Common Engineering Office.

For additional information, please refer to the specific engineering program within this calendar or contact the First-Year and Common Engineering Office, Room ENG 377 Telephone: 416-979-5000 ext. 4261.

#### **OPTIONAL INDUSTRIAL INTERNSHIP PROGRAM (IIP)**

The Industrial Internship Program (IIP) provides full-time undergraduate students who have successfully completed three years of their program with the opportunity to obtain valuable work experience over an eight to sixteen month period. The IIP provides students with practical on-the-job training in a company or an organization. Qualified students take part in an application/interview process. The employer makes the final selection and an offer of employment through the Department's IIP office. The employer pays internship students. The internship placements start in May at the completion of the academic year. Upon successful completion of the internship in September of the following year, students return to Ryerson to complete their fourth and final year of studies.

Students must be in a clear academic standing in order to apply for IIP. This option adds one additional year to a student's academic program. During and at the end of the placement term, the performance of IIP students is evaluated by the employer and an evaluation report from the employer is sent to the Department. IIP students are required to submit a report for evaluation to the Department at the end of the internship. For further information on IIP, visit [www.ee.ryerson.ca/~iip](http://www.ee.ryerson.ca/~iip).

#### **HYDRO ONE CO-OP FELLOWSHIP PROGRAM**

In the face of an acute shortage of electrical power engineers across Canada, and around the world, Ryerson University and Hydro One have come together to create a work-study program aimed at

developing career-ready power engineers. The Hydro One Fellowship program, gives selected Ryerson Electrical Engineering students the opportunity to spend their summers as Hydro One summer development students, putting their skills to work while benefiting from additional hands-on training and a steady salary.

Students admitted to the newly created program gain experience in engineering, construction, planning, field services and management functions and receive in-house instruction delivered by Hydro One experts. Hydro One, the largest electricity delivery company in Ontario, is facing a potential technical workforce shortage as a significant number of retirements are forecasted in most utilities across Canada. Prolonged limited employment opportunities have contributed to a decline in electrical power engineering program enrolments. The Hydro One Fellowship is an innovative strategy on the part of the utility and Ryerson to address this critical employment dilemma. Upon successful completion of three summer work-terms, these students will receive a Hydro One Power Utility Program Certificate, in addition to their Bachelor of Engineering (B.Eng.) degree in Electrical Engineering from Ryerson.

One of the goals of the Ryerson University-Hydro One affiliation is to enhance the teaching of power engineering and utility-oriented courses at the undergraduate level. For the students, this new partnership represents the potential to have a summer job secured for every summer of their undergraduate studies. Hydro One will admit 10 first-year Electrical Engineering students every year. Students, who perform satisfactorily and successfully complete the Hydro One training program, will be invited back the following summers at the end of their second and third year of studies. Previously, the company had only employed students after the third year of their university studies, or after graduation. Now the Hydro One Fellowship Program gives students the added benefits of getting in the door early and making career decisions as they complete their education.

#### **OPTIONAL SPECIALIZATION IN MANAGEMENT SCIENCES**

Students who opt for this specialization will gain a solid foundation in management science courses; specifically tailored to better prepare them for a career in engineering or applied science management or for graduate studies in management related specializations (e.g. MBA). Students must complete all first year courses and obtain a CLEAR standing to be eligible to enroll in this specialization, students must maintain their CLEAR standing. Students' CGPA's will continue to be calculated based only on their required program courses and separate CPGA's will be computed for courses in the specialization. In order to have the specialization designation reflected on their degrees, students must successfully complete all six courses in the

specialization and achieve a CGPA of 2.0 or more before graduation. For more information, please see 2010-2011 Ryerson Full-time Undergraduate Calendar.

### **PROFESSIONAL ACCREDITATION**

The Canadian Engineering Accreditation Board (CEAB) of the Canadian Council of Professional Engineers (CCPE) accredits the Electrical Engineering and Computer Engineering programs offered by the Department of Electrical and Computer Engineering. The Biomedical Engineering program will receive its first CEAB accreditation visit in 2012. Like graduates from other accredited engineering programs, Ryerson graduates must acquire four years of relevant experience and successfully complete the professional practice and ethics examinations of the Professional Engineers of Ontario (PEO) before they can obtain a license to practice engineering in the province of Ontario.

### **GRADUATE PROGRAMS**

The Department of Electrical and Computer Engineering offers graduate degree programs in Electrical and Computer Engineering, leading to Master of Applied Science (M.A.Sc.), Master of Engineering (M.Eng.), and Doctor of Philosophy (Ph.D.) degrees. The main objective of these programs is to provide high quality graduate training in Electrical and Computer Engineering beyond the Bachelor's degree. The Department promotes a rigorous scholarly environment with strong cross-disciplinary links supporting advanced education, research and engineering applications. Faculty members in the Department of Electrical and Computer Engineering are actively conducting leading edge research in the following areas: (i) biomedical engineering, (ii) computer systems and integrated circuits, (iii) communications, (iv) power system engineering, and (v) signal and multimedia processing.

Admission requirements (Graduate Programs):

- Graduated from a four year approved undergraduate university program or equivalent.
- For the M.A.Sc., a minimum of a B+ standing or equivalent over all courses in the final half of the program. For the M.Eng., a minimum of a B standing or equivalent over all courses in the final half of the program, and for Ph.D., a minimum of an A- standing with proof of research skills.
- Applicants whose language of instruction during their undergraduate studies was not English must take a TOEFL test. The minimum score for the TOEFL test is 580/237, TWE 5, MELAB 90, IELTS 7.0.

For more information on graduate studies, visit [www.ryerson.ca/~eleceng/](http://www.ryerson.ca/~eleceng/)

### ACADEMIC STANDINGS

1. **CLEAR** - a cumulative grade point average (CGPA) of at least 2.00 (except where the student has violated an approved Department/School Standing variation or, while on Probation, 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.
2. **PROBATIONARY** - a cumulative grade point average (CGPA) of 1.00 to 1.99. Students with PROBATIONARY Standing may not continue their program studies until a Probationary Contract outlining a specific plan for studies and academic supports has been authorized by their Department/School, and signed by the student. Students who fail to have such a Probationary Contract by the last date to add courses for the semester will have their course enrollments and course intention requests cancelled for the term in question and will be **REQUIRED TO WITHDRAW (RTW)** from their program unless their Department/School determines otherwise.

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 2.00 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/School will result in the students being **REQUIRED TO WITHDRAW** from their Ryerson program.

3. **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 2.00 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.

Students REQUIRED TO WITHDRAW from their program will not be eligible for reinstatement in their program for 12 months. However, in cases where a further semester of study could result in a CLEAR Standing by the end of that semester, students may request the permission of their Department/School to continue to take courses on PROBATION in the immediately following semester (or a later semester with the permission of their Department/School). If the student fails to achieve a CGPA of 2.00 at the end of that semester, s/he will be REQUIRED TO WITHDRAW.

Students who have been REQUIRED TO WITHDRAW from a Ryerson program may not continue their program studies. Applications for reinstatement to the student's original program or for transfer to another program will be considered. In such cases a student may not return to studies until 12 months have elapsed following the REQUIRED TO WITHDRAW standing. No courses taken between when a student is REQUIRED TO WITHDRAW and reinstatement or transfer to another program will be granted Ryerson credit.

Applications for reinstatement will be considered by faculty and/or program admission committees based on criteria, assessments and/or procedures developed by the faculty or program in consultation with the Registrar's Office. Past academic performance and space availability will normally be considerations. Students who are reinstated to their program will be reinstated on PROBATION, and will be required to have a Probationary Contract.

Some programs may reinstate students with a Probationary Contract which may significantly restrict course load and require successful completion of specific program courses. Programs may also specify grades which must be achieved. Successful completion will allow the student to continue on PROBATION (or CLEAR Standing if a CGPA of 2.00 or higher is achieved). Students who are unsuccessful will be permanently withdrawn from their program. Normally a student may not receive more than one Probationary Contract of this sort.

4. **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 with a PERMANENT PROGRAM WITHDRAWAL standing may apply to a different program for the Fall semester of the following calendar year.

5. **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 Department/School to make arrangements for reinstatement.

#### **REQUIRED TO WITHDRAW STUDENTS SEEKING RE-INSTATEMENT**

##### **Students Required to Withdraw after September 2008**

Students who have been REQUIRED TO WITHDRAW (RTW) Standing from a Ryerson program may not continue their program studies and are not be eligible for reinstatement in their program for 12 months.

Reinstatement will be considered by faculty/program committees based on criteria, assessments and/or procedures developed by the School or Department. Past academic performance and space availability will normally be considerations. Students who are reinstated to their program will be placed on PROBATION and will be required to have a Probationary Contract authorized by their program School or Department prior to commencing studies.

No courses taken at Ryerson (or elsewhere) between when a student is RTW and reinstatement or transfer to another program will be granted Ryerson credit.

Students seeking reinstatement **within 24 months** of their RTW date must contact their program School or Department directly. Students seeking reinstatement **after 24 months has elapsed from their RTW date** must apply for reinstatement using a Ryerson online application form available at: [www.ryerson.ca/undergraduate/admission/apply/forms](http://www.ryerson.ca/undergraduate/admission/apply/forms). Applications will be subject to space availability, admission deadline dates and procedures determined by Undergraduate Admissions and Recruitment.

### **UNDERGRADUATE ACADEMIC CONSIDERATION AND APPEALS**

The policy is available in its entirety at [www.ryerson.ca/senate](http://www.ryerson.ca/senate) and at [www.ryerson.ca/essr/appeals](http://www.ryerson.ca/essr/appeals) and in the [Student Guide](#).

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 Student Guide, Senate and Enrollment Services and Student Records websites for detailed information on the various academic considerations that may be requested; necessary documents such as appeal forms, medical certificates and forms for religious accommodation; and procedural instructions. Information is also available from the Departments and Schools, Dean's Offices and the Secretary of Senate.

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.

### **STUDENT CODES of ACADEMIC and NON-ACADEMIC CONDUCT**

Information on Academic Integrity can be found at [www.ryerson.ca/academicintegrity](http://www.ryerson.ca/academicintegrity).

**Please refer to the complete Ryerson University Student Code of Academic Conduct and the Student Code of Non-Academic Conduct at [www.ryerson.ca/senate](http://www.ryerson.ca/senate).**

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 community must exhibit integrity in their teaching, learning, research, evaluation, and personal behaviour.

The Ryerson University Code of Academic Conduct applies to the academic activities, both on and off campus, of all students enrolled in courses at the University. Ryerson students are responsible for familiarizing themselves with this policy.

The Ryerson Student Code of Academic Conduct 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.

The University recognizes the gravity of a charge of academic misconduct and is committed to handling the disposition of such charges in a respectful, timely and thoughtful manner. The University will apply this policy in a manner that is consistent with the principles of natural justice and the rights of students to a timely and fair assessment of their academic performance.

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.

Instructors<sup>1</sup> and staff members have a responsibility to take action if they suspect either Code of Conduct has been violated. The procedures described in the Codes have been designed to provide a fair process in such matters. It is imperative that all members of the community abide by the Codes in order to maintain an environment that is consistent with the values and behaviour we espouse.

<sup>1</sup> For the purposes of this document, 'Instructor' shall mean any person who is teaching a course at Ryerson.

### **COURSE MANAGEMENT OVERVIEW**

Students will be provided with a course outline by, or at the first meeting of every course. The outline lists basic course information, course description, texts and readings, scheduled class and out-of-class activities, other course issues, course variations, relevant

department/school and University policies, and the evaluation schedule. This outline represents the commitment to the provision of a shared educational experience. Students are responsible for knowing what is presented in the course outline.

Please consult the [Ryerson Student Guide](#) for details. The complete Course Management policy is available at [www.ryerson.ca/senate/policies](http://www.ryerson.ca/senate/policies).

### **FACULTY/COURSE EVALUATION**

Faculty / Course Survey is used to obtain student opinion about teaching performance of instructors and course quality. The evaluation is carried out in week 10, 11, or 12 of the semester. The teaching performance of instructors and the course quality are evaluated by students in response to the following questions

1. The faculty member presents the course material in a well-organized manner.
2. The faculty member deals fairly with the students in this course.
3. The faculty member is available during posted office hours.
4. The faculty member responds clearly to student questions.
5. The faculty member demonstrates an enthusiasm for the course material.
6. The faculty member treats the students with respect.
7. Rate the level of the course material.
8. Rate the amount of material in this course.
9. The tests and other evaluations in this course provide a good measure of student accomplishment.

### **COURSE REPEATS**

If you fail a required course for the third time, you will be assigned an Academic Standing of **PERMANENT PROGRAM WITHDRAW**, and will be ineligible to continue your program. The grade earned for a repeated course is substituted for the previous grade in calculating subsequent grade point averages even if the later grade is lower, but both attempts are recorded on the transcripts. A passing grade in either of the attempts will be used to fulfill graduation requirements. No course can be repeated more than twice. (i.e., enrolled initially, repeated once, repeated twice = three enrollments).

For more detailed information on course repeats, visit <http://www.ryerson.ca/studentguide/AcademicMatters.html>

### **COURSE SUBSTITUTION / COURSE DIRECTIVE**

A Course Substitution/Course Directive 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. The substitute course must be of equal value (course weight) and same level of difficulty and can only be used once towards graduation requirements. Substitution forms are available online at [www.ryerson.ca/forms](http://www.ryerson.ca/forms).

Approval, by way of signatures from both the teaching and program departments is required before students can submit the form to the Curriculum Advising Office c/o Enrollment Services and Student Records. Curriculum Advising will assess the suitability of the substitution only and authorizations will be recorded. Approved Course Substitutions/Course Directives will be reflected on Advisement Reports available on [RAMSS](#). Students will be notified by Ryerson e-mail if requests have been denied.

**PLEASE NOTE: Forms should be filled in, signatures obtained, and approvals received BEFORE the substituting course is taken.**

#### **EXAM POLICY AND SCHEDULE**

You are responsible for making sure you are in the right place at the right time to write your exam. You must be prepared to identify yourself with your Ryerson Photo ID card at anytime during the examination. If you discover a conflict in your examination schedule, report it immediately to the program department. The pulling of fire alarms and/or notification of a false bomb threat will result in penalties as per the Academic Code of Conduct.

Refer to Ryerson website [www.ryerson.ca](http://www.ryerson.ca) or [www.ryerson.ca/senate](http://www.ryerson.ca/senate) for Academic Code of Conduct and Non-Academic Code of Conduct. See Ryerson Student Guide for rules for proper conduct in exams and penalties for misconduct. See website for Religious Observance policy.

Examination schedules are available **online only**, generally the first week of November for the fall semester and early March for the winter semester. [www.ryerson.ca/rr/observemain.htm](http://www.ryerson.ca/rr/observemain.htm)

#### **GRADED COURSE PERFORMANCE DESIGNATIONS FOR THE FACULTY OF ENGINEERING AND APPLIED SCIENCE**

Performance Discription	Letter Grade	Conversion Range Percentage Scale to letter grades	Ryerson GPA
Excellent	A+	90 – 100	4.33
	A	85-89	4.00
	A-	80-84	3.67
	B+	75-79	3.33

Good	B	70-74	3.00
	B-	66-69	2.67
	C+	63-65	2.33
Satisfactory	C	60-62	2.00
	C-	57-59	1.67
	D+	54-56	1.33
Marginal	D	52-53	1.00
	D-	50-51	.67
Unsatisfactory	F	0-49	0

Final academic performance in each course is recorded as one of the above letter grades at the discretion of the teaching department; performance on term work or specific assignments may be marked on a numeric scale. When a numeric scale is used, it will result in a traditional percentage scale with the ranges of conversion to letter grades as shown in the *Ryerson Full-Time Undergraduate Calendar*.

#### LETTERS OF PERMISSION

Students who wish to take courses at another accredited post-secondary institution for credit towards their Ryerson Degree or Certificate must apply for a Letter of Permission prior to enrolling to ensure that the course(s), if completed successfully, will be credited towards their program. Applications for Letters of Permission are available online at [www.ryerson.ca/forms](http://www.ryerson.ca/forms).

Students are responsible for making formal application to the institution where they intend to study. Upon completion of the course(s), students are required to complete a Ryerson Application for Transfer Credit (also available online) and provide an officially certified transcript of final results. Transfer credit is recorded on the Ryerson academic record as CRT and is not included in the calculation of the student's Grade Point Average. The fee for each Letter of Permission is \$40 (subject to change). Apply early.

**No more than a total of 50 percent of a program's requirements may consist of credits/advanced standing, (transfer credits, challenge credits or credits granted on a Letter of Permission).**

Transfer credit is dependent upon achieving a grade of 'C' or better, where 'C' equals 60 percent or higher from a University or 'B' or better, where 'B' equals 70 percent or higher from a Community College.

**NOTE:** 'Special Students' and students who have a SUSPENDED standing are not eligible to apply for Letters of Permission.

## LIBERAL STUDIES POLICY

Students must complete Liberal Studies 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 and cultural context in which graduates will work as professionals and live as educated citizens.

These studies are offered at two levels: the Lower (LL), which are normally taken during the first two years of a four-year program, and the Upper (UL), which are normally taken during the last two years. The courses offered at each Level are listed in Table A and Table B.

**The required number of lower level liberal studies courses, and of upper level, varies according to program, and is specified in the program overview of each program published in the Calendar.**

**NOTE: Certain courses listed in Table A and Table B** due to their close relation to the professional fields, **cannot be taken for Liberal Study credit** by students in some programs. A list of these programs and the restricted courses is provided following Table A and Table B in this calendar.

**Students are responsible for making appropriate course intentions. They should consult the descriptions of their programs published in the Calendar with care.**

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.

## MEDICAL DOCUMENTS

Students who are unable to write their midterms or final exams or who have missed assignment deadlines due to illness must:

1. Inform their instructor of the illness.
2. Provide a completed medical form available online at [www.ryerson.ca/forms](http://www.ryerson.ca/forms) to the main office of the Department of Electrical and Computer Engineering within (3) working days of the test or exam for academic consideration on medical grounds. Documents not submitted within this period will only be accepted under exceptional circumstances. The physicians contact information should be stamped on the form. All medical documentation will be verified. A Ryerson Medical Certificate or a letter on letterhead from a physician or other relevant health professional with the student declaration portion of the Medical Certificate completed is required for an appeal on Medical

grounds.

### **MINORS POLICY**

Students at Ryerson may earn a Minor outside their core program/major/option, and primarily, outside the professional category of courses in their program. A Minor is a concentration of six or more, single-term courses or the equivalent with a coherence based upon discipline, theme and/or methodology. Visit <http://www.ryerson.ca/calendar/2010-2011> minors policy.

### **TRANSFER TO ANOTHER RYERSON PROGRAM**

Students wishing to transfer to another Ryerson program are advised that they can have formal status in only one Ryerson degree or diploma program (including Special Student studies) at a given time. When a student applies for and accepts the offer of a transfer from one Ryerson program to another, the student forfeits his/her status in the original program. Students must obtain written permission from the Office of Admissions/Liaison/Curriculum Advising to transfer from one Ryerson program to another.

### **TRANSFER CREDITS**

Students eligible for/planning to apply for transfer credit for courses completed at accredited post-secondary institutions should ensure that they commence the collection of officially certified transcripts, course descriptions, and teaching outlines as early as possible. These should be submitted directly to the Office of Admissions / Liaison / Curriculum Advising at the time of application. Application forms for transfer credits are available from the Office of Admissions/Liaison/Curriculum Advising. Students must complete the "Transfer Credit Application" form for courses they have previously taken at the post-secondary level and that were not assessed/used as part of the Offer of Admission. The application must include officially certified transcripts, course descriptions, and teaching outlines.

### **BURSARIES**

Bursaries are awards given primarily on the basis of financial need and require satisfactory academic performance. Bursary details are available after the first week of classes in September from the Student Financial Aid Office or visit web site [www.ryerson.ca/financialaid/](http://www.ryerson.ca/financialaid/)

### **E-MAIL**

As per policy 157 [www.ryerson.ca/senate](http://www.ryerson.ca/senate) 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 E-mail, RAMSS, my.ryerson.ca portal and learning system, and other systems by which they will receive official University communications.

### **FEES**

Students are required to pay their full academic year's fees prior to the start of fall classes. Students have the option of paying 60% of the total fees plus all applicable special and departmental ancillary fees prior to the start of fall classes, with the remainder including late fees due by the start of winter classes. Students may be dropped from their courses and/or program if fees are not paid, or suitable payment arrangements made, by the appropriate fall and winter deadline dates. Please see the *Ryerson Full-Time Undergraduate Calendar* for more information on fees.

### **CONVOCATION**

Students enrolled in their final course, year or semester of their program must apply to graduate by the appropriate deadlines. Information regarding dates, times and procedures for Convocation Ceremonies are available on Ryerson website at [www.ryerson.ca/convocation/](http://www.ryerson.ca/convocation/) **Applications to graduate will not be accepted beyond the Deadline dates.**

### **IRON RING CEREMONY**

The ring symbolizes the pride, which engineers have in their profession, and serves as a reminder to the engineer's obligation to live by a high standard of professional conduct.

Fourth year students who have applied to graduate and are not missing any courses are eligible to participate in the Iron Ring Ceremony. Students graduating in the spring are eligible to participate in the Iron Ring Ceremony, which will be held Sometime **in March 2011**. Student representatives will be visiting fourth year classes following Reading Week to provide detailed instructions for participation.

### **OSAP**

The Ontario Student Assistance Program is available to full time Ryerson students who meet the eligibility requirements. Applications are available online. Your application must be submitted to the Student Financial Assistance Office, located at POD-59. This office administers a number of financial assistance programs.

### **RAMSS**

Ryerson's Administrative Management Self Service (RAMSS) is a one-stop shop for just about everything you need to do online, such as

viewing your academic, financial and personal information at Ryerson. Visit [www.my.ryerson.ca](http://www.my.ryerson.ca) portal to:

- View your class schedule
- Check for class availability
- Add, drop, and swap classes
- Update your address
- View your Financial student account
- View your grades and academic standing
- View your degree progress report

### **SCHOLARSHIPS & AWARDS**

Ryerson offers many scholarships and awards to new and returning students. Information on awards and scholarships are available from the Financial Aid and Awards Office. Students who have a yearly GPA of 3.50 with at least 80% course load per semester are eligible for the Dean's List. See the home page of Ryerson University for detailed listing of awards [www.ryerson.ca/financialaid/](http://www.ryerson.ca/financialaid/)

### **SIGNIFICANT DATES**

Please visit <http://www.ryerson.ca/calendar/2010-2011> for 2010-2011 Significant dates.

## **LABORATORY SAFETY POLICY**

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### **GENERAL SAFETY PRACTICES IN LABORATORY**

The Laboratories in the Department of Electrical and Computer Engineering provide students with the best opportunity to gain practical knowledge. Students should make themselves aware of the possible hazards that may be present in the laboratory. Following are some general guidelines that can be used to reduce the risk of injury caused by laboratory hazards.

1. Know what you are working with and how to use it safely. Before beginning any new experiment, find out the potential hazards involved and the appropriate safety precautions to follow.
2. Perform only appropriate experiments, and be sure you understand the procedures involved before you begin. If anything unexpected, dangerous, threatening, or unmanageable happens, immediately notify your instructor or the lab staff personnel.
3. Use fume hoods or other necessary engineering controls when handling toxic materials.
4. Wear the proper protective clothing and equipment for each job.

This should include eye protection and may include:

- a. Face shields or safety glasses. Students are required to provide their own safety glasses.
  - b. Lab. coats or aprons. Students are required to provide their own lab coats and gloves to protect the hands from sharp edges, chemicals or hazardous materials.
  - c. Hearing protection.
5. Students who are not appropriately attired will not be allowed to perform experimental procedures. Clothing that unduly exposes limbs to splash or drop hazards should not be worn i.e. Shorts, halter tops, sandals and open-toed shoes. Loose clothing and long hair should be confined to avoid contact with hazardous materials, equipment, rotating machinery, or heat sources such as soldering irons or open flame.
  6. Contact lenses can be a serious problem in the laboratory, as they can trap chemicals next to the eye, and are difficult to remove in case of a splash accident. We strongly suggest that they not be used when in lab.
  7. Never eat, drink, smoke or chew gum around chemicals or hazardous materials, and always wash hands thoroughly before touching food or cigarettes. Food and drink (including water) are not to be brought into the lab at any time.
  8. Keep work areas clean and free from obstructions. Backpacks and coats should be put away.
  9. Cleanup should follow the completion of any experiment, return leads etc. to wall racks.
  10. All chemical containers should be correctly and clearly labelled.
  11. Be familiar with emergency procedures; know the location of, and how to use, the nearest emergency equipment. Note the locations of fire extinguishers. (These should only be used on small fires, make sure the extinguisher is rated for type of fire.) Also note the location of fire alarm pull boxes. Upon hearing a fire alarm, all persons must leave the building. Leave quickly, make sure doors are closed. Don't use the elevator during a fire.
  12. Follow prescribed waste disposal procedures; if unsure, call Karen Terry at ex 6356 for advice on hazardous waste disposal.
  13. Be alert to unsafe conditions and call attention to them so corrections can be made as soon as possible. Report any accident, unusual occurrence, or injury immediately. First Aid Kit for minor injuries is located in ENG418. All injuries should be checked by Health Services.
  14. Remove all broken glass from work area or floor as soon as possible. Never handle broken glass with bare hands (use dustpan and broom). Place broken glass in cardboard box and mark as such. Notify lab staff for disposal.
  15. Spills and leaks must be cleaned up without delay. Check with the lab staff for help in cleaning up special situations.

16. Students may not work alone in labs.
17. In the event of a medical or personal emergency contact Ryerson Security. Dial "80" from any office phone OR Press the **RED "EMERGENCY"** button on any pay phone on Campus. To contact Police, Fire, Ambulance, dial **911 for "EMERGENCY"** from any pay phone on Campus. Internal office phones may require you to dial 9 911. If you dial 911 first, you should also notify Security, they may be able to respond faster and they can direct Emergency Personal to the scene.
18. Hazardous materials likely to be found in the labs. Lead/tin solder, solder flux remover, humidity calibration salts and circuit board fabrication chemicals such as developer, ammonium persulphate etch, cold tin plating solution. Read the Material Safety Data Sheet (MSDS) before handling/using. MSDS's can be found in ENG308.

### **ELECTRICAL SAFETY**

There is always a potential danger of electric shock or fire wherever there are outlets, plugs, wiring or connections, as there are in all labs. In addition to the usual electrical hazards, some labs have high voltage electrical equipment that poses an even greater potential problem. Students should be extra careful with this equipment, and should learn how to disable the power source in an emergency. The following are some **do's** and **don'ts** for working with and around electricity.

1. Don't work with electricity if your hands, feet, or other body parts are wet or when standing on a wet floor.
2. Inspect electrical equipment (with power off and unplugged) for frayed cords and damaged connections -- if any are found, do not use the equipment -- report it to the appropriate person for repairs.
3. Never attempt to repair electrical equipment yourself. It must be done by qualified lab staff.
4. If you receive even a mild shock from a piece of equipment, turn it in for repair immediately.
5. Do not use or store highly flammable liquids near electrical equipment – some materials, such as ether, can be ignited by sparks from electrical equipment.
- 6. Use 3-prong plugs for 3-prong receptacles. Never break off or alter a 3-prong plug to fit into an outlet.**
7. Extension cords should not be used in place of permanent wiring -- their use should be temporary and they should not be run under doors, across walkways, through windows or holes in the wall, around pipes or near sinks.
8. Don't overload circuits by using power strips or multiple outlets on regular sockets.

9. **Don't remove or alter safety features of high voltage equipment** -- it is there to protect you.
10. Low Voltage Labs (DC 0 to 50V, AC 120V)
  - a. Make sure the power is off when wiring or making changes to circuits.
  - b. Make sure instruments are set on proper range for the desired type of measurement before energizing circuits.
  - c. Do not short outputs of power supplies or function generators.
  - d. Make sure components used are of a rating that will withstand applied current and voltage.
  - e. Replace blown fuses with the proper ones specified by type and rating.
11. High Voltage Labs (DC 0 to 2000V, AC 1 Phase 120V, 3 Phase 208-600V)
  - a. High Voltage is found in rooms EPH120 & ENG327, ENG310, ENG309, and ENG308.
  - b. Lab benches in ENG308. 3 PH 208 Volts at 15 Amps. power is on the benches and live at all times.
  - c. To turn main power on and off in labs locate the mains panel and appropriate circuit breakers in each lab before starting any work.
  - d. When making connections to benches or panels a circuit breaker of suitable rating and type must be used between power outlet and your circuit.
  - e. Make sure the power is off when wiring or making changes to circuit.
  - f. Make sure instruments are set on proper range for the desired type of measurement before energizing circuits.
  - g. Make sure components used are of a rating that will withstand applied current and voltage.
  - h. Replace blown fuses with the proper ones specified by type and rating.
12. In the event of electrical shock.
  - a. Turn off lab power immediately. Call 911 and Security "80"
  - b. Do not touch the victim until the power has been shut off.
  - c. Do not remove the victim from the electric source until the power has been shut off.
  - d. If you cannot shut off the power, use an insulator such as a dry rope, cloth or broom handle to drag the person away from the live wire (CPR to be performed by qualified personal only)
  - e. If there is no heartbeat and no breathing, do CPR. Get Emergency Care.
  - f. If there is a heartbeat, but no breathing, immediately start rescue breathing. Get Emergency Care.

- g. Check for burns and treat as third degree burns. Get Emergency Care.
  - h. If the person is breathing, put them in the recovery position. Get Emergency Care.
13. In the event of a mild shock, and the following symptoms are observed, see a doctor: Heart skipping beats, fever or coughing up sputum.

### **LABORATORY ACCESS**

Third and fourth-year undergraduate students will have an ACCESS CARD issued by the Department to specific laboratories. Graduate Students are also assigned an ACCESS CARD to specific laboratories and his/her research offices. There will be \$20 deposit for each ACCESS CARD, refundable when the ACCESS CARD is returned to the Department. There will be no refund issued for access cards that are lost, stolen or broken.

## **STUDENT REPRESENTATION COMMITTEES**

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### **SENATE**

The Senate is the academic policy making body of Ryerson University. The Senate consists of 51 elected representatives of the faculty, librarians, students and alumni, and 18 *ex-officio* members of the administration, including the Chancellor. Senate is chaired by the President. Information on the Senate including elections, nominations etc. see [www.ryerson.ca/senate](http://www.ryerson.ca/senate)

### **DEPARTMENTAL COUNCIL**

Department Council is made up of faculty and student representatives from the Department of Electrical and Computer Engineering. It is responsible for developing and recommending policy relevant to the department. Department Council approves program and curriculum changes before presenting them to the Academic Council. Students interested in being a member of Department Council should contact the department administration.

### **RYERSON STUDENTS' UNION**

The Ryerson Students' Administrative Council is the students' union for Ryerson's full-time undergraduate and graduate students. It offers many services to help students to stay healthy and safe, to make university life easier. It holds events and activities of both social and educational nature. RSU is students working together.  
(Located in the Student Centre at 55 Gould St. 416-979-5255 or 416-979-5000 Ext.7508, [www.rsuonline.ca](http://www.rsuonline.ca))

## **RYERSON ENGINEERING STUDENT SOCIETY (RESS)**

*Ryerson Engineering Student Society (RESS)* represents and acts as an advocate for all engineering students at Ryerson. It is an association of members who are full time, undergrad students enrolled in engineering programs within the Faculty of Engineering and Applied Science at Ryerson. Membership terminates upon graduation, suspension, withdrawal or expulsion from the University. See website: [www.ress.ca](http://www.ress.ca) for upcoming events, news and announcements. RESS is located at Room KHE 123

## **PROGRAM COURSE UNION**

It is a student-run organization geared to the needs of the students. Each program has a course union; it provides services like peer support, exam/test bank and assists students. Course Unions advocate on your behalf, build connections to your industry, and plan social and educational events. For more information visit <http://www.ee.ryerson.ca/~recess>.

## **IEEE STUDENT BRANCH**

*(Located in the George Vari Engineering Building room ENG110)*

The IEEE (The Institute of Electrical and Electronic Engineers) Student Branch of Ryerson University was founded on January 2<sup>nd</sup>, 1963 by students from the Department of Electrical and Computer Engineering, Ryerson University. IEEE is the world's largest professional organization consisting of over 300,000 members. This extensive network consists of professionals within the field of electrical and electronic engineering. Over 40,000 members are students working towards degrees within the electrical and computer engineering field. This IEEE student branch was formed to serve the student body currently completing the Bachelor of Engineering degree in Electrical Engineering and Computer Engineering. This branch is operated by an executive committee elected by IEEE student members. IEEE provides members with the following services

- Weekend lab access.
- Access to old tests
- Provide seminars and technical presentations on up and coming technologies and innovative academic research. Guest speakers from big companies such as Motorola, Nortel Networks, and IBM to name a few are invited to present new and exciting technological advances and solutions.
- Access to the student Branch's Book Library
- Provide drinks and candies for a small donation
- Provide electronic components at minimal cost
- Access to Microwave and Toaster Oven
- Serve as a liaison between faculty and students
- Our Online Exam Bank

- Seminars and workshops on various technical and state-of-the-art topics.

For information on IEEE student branch, visit  
<http://www.ee.ryerson.ca/~ieee/>

### **BMES STUDENT CHAPTER**

The BMES (Biomedical Engineering Society) Student Chapter was established at Ryerson University in 2010, and is the first student branch of its kind geared specifically toward Biomedical Engineering. BMES itself was established in 1968 and is a full-service professional society consisting of students, university professors, industry professionals, doctors, and pharmaceutical and prosthetic companies. As a Chapter member you get the chance to:

- Meet and network with professionals in the field
- Travel to annual student conferences
- Participate in competitions, plant tours, social events, meetings and lectures
- Expose your resume to potential employers
- Access to a wide range of job opportunities
- Gain access to six Biomedical Engineering journals
- Become eligible for student awards
- Participate in development and leadership workshops
- Get involved with the society on a national and international level

If you are interested in becoming a member, or have any questions, please feel free to send us an email at [bmes@ee.ryerson.ca](mailto:bmes@ee.ryerson.ca).

### **WOMEN IN ENGINEERING**

Ryerson's Women in Engineering (WIE) is an award-winning program dedicated to providing information for students considering engineering as a career, and promoting a friendly and supportive environment in which women can pursue their engineering studies. We have a number of programs and events scheduled for, including:

- Discover Engineering Summer Camp for young women in High School (one week camps held throughout July and August )
- Discover Engineering Career Conference for young women in High School (one day event)
- Discover Engineering Girl Guide Conference for Toronto area Girl Guides (one day event)
- Discover Engineering High School Workshops (on-going throughout the school year)
- Mentor-Link mentoring program pairing 3<sup>rd</sup>/4<sup>th</sup> year female

- engineering students with women in engineering careers
- Student-Link mentoring program pairing 1<sup>st</sup>/2<sup>nd</sup> year female engineering students with 3<sup>rd</sup>/4<sup>th</sup> year female engineering students
- “Lunch and learn” sessions with presentations by women engineers

If you are interested in participating in any of these programs/events, and are not currently on the WIE student list, please send an email to: [womeng@ee.ryerson.ca](mailto:womeng@ee.ryerson.ca). For more information on Ryerson’s Women in engineering programs, visit [www.discoverengineering.ryerson.ca](http://www.discoverengineering.ryerson.ca)

## STUDENT SERVICES

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### ACADEMIC INTEGRITY

Intellectual freedom and honesty are fundamental to the sharing and development of knowledge. Ryerson University is committed to these principles and places a high value on Academic Integrity. As a member of the Ryerson community and a future Engineer, it is your responsibility to understand and adhere to Ryerson’s Academic Integrity policy. Academic misconduct can take many forms, including copying assignments and lab reports from published sources, websites, or peers; cheating on tests and exams; and handing in the same assignment more than once. Please visit it early in your academic career and make sure you understand what academic misconduct means and how to avoid it: <http://www.ryerson.ca/academicintegrity/>

### ACCESS CENTRE

(VIC21 & JOR 300, 416-979-5290, [www.ryerson.ca/accesscentre](http://www.ryerson.ca/accesscentre))

The Access Centre assists students who are deaf or hard of hearing; blind or partially sighted; have a physical, medical, psychiatric, or learning disability; or have any other disability that requires adaptations. The Centre provides counselling, test and examination adaptations, computer-equipped exam and study rooms, assistive listening devices for on-campus and personal use, computer lab with adaptive technology, advocacy services, individual needs assessment, access to a wide variety of technical devices and other services available based on individual needs.

### CAREER CENTRE

(JOR 400, 416-979-5177, [www.ryerson.ca/career](http://www.ryerson.ca/career))

The Career Centre offers employment and career-related services including: job-search skills activities, job postings, a Career Resource Library, computer access to Campus WorkLink, and individual

counselling. It is open year-round to Ryerson students.

### **CRISIS TEAM**

The team provides a range of emergency services to students. Individual counseling, post-traumatic group support and other campus related services are provided. (JOR 402, 416-979-5195) [www.ryerson.ca/counselling/resources/crisisservices/](http://www.ryerson.ca/counselling/resources/crisisservices/)

### **CAREER AND EDUCATIONAL COUNSELLING**

The Faculty of Engineering Architecture and Science employ its own counsellors. They are seconded from the Centre for Student Development and Counselling but housed within Engineering and Science. Students can see Shannon Robinson, ENG352, 416-979-5000 ext. 4262 [s1robins@ryerson.ca](mailto:s1robins@ryerson.ca)

Students may also seek advice from the Centre for Student Development and Counselling in JOR 402, which provides a wide range of free services to students covering areas on development, personal, and transition issues.(416-979-5195, [www.ryerson.ca/counselling](http://www.ryerson.ca/counselling))

### **ENGLISH LANGUAGE SUPPORT (ESL)**

English Language Support (ELS) provides non-credit programs to Ryerson students whose first language of academic study is not English.

Location: Victoria Building (VIC-B17), Telephone: (416) 979-5000, ext. 4064, E-mail: [els@ryerson.ca](mailto:els@ryerson.ca) Website: [www.ryerson.ca/els](http://www.ryerson.ca/els)

### **INTERNATIONAL STUDENTS**

(POD-61, 416-979-500 ext. 6655 [www.ryerson.ca/internationalservices](http://www.ryerson.ca/internationalservices) )

International Services for Students (ISS) provides support services for registered international students and promotes work-study abroad opportunities and international awareness to all students.

### **LEARNING SUCCESS CENTRE**

The Learning Success Centre (LSC) is an academic resource for all students on campus. Services include:

**Live Workshops:** Led by a Learning Strategist, these live 50 minute seminars are offered on campus on a wide range of topics including: Group Work, Time Management, Discovering Your Learning Style, Improving Your Mental Focus and much more. Students must enroll online to reserve a spot.

**Online Seminars:** Created by Learning Strategists, these online seminars are designed for individuals who are unable to attend live workshops. Once students enroll in the service, online seminars are

available 24/7 on their Ryerson Blackboard page. Online seminar topics include Test Preparation & Critical Reading.

**Learning Groups:** Groups are facilitated by a Learning Strategist, and meet for six hours over three or four weeks. These small, interactive groups allow students the opportunity to explore their own learning needs and goals while impacting the topics and focus of the four sessions.

**Tutoring:** Two different tutoring services are housed at the Learning Success Centre - 'Resource Centres' and the 'Online Tutor Registry'. Resource Centres are sponsored by some Faculties. The service is free and is provided on a drop-in basis. The Tutor Registry assists students seeking academic help for specific courses by providing contact information of registered tutors. Tutors are Ryerson students who have earned a 'B+' or higher in the course for which they tutor, and who have voluntarily registered with us.

Location: Victoria Building (VIC-B15), Telephone: (416) 979-5000, ext. 7350, E-mail: [lss@ryerson.ca](mailto:lss@ryerson.ca), Website: [www.ryerson.ca/studentsservices/learningsuccess](http://www.ryerson.ca/studentsservices/learningsuccess)

### **LIBRARY**

(LIB, 2<sup>nd</sup> floor, 416-979-5055, [www.ryerson.ca/library](http://www.ryerson.ca/library))

Ryerson Library is the primary source of information. Students can use the range of facilities and borrowing privileges offered by the Library. Reference staff is available for assistance on the second floor during the hours of library operation.

### **OFFICE OF THE OMBUDSPERSON**

(Ombudsperson: Nora Farrell, Oakham House 416-979-5000 ext.7450 [www.ryerson.ca/ombuds](http://www.ryerson.ca/ombuds))

The Ombudsperson offers advice and assistance with problems unresolved through regular University channels. The Office of the Ombudsperson can recommend changes in academic or administrative procedures where it is justified.

### **RYERSON HEALTH CENTRE**

(KHW181, Kerr Hall West, 416-979-5070) [www.ryerson.ca/healthservices](http://www.ryerson.ca/healthservices)

The Ryerson University Health Center is a medical clinic staffed by 4 physicians, a lab technician and receptionist. They provide a wide range of medical services to the Ryerson community.

### **RYERSON HEALTH PROMOTION**

Ryerson Health Promotion aims to promote the Health of the Ryerson University community through education, advocacy, and capacity building. Workshops and outreach activities are provided by Peer Health Promotion teams regarding nutrition, active living, smoking cessation, alcohol and drug awareness, sexual health and mental

health. Look out for our events through the year and/or join one of our teams as a volunteer.

**Health Promotion Nurse:** Telephone 416-979-5000, ext. 4295, Location: JOR-05A, E-mail: [healthy@ryerson.ca](mailto:healthy@ryerson.ca), Website: [www.ryerson.ca/student-services/health-promotion](http://www.ryerson.ca/student-services/health-promotion)

### **TRI-MENTORING**

Provides support to culturally and linguistically diverse students with adjustment to university and the world of work. First year students are mentored by upper year students. Once in the program second and third year students continue to develop leadership skills and participate in mentoring activities. Fourth year students are partnered with a career mentor who is working in their field of study and who will provide guidance and networking in the job search.

Location: Podium (POD-50), Telephone: (416) 979-5000 ext. 6634, E-mail: [tmentor@ryerson.ca](mailto:tmentor@ryerson.ca), Website: [www.ryerson.ca/trimentoring](http://www.ryerson.ca/trimentoring)

### **WRITING CENTRE**

(LIB-266A, 416-979-5000 ext. 7192, <http://www.ryerson.ca/writing-centre/>) The Writing Centre offers free one-on-one peer tutoring to assist students to improve their writing to meet university standards. It offers sessions and strategies of organization, writing and revision.

## USEFUL INFORMATION AT A GLANCE

Academic Information:	<a href="http://www.rverson.ca/calendar">www.rverson.ca/calendar</a>
Access Centre:	<a href="http://www.rverson.ca/accesscentre">www.rverson.ca/accesscentre</a> VIC Bldg. L-L, Room #21 & POD63E, 416-979-5290
Appeal Forms:	<a href="http://www.rverson.ca/essr/appeals/html">www.rverson.ca/essr/appeals/html</a>
Bursaries:	<a href="http://www.rverson.ca/financialaid/bursary/ryebur.html">www.rverson.ca/financialaid/bursary/ryebur.html</a> POD59, 416-979-5000 ext. 7298
Career Centre:	<a href="http://www.rverson.ca/career">www.rverson.ca/career</a> JOR400 416-979-5177
Counselling Centre:	<a href="mailto:devcoun@rverson.ca">devcoun@rverson.ca</a> , <a href="http://www.rverson.ca/counselling">www.rverson.ca/counselling</a> JOR 402, 416-979-5195
Course Management Policy:	<a href="http://www.rverson.ca/senate/policies">www.rverson.ca/senate/policies</a>
Crisis Team:	<a href="http://www.rverson.ca/counselling/crisisservice">www.rverson.ca/counselling/crisisservice</a>
Examination Timetable:	<a href="http://www.rverson.ca/">www.rverson.ca/</a>
Electrical & Computer Eng:	<a href="http://www.ee.rverson.ca/">http://www.ee.rverson.ca/</a> 416-979-5052 ENG478
FEAS	<a href="http://www.feas.rverson.ca">www.feas.rverson.ca</a> Deans Office ENG359
Financial Aid Office, OSAP, Scholarships & Awards	<a href="http://www.rverson.ca/financialaid/">www.rverson.ca/financialaid/</a> POD59, 416-979-5113 or 979-5115
Industrial Internship:	<a href="http://www.ee.rverson.ca/~iip">www.ee.rverson.ca/~iip</a>
International Student Services:	Location: POD-61, Telephone: (416) 979-5000, ext. 6655, E-mail: <a href="mailto:issask@rverson.ca">issask@rverson.ca</a> , Website: <a href="http://www.rverson.ca/internationalservices">www.rverson.ca/internationalservices</a>
Learning Success Centre	Location: Victoria Building (VIC-B15), Telephone: (416) 979-5000, ext. 7350, E-mail: <a href="mailto:lss@rverson.ca">lss@rverson.ca</a> , Website: <a href="http://www.rverson.ca/studentervices/learningsuccess">www.rverson.ca/studentervices/learningsuccess</a>
Medical Certificate Form:	<a href="http://www.rverson.ca/senate/forms/index.html#other">http://www.rverson.ca/senate/forms/index.html#other</a>
RYESAC:	<a href="http://www.rsuonline.ca">www.rsuonline.ca</a>
Student Guide	<a href="http://www.rverson.ca/studentguide">www.rverson.ca/studentguide</a>
Tri-mentoring:	<a href="http://www.rverson.ca/trimentoring">www.rverson.ca/trimentoring</a>

There are many **Senate Policies** students should be aware of that are available at [www.rverson.ca/senate](http://www.rverson.ca/senate)

- Student Academic Consideration and Appeals Policy (#34)
- Code of Academic Conduct Policy (#60)
- Student Code of Non-Academic Conduct Policy (#61)
- Examination Policy (#135)
- Accommodation of Religious Observance Policy (#150)
- GPA Policy (#46)
- Course Management Policy (#145)
- Establishment of Student E-mail Accounts for Official University Communication (#157)