

RCC Institute of Technology

Academic Calendar 2017

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RCC Institute of Technology

Message from the President

My Favourite Days

My favourite days of the term happen when graduating students present their final, capstone projects. These events signal the culmination of an RCC education. More importantly, they demonstrate that RCC graduates are adept at creative and critical thinking, continuous learning and self-promotion. The projects themselves attest to the fact that program learning outcomes are practitioner-based, practical and professional. And by exhibiting what they are able to do and what they know about their industries and sectors, RCC graduates show that they are prepared to contribute to projects and organizations from their very first day on the job.

Another favourite day of the term is when I welcome new students to one of RCC Institute of Technology's three campuses. Invariably these new students are excited about their decision to pursue their career goals and to participate in RCC's brand of applications-oriented learning. At the same time, they are anxious about their success in a rigorous post-secondary program of study. I can therefore assure them that RCC faculty and staff are committed to helping them reach their career goals and to pro-actively supporting them as they progress through their programs.

All of these programs are career-focussed and applications-oriented. Program Advisory Committees provide insights and ensure curricular alignment with sectors and job requirements. Faculty members plan and deliver their courses to emphasize hands-on applications that engage and encourage students' learning. Students apply new skills and knowledge in increasingly complex activities and projects in each of RCC's labs, clinics and studios—every day of the term.

Dr. Rick Davey
President

Academic Schedule / Important Dates

	2017 WINTER TERM	
1	January 3, 2017	Winter Term begins
8	February 20, 2017	Family Day – Campus closed
12	March 26, 2017	Winter Term ends
	2017 SPRING TERM	
1	April 3, 2017	Spring Term begins
2	April 14, 2017	Good Friday – Campus closed
8	May 22, 2017	Victoria Day – Campus closed
12	June 25, 2017	Spring Term ends
	2016 SUMMER TERM	
1	July 3, 2017	Canada Day – Campus closed
1	July 3, 2017	Summer Term begins
6	August 7, 2017	Civic Day – Campus closed
10	September 4, 2017	Labour Day – Campus closed
12	September 24, 2017	Summer Term ends
	2016 FALL TERM	
1	October 2, 2017	Fall Term begins
2	October 9, 2017	Thanksgiving Day – Campus closed
12	December 24, 2017	Fall Term ends
13	December 25 and December 26, 2017	Christmas and Boxing day – Campus closed
13	December 27, 2017	Campus Closed

Mission and Goals

The vision of [RCC Institute of Technology](#) (RCCIT), and its parent [Yorkville University](#) located in New Brunswick, is to build a Canadian national university that provides practitioner-oriented degree and diploma programs, leading to professional careers that are personally rewarding and that contribute to the betterment of society.

History

Radio College of Canada was founded in 1928 to train factory and service technicians in the fast-growing radio industry. And so began Canada's oldest technology institute and a remarkable history serving Canada's high technology sectors and pioneering innovative and responsive technology education.

RCC has always responded to the needs of its sectors and the nation. In the late 1930s RCC introduced courses in commercial radio operating and trained large classes of radio operators for the Federal Department of Transport. During WWII, the Radio College established additional facilities and developed specialized training programs to aid Canada's contribution to the war effort. Training was provided for the merchant marines, for government departments and for other allied governments. Several classes of women radio operators were assigned to air stations across the country as part of the Commonwealth Air Training Scheme. Following the war, the college did extensive rehabilitation training for Canadian and American veterans.

With the advent of digital electronics in the 1950s and into the 60s, RCC developed programming that enabled its graduates to assume leadership positions in the new digital-, computer- and microprocessor-based occupations that have continued to transform the world. At the same time, the Institute established a fundamental tenet of its programming: educating graduates who have the ability to learn and who have the fundamental knowledge required to continue to more advanced levels of study. By design, RCC graduates know how to continue learning and to participate in the future advances in their chosen field.

This focus on quality is evidenced by the number of programs that have been accredited and RCC's distinction as the Ontario's only private college that has achieved ministerial consent to deliver degree programs, including the Bachelor of Technology (Electronics Engineering Technology) and the Bachelor of Business Information Systems.

In 2007, RCC Institute of Technology joined Yorkville University as the University's undergraduate technology division. Yorkville University is a private, non-denominational university designated in New Brunswick. The University's mission is to provide access to rigorous and flexible professional programs in curricular areas that are personally rewarding for students and that contribute to the betterment of society.

In 2008 RCC acquired the International [Academy of Design](#) and Technology-Toronto, including the Toronto Film School. This well-known private college began operations in 1983 as the International Academy of Merchandising and Design. Over the years, the Academy's programs have achieved a strong reputation for developing hands-on, industry-relevant skills and competencies for the interior design, fashion and media industries. Today, the Academy of Design is a faculty within the Institute, responsible for delivering the Bachelor of Interior Design program and for encouraging convergence between design and technology education.

Governance

Board of Governors

RCCIT Institute of Technology has assembled a broad-based Board of Governors with fiduciary and planning responsibilities as set out in the [RCCIT 1928 ULC By-Law](#).

The following individuals currently serve on the Board of Governors:

- Dr. Ron McDonald**, Vice President Academic, Yorkville University (Ex-Officio)
Dr. Seth Crowell, Vice President Academic, Crandall University
Moncton, New Brunswick
Dr. Rick Davey, President, RCC Institute of Technology (Ex-Officio)
Mr. Gord Glazier, Chief Financial Officer, Yorkville Education Company (Ex-Officio)
Dr. Catherine Henderson, Past President, Ontario College of Art and Design; Past President, Centennial College, Toronto, Ontario
Ms Erin Keough, Online Learning Consultant
St. John's, Newfoundland and Labrador
Dr. Michael Markovitz, Executive Vice-Chair and Treasurer of the Board
Toronto, Ontario
Dr. Terry Miosi, Past Acting Director Ontario Post-secondary Education Quality Assessment Board Secretariat
Hamilton, Ontario
Dr. Paul Roach, Psychologist
Saint John, New Brunswick
Mr. Eric Roher, Borden Ladner Gervais, LLP, Secretary of the Board
Toronto, Ontario
Dr. Jacquelyn Scott, OC, Former President, Cape Breton University
Sydney, Nova Scotia

The RCCIT 1928 ULC By-Law establishing the RCCIT Institute of Technology Board of Governors was approved on October 6, 2008.

Academic Council

An Academic Council comprised of faculty, students and administration is responsible for the academic directions of RCCIT, subject to Article 7: Academic Council included in the By-Law establishing the Board of Governors.

Academic Council meets at least once per term (four times per year.) All Academic Council meeting records are available on the RCCIT Webcampus.

The [RCCIT 1928 ULC By-Law](#) establishing the RCCIT Institute of Technology Board of Governors was approved on October 6, 2008. Terms of Reference are provided in Article 7: Academic Council, available on the RCCIT website.

RCCIT Policies and Regulations

Academic Freedom and Academic Responsibility Policy

All members of the RCCIT community have a right to academic freedom, which is defined as the freedom, individually or collectively, to pursue, to develop and to transmit knowledge through research, study, discussion, documentation, production, creation, teaching, lecturing and writing, regardless of prescribed or official doctrine and without constriction by institutional censorship.

Academic Freedom Constraints

While faculty, students and staff are not asked to sign or adhere to a statement of faith and/or a code of conduct that might constitute a constraint upon academic freedom, RCCIT does reserve the right to establish the educational mission and the goals of the curriculum. Faculty are required to address the course terminal objectives, which define the scope and level of their courses. In that context, faculty are encouraged to develop effective teaching strategies and methods for their classes, to seek ways of enriching the educational experience of their students, and to participate collegially in the continuing improvement of courses and programs.

In the classroom, both the discussion of issues and the use of written or visual materials must be conducted in an impartial spirit and must be accompanied by tolerance for differing views and by discretion regarding the sensibilities of students and others. Academic freedom does not include the right to use one's position to promote particular ideologies or religious beliefs. In expressing personal opinions and views, faculty must make clear that they are not representing the position of RCCIT.

Conflict of Interest

All employees of RCCIT have a responsibility, when called upon to do so in the course of their employment, to make the best judgments of which they are capable with respect to RCCIT affairs, free from other interests that might affect their judgment or cause them to act other than in the RCCIT's best interests.

A conflict of commitment or interest may exist when an employee is involved in an activity or has a personal financial interest that might interfere with the employee's objectivity in performing institute duties and responsibilities. Therefore, any such activity or personal interest, including those of an employee's immediate family, is prohibited unless approved by an executive of the RCCIT in writing. "Family" is defined as a spouse/domestic partner, child, parent, or sibling of the employee, or of the employee's spouse/domestic partner. If there is any doubt about whether a conflict exists, employees should check with their supervisor.

With respect to faculty members, additional conflicts may exist where a relationship to a student outside the classroom other than that of teacher-student is present. It is the responsibility of the faculty member – not the student – to bring this type of conflict to the attention of the program chair.

Employees of RCCIT may engage in activities either for remuneration or on a volunteer basis outside of the RCCIT. These activities are permitted so long as they are disclosed and do not interfere with the employee's job performance. However, full-time employees must receive written approval from RCCIT to engage in employment outside the organization, and may not engage in outside activities on behalf of

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RCCIT's competitors. Part-time faculty members are permitted to teach elsewhere without the institute's approval, as long as these teaching obligations are disclosed to the program chair.

Ethical Standards

RCCIT is committed, both globally and locally, to the promotion of social awareness, to the exercise of its social responsibilities, and to conducting its business affairs in a manner that affirms this commitment, consistent with its educational mission. Accordingly, RCCIT will not knowingly engage in or support business practices that are contrary to the fulfillment of its social responsibilities, nor rest content with unknowingly engaging in or supporting such practices. In all its business affairs and relations RCCIT will:

- make itself actively aware of the social consequences of its actions;
- exercise thoroughness in gathering information regarding these consequences; and
- develop policies and practices that are the product of balanced reflection and intellectual honesty, and which affirm RCCIT's commitment to the exercise of its social responsibilities.

The Board of Governors accepts responsibility for ensuring that business practices are fair, honest, and ethical. Responsibilities include, but are not limited to, the following assurances:

- Recruitment policies follow fair business practices.
- RCCIT and its programs and policies are represented accurately and honestly.
- Each advertisement and piece of promotional literature is truthful and refrains from giving any false, misleading or exaggerated impression with respect to RCCIT, staff, courses, services, or the occupational opportunities for its graduates.
- Faculty and administration have the appropriate educational credentials and competencies to provide academic programs that will assist students in successful attainment of diplomas and degrees.
- Programs, course content, length of instruction and instructional methods are of the nature and quality to reasonably ensure that students will develop the education necessary to obtain employment in the occupation for which instruction is offered.
- Facilities are in compliance with laws and regulations relative to health and safety, and the Institution provides adequate classroom space, laboratories, and equipment that is in good working order and appropriate to instruction.
- Each student is provided with an academic calendar containing key information on the organization, programs, admission requirements, tuition and fees, and policies covering attendance, satisfactory academic progress, conduct, and refunds.

RCCIT recognizes that conflicts may arise regarding ethical standards. Any conflicts between faculty and administration are dealt with referencing the Faculty Policy on Conflict Resolution

Standards of Conduct

Each student at RCCIT assumes the obligation to understand and maintain the highest principles of honesty, integrity and respect for the institution, its students, faculty and staff.

RCCIT expects its students to behave as mature and responsible individuals in all matters of conduct, behaviour, business and personal ethics. Courtesy to fellow students, professors and instructors, staff and the public is expected.

Enrolment at RCCIT carries with it the responsibility to know and follow the regulations and policies related to standards of conduct.

Any student whose behaviour or academic conduct does not conform to the standards may be subject to progressive sanctions. The following policies constitute the Standards of Conduct:

- Academic Integrity Policy
- Anti-Violence Policy
- Policy on Harassment
- Policy on the Acceptable Use of Computers and Technology
- Substance Abuse Policy

Academic Integrity Policies and Procedures

Academic honesty is a guiding principle within RCCIT for students, faculty members, and administrative staff. RCCIT values openness, honesty, civility, and curiosity in all academic endeavours. Support for academic honesty is exemplified in policies related to the initial assessment of applicants, the treatment of students during courses, the placement and treatment of students, and all assessment procedures.

All members of the RCCIT community are obligated to maintain the highest standards of academic honesty, to follow accepted standards of academic honesty, and to foster these practices in others. All members of the academic community must ensure that all materials used in courses or in assignments submitted for assessment adhere to established standards of academic honesty.

This policy is designed to foster a fair and impartial set of standards by which academic misconduct will be judged. The policy defines misconduct under two headings: plagiarism and other forms of academic misconduct.

Plagiarism

RCCIT defines plagiarism as:

- The intentional or unintentional act of representing someone else's work as one's own.
- Quoting verbatim, or almost verbatim, from any source without using quotation marks or a block quote, thereby creating the appearance that material written by someone else was written by the student.
- Submitting someone else's work, in whatever form, without acknowledgement.

Other Forms of Academic Misconduct

- Cheating on examinations, tests, assignments, or reports.
- Impersonating another person for the purposes of completing course assignments, tests, or examinations.
- Obtaining an examination, test, or other course material through theft, collusion, purchase or other improper manner.

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- Falsifying credentials, records, transcripts, or other academic documents, health certificates, or other certificates.
- Submitting course work that is identical or substantially similar to graded work that has been submitted for another RCCIT course, or for the same course attempted in a previous term.
- Forging any electronic or print document, including transcripts, submitted for admission requirements.
- Interfering with the right of other students to pursue their studies.
- Interfering with the manner in which the instructor is teaching.
- Employing any unauthorized academic assistance in completing assignments or examinations.
- Tampering with, or altering, in any deceptive way, work subsequently presented for a review of the grade assigned.

Prevention Techniques for Students

All RCCIT students have a responsibility to adhere to this Academic Integrity Policy, as do all members of the RCCIT community.

The following is a list of ways in which students can prevent and confront academic integrity violations:

- Cite all references and always submit your own work.
- Make it difficult and unacceptable for other students to cheat by:
 - Covering your work during exams.
 - Refusing to give away old term papers.
 - Refusing to provide old exams to other students without the consent of the faculty member.
 - Keeping your computer password a secret.
 - Denying others access to your computer programs.
 - Logging off your computer, denying access to your work.
 - If you observe a violation of the Academic Integrity Policy, report it to either the faculty member teaching the course, or your program chair.

Procedures

Any member of the RCCIT community may report a violation of the standards of conduct as described in this policy.

When an instructor suspects an offence has occurred, the following process is initiated:

1. The student(s) will be required to meet with the instructor within five working days to discuss the incident. The student will be given the opportunity to provide an explanation or to admit fault. If the situation is shown, to the instructor's satisfaction, to be free of academic misconduct, no record will be kept of the incident.
2. If the student admits fault, or presents an unsatisfactory explanation, the instructor will inform the student that the incident is being referred to the program chair. The instructor will contact the Office of the Registrar to determine if previous instances of academic misconduct are on file for that student. The instructor will complete Part 1 of an *Academic Misconduct Form* and submit it along with any supporting documentation to the program chair. A previous incident will determine the minimum penalty available as per the following *Penalties for Academic Misconduct* chart.

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Penalties for Academic Misconduct

Offence	Minimum Penalty	Maximum Penalty
First	Mark of "0" on the work evaluated	Immediate dismissal from the Institute for current semester, plus one subsequent semester.
Second	Mark of "0" in the course	Immediate dismissal from the Institute for three years
Third	Mark of "0" in the course, immediate dismissal for one year	Immediate dismissal from the Institute for five years

3. The *Academic Misconduct Form* and any notes and/or related documentation will be passed on by the instructor to the program chair of the student's program. The program chair and the instructor will meet to review the materials related to the misconduct incident to confirm their agreement relative to the charge.
4. The student will be required to meet with the program chair within five working days of his/her initial meeting with the instructor to review the misconduct charge. At that time, the student will be given opportunity to explain once more his/her behavior relative to the charge. If the situation is shown, to the program chair's satisfaction, to be free of academic misconduct, no record will be kept of the incident.
5. If the student admits fault, or presents an unsatisfactory explanation, the program chair will complete Part 2 of the *Academic Misconduct Form*. The student will be requested to acknowledge one of the following statements:
 - I acknowledge the stated offence to be true and correct, and I accept the penalty stated (note that an upward adjustment in severity may be made if previous incidents are revealed in the student record).
 - I acknowledge the stated offence to be true and correct, but I do not accept the penalty which is above the minimum stated in the policy and will follow procedures required to request an appeal hearing in this matter.
 - I do not acknowledge the stated offence and will follow procedures required to request an appeal hearing in this matter.
6. If the student is unresponsive or unwilling to meet, the *Academic Misconduct Form* is forwarded to the Office of the Registrar for processing. Only the program chair will sign in this instance.
7. If the student wishes to appeal the sanction, he or she will follow the appeal procedures outlined in Section 7.15. Otherwise, the Registrar will process the sanction within five working days. A revelation of previous offence(s) from the student's record may result in the penalty being increased, and the student will be so notified. The *Academic Misconduct Form* will remain part of the student's file in the Office of the Registrar for one year after leaving RCCIT. No indication of academic misconduct will be made on a student's grade report or transcript.

Academic Appeals and Complaints

A student may appeal a decision through the Office of the Registrar within five (5) business days following receipt of the letter conveying the decision.

Limitation on appeals: Appeals will not be considered when the outcome of the appeal will have no substantial practical effect on the appellant's grades or academic standing.

The Registrar will present the appeal and all supporting documentation to the Dean of Academics who will convene the academic appeals standing committee which, within two business days, will review the file and render a decision upholding, overturning, or modifying the decision in question. The Registrar will communicate by letter to the student concerning the appeal committee's decision.

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The appeal committee's decision is final.

Standing Committee on Academic and Student Conduct Appeals:

The Standing Committee on Academic and Student Conduct Appeals is the final appeal body for students contesting decisions made by academic decision makers, including program chairs, deans, associate deans, and the registrar. The main policies governing decisions that might be appealed are student conduct (including academic integrity) and grading (including policies relating to academic probation and academic dismissal). Because appeals can come only from students, the Standing Committee does not hear requests for reconsideration of decisions relating to admission to academic programs.

Composition:

- Dean of Academics (Chair)
- All Program Chairs
- Registrar (non-voting secretary and support)

Process:

- The Registrar manages the flow of cases to the Standing Committee, including:
 - Communicating with the student appellant concerning: the student's rights under policy; the procedures to be followed to prepare an appeal; deadlines; outcomes of the appeal.
 - Preparing files for the Standing Committee, including, where appropriate, copies of student academic work and academic record and copies of correspondence and previous decisions relating to the matter being appealed.
 - Maintaining records relating to each academic appeal.
 - Implementing the outcomes of the appeal.
- Students appealing academic decisions will prepare a written request to the Standing Committee outlining the grounds for appealing the academic decision and indicating the outcome desired.
- Grounds for appeal: Dissatisfaction with Institute policy, unhappiness with the outcome of a decision, and technicalities that do not materially affect a decision are not sufficient ground for appeal. Students appealing decisions should provide argument and evidence showing one or more of the following:
 - Institute policy was incorrectly interpreted and applied;
 - there was a fundamental procedural error seriously prejudicial to the student;
 - there was clear evidence of bias in a hearing or decision;
 - the student has significant new information relevant to the case;
 - inadequate weight was given to the evidence provided;
 - the severity of the penalty imposed exceeds the nature of the offence for reasons identified by the student.
- Considering appeals:
 - Panels: For each appeal, the Standing Committee will strike a panel of three members – normally the Dean of Academics (panel chair) and two other members. No member of a panel will have previously been involved with the decision being appealed; nor shall any member of the panel be a member of the Faculty from which the appeal originates. If the Dean of Academics has previously been involved with the decision, another member of the Standing Committee will serve as panel chair.
 - Natural justice: Panels considering appeals will follow the principles of natural justice to ensure due process and fairness.

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- Outcomes: Panels considering appeals might: deny the appeal and uphold the previous decision; accept the appeal and overturn the previous decision; replace the previous decision with another decision. For each appeal, the Chair of the Standing Committee will prepare a written summary of the decision and the reasons for the decision. The summary will be communicated through the Registrar to the student making the appeal.

Procedures for Policy Violation (Anti-Violence, Acceptable Use of Computers and Technology, and Substance Abuse)

Any member of the RCCIT community may report a violation of the standards of conduct as described in abovementioned policies. Any violation should be reported as soon as possible after the incident takes place using the prescribed incident report format.

Incident reports are to be directed to the campus principal who is authorized by the president to act as the judicial advisor overseeing this policy.

The judicial advisor may conduct an investigation to determine if standards of conduct have been breached. The judicial advisor has authority to resolve a complaint by mutual consent through mediation.

Should the judicial advisor determine that the student has breached the standards of conduct, s/he will meet with the student and impose the mandatory sanction for a first offence.

First Offence

The judicial advisor will meet with the student and provide a written summary of the charges and the mandatory sanction:

- The student will acknowledge that s/he understands the policy and the consequence of a second offence. If appropriate, the student may be required to write an apology.
- The written summary of the charges and the acknowledgement will be filed until the student graduates from RCCIT.

Second Offence

The judicial advisor will meet with the student and provide a written summary of the charges and an appropriate sanction. Appropriate sanctions for a second offence include probation, loss of privileges, fines, restitution, community service and suspension.

The judicial advisor will provide a written summary of the charges and the sanction, which will be filed until the student graduates from RCCIT.

Third Offence

The judicial advisor has authority to impose the mandatory sanction, which is expulsion from RCCIT.

- The judicial advisor will meet with the student and provide a written summary of the charges as well as the mandatory sanction.
- This documentation will be part of the student's permanent academic record.

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Appeals

A student has the right to appeal the judicial advisor's decision within five (5) days of the ruling. All appeals must be in writing and addressed to the Campus Appeals Committee.

Each campus will have a Campus Appeals Committee comprised of a faculty member, a staff member and a student (member of Campus Council). The dean of academics or the campus principal will serve as secretariat to the Campus Appeals Committee.

The Campus Appeals Committee will hear the appeal within ten (10) days of receiving the appeal. The decision of the Campus Appeals Committee is final.

Violence

Violence is prohibited by Canadian legislation. It also constitutes unprofessional behaviour which undermines a respectful and safe teaching and learning environment.

In the context of this policy, violence means:

- The exercise of physical force by a person against any member of the RCCIT community, that causes or could cause physical injury to a member of the RCCIT community.
- An attempt to exercise physical force against a member of the RCCIT community, that could cause physical injury to a member of the RCCIT community.
- A statement or behaviour that it is reasonable for a person to interpret as a threat to exercise physical force against a member of the RCCIT community, that could cause physical injury to the member of the RCCIT community.

Harassment and Discrimination

Statement of Commitment

Harassment is prohibited by Canadian legislation. In keeping with its values and legal responsibilities, RCCIT will treat any complaint of harassment as a serious matter.

Discrimination

RCCIT is an educational institution that admits academically qualified students without regard to gender, age, race, national origin or disability and affords students all rights, privileges, programs, employment services and opportunities. RCCIT complies with all Canadian and provincial laws and regulations in this area.

Substance Abuse

Students in violation of federal, provincial or other municipal regulations with respect to illegal drugs may be subject to both criminal prosecution and disciplinary action.

The following conduct is unacceptable:

- Being drunk or disorderly on RCCIT premises or at an RCCIT sponsored event or using, possessing or distributing alcoholic beverages or other controlled substances, except as permitted by law;
- Possessing or consuming alcohol anywhere on RCCIT premises if under the age of nineteen (19) years.

Intellectual Property

RCCIT recognizes and values the contribution of employees and students in the works they produce and seeks to balance the rights of the creators with the interests of RCCIT while encouraging educational innovation and creativity.

Works owned by RCCIT

As an employer, RCCIT claims ownership of copyright in works created by employees in the normal course of their employment. Such works include:

- a. the curriculum which includes but is not limited to:
 - i. teaching support materials,
 - ii. teaching/learning resources produced on assignment,
 - iii. instructional by-products and
 - iv. curriculum support materials;
- b. administrative materials; and
- c. professional, technical and artistic works produced on assignment.

Works owned by employees

RCCIT recognizes the ownership of copyright in works created by employees on their own initiative and own time where an extensive use of RCCIT facilities, resources or funds are not used in the creation or reproduction of the works. Such works include:

- a. teaching/learning resources;
- b. professional, technical and artistic works;
- c. personal works; and
- d. works produced on sabbatical leave where the prime purpose of the sabbatical leave was not to create the works.

Works owned by students

Students own the copyright to the works they produce. The RCCIT does not claim ownership of any works created by students, except where:

- a. the student received compensation as an employee of RCCIT for the creation of the work; or
- b. the creation of the work required the extensive use of RCCIT facilities, resources or funds.

RCCIT will automatically be licensed to present student-produced works for instructional purposes in RCCIT courses for up to five (5) years after the creation of the works. The use of these works for non-instructional purposes (i.e. RCCIT publicity) or for instructional purposes beyond the five-year period requires the consent of the creators of the works.

Sanctions/Actions/Appeals

Potential consequences of non-compliance with this policy will depend upon the specific situation and may range from having the issue dealt with by administration at RCCIT to formal legal action.

Dispute Resolution

General complaints must be made in writing to the Dean of Academics who will direct the complaint to the administrator designated as the most able to address and resolve the complaint. The procedure is as follows:

- a. Within five (5) business days of receiving the complaint, the designated administrator will meet with the student and provide an opportunity to make an oral submission(s).
 - i. Complainants are entitled to have another person present throughout the complaint process and/or to make oral submissions on behalf of the student.
 - ii. There will be a written record of this meeting and the student will receive a copy of this record.
- b. Within fifteen (15) business days, the designated administrator will respond to the complaint in writing. This response will include a decision statement, rationale for the decision and the record of the meeting with the student.
- c. Should the complaint still not be resolved to the satisfaction of the student, s/he may appeal the decision to the Dean of Academics. All appeals must be in writing and addressed to:

Angela Antohi-Kominek
Dean of Academics, RCC Institute of Technology
2000 Steeles Avenue West
Concord ON L4K 4N1

The appeal statement must indicate why the student disagrees with the designated administrator's decision. The appeal documentation must include the original decision and any supporting and background information.

- d. Within ten (10) days of receiving the appeal, the Dean of Academics will meet with the complainant when s/he will have an opportunity to make an oral submission(s).
 - i. Complainants are entitled to have another person present throughout the complaint process and/or to make oral submissions on behalf of the student.
 - ii. There will be a written record of this meeting and the student will receive a copy of this record.
- e. The Dean of Academics will provide a written response to the student within ten (10) business days from the meeting. This response will include a decision statement, rationale for the decision and the record of the meeting with the student.
- f. Should the student not be satisfied with this decision, s/he may escalate the complaint to the President

Dr. Rick Davey
President, RCCIT Institute of Technology
Steeles Campus
2000 Steeles Avenue West
Concord, ON L4K 4N1

RCCIT Academic Calendar

- g. In the event that the President cannot resolve the complaint, a body of persons not involved in the appeal in any way will be convened to provide a final internal review and decision of the student's complaint.
- h. Student services will maintain a file of each student complaint along with any submissions and decisions. A complainant has access to her/his complaint file which will be maintained for three (3) years from the original date of the complaint.

Rules and Enrollment Conditions

RCCIT is not responsible for loss, theft or damage of personal property or students work. This includes work that may be damaged as a result of faculty equipment. Students are responsible for reading their school handbook and knowing and following policies and procedures described therein.

Student ID

Each student is assigned a unique identification number. This number is confidential. The RCCIT strictly controls access to student ID numbers and it is assumed, and expected, that all students will protect the confidentiality of their ID numbers.

Health Insurance

Full emergency medical insurance is mandatory as a condition of acceptance at RCCIT. Proof of valid emergency medical insurance must be submitted before the first day of class. International students who are unable to present proof of full emergency medical insurance must enrol in RCCIT's Ingle International group policy for the duration of the academic year.

Institutional Closure

In the unlikely event that RCC Institute of Technology is required to end a program due to business related or other reasons, students would not suffer financially and would be able to finish their studies with RCC Institute of Technology or would receive assistance with transferring to another program or institution. RCC Institute of Technology would assure the continued availability of student records and transcripts relating to the programs and would make efforts to minimize any negative impact upon the students' studies.

Admissions Policies and Information

Undergraduate Admissions

Bachelor of Interior Design Program

Applicants from a variety of educational backgrounds will be considered for admission, including:

- High school graduates
- Graduates of degree programs in related or unrelated fields
- Graduates of Bachelor of Fine Arts or Architectural Design programs
- Graduates of interior design diploma (two year) or interior decorating diploma programs
- Graduates of three (3) year interior design diploma programs

Students entering the Bachelor of Interior Design degree program from high school are required to submit an Ontario Secondary School Diploma (OSSD) or equivalent with at least a 65% average in six (6) courses from the University or University/College stream, including:

- English, grade 12
- One grade 12 Science at the U and/or U/M level or equivalent
- One grade 12 Math at the U and/or U/M level or equivalent
- Three (3) other grade 12 subjects at the U and/or U/M level or equivalent
- High school transcripts

A mature student is an applicant who has not achieved the Ontario Secondary School Diploma (OSSD) or its equivalent and who is at least 21 years of age on or before the commencement of the program in which he/she intends to enrol. RCCIT's admissions policy for mature students creates pathways for applicants who can demonstrate abilities equivalent to those of Ontario high school graduates through the successful completion of courses at the postsecondary level or through proficiency assessments.

In addition to the above requirements, all applicants must submit:

- A \$100 application fee
- Resume and Statement of Interest
- A completed application form (can be completed online)

RCCIT Academic Calendar

Bachelor of Technology

Admission requirements for students entering the Bachelor of Technology (Electronics Engineering Technology) out of high school are as follows:

- High School Diploma with an average of at least 65% in six courses from the U/M level or equivalent including;
- Senior Math (grade 12) Calculus is recommended
- Senior English (grade 12)
- Senior Physics (grade 12) or the RCC physics bridging course

Other

Post-admission, students are asked to demonstrate proficiency in basic college-level skills by writing diagnostic assessments in math and language usage. The results of these assessments will be used to counsel students about remedial tutoring and in some cases students may be required to enroll in remedial courses.

Mature Students

A mature student is an applicant who has not achieved the Ontario Secondary School Diploma (OSSD) or its equivalent and who is at least 21 years of age on or before the commencement of the program in which he/she intends to enrol. RCCIT's admissions policy for mature students creates pathways for applicants who can demonstrate abilities equivalent to those of Ontario high school graduates through the successful completion of courses at the postsecondary level or through proficiency assessments.

RCCIT Academic Calendar

Language Proficiency

In addition to completing all respective requirements for the desired program of study, applicants to RCC from countries where English is not the primary language spoken and applicants whose first language is not English, may be required to provide proof of English proficiency. When proof of proficiency is required, it can be demonstrated by the following methods:

Test of English as a Foreign Language- TOEFL

Minimum:

paper-based test (PBT) 550

computer-based test (CBT) 213

Internet based test (iBT) 80

International English Language Testing - IELTS

Minimum:

IELTS academic test 6.0

Michigan English Language Assessment Battery - MELAB

Minimum:

MELAB 76

Canadian Academic English Language - CAEL

Minimum:

CAEL 60

CanTEST

Minimum

CanTEST reading/listening/speaking 4.5

CanTEST writing 4.0

Canadian Language Benchmark Assessment - CLBA

Minimum

Average on reading, listening and speaking 6

Pearson Test of English (PTE) Academic

Minimum:

PTE 55

Program Credit Transfer and Advanced Standing

The transfer of credits obtained at other post-secondary institutions is permitted, but all requests must be well documented.

In reviewing eligibility for transfer of external credits, the Admissions Committee adheres to the following guidelines:

- Credits being transferred to the RCCIT degree program must have been completed at a postsecondary institution recognized in that institution's home jurisdiction;
- Course hours and credit hours contained by the external course must correspond to the targeted RCCIT course by an approximate 90%;
- Learning outcomes contained by the external course must match the RCCIT course in terms of topics and subject matter at 80%;
- Texts, assigned readings, student activities, assignments, and assessment used in the external course must meet the standards and expectations of the course for which equivalency is sought;
- Normally, only credits earned within ten years of a student's admission to RCCIT will be accepted, but the Admissions Committee may use discretion in particular cases;
- Students must have achieved a satisfactory grade of C by RCCIT standards in the individual courses being considered for transfer credit;
- Official transcripts must be submitted at the time of application for transfer credits to be considered by the Admissions Committee. Transcripts will be evaluated and notification will be forwarded by the Office of the Registrar concerning the student's status in the program, including the number of transfer credits awarded;
- Credits earned through transfer are not used to compute the student's GPA;
- Foreign credentials may require an assessment from a third party international credential assessment service.

Examination Challenge for Credit

Students who believe that they have mastered the learning objectives of a course, either through courses taken at another school for which transfer credit has not been given, or through self-study or life experiences, may apply for a challenge examination through the Office of the Registrar. Proficiency credit may be achieved through a written examination, presentation of a portfolio, the completion of assignment(s) and/or the development of product(s). Prior enrollment in a course renders it ineligible for challenge. RCCIT does not award advanced standing through proficiency for more than 50% of the total number of credits contained by a program. Certain courses (e.g., capstone courses) within a particular program are not eligible for challenge. In the case of written or oral examinations, a grade of 80% must be achieved for credit to be assigned.

To challenge a course for credit a student must submit to the Office of the Registrar an *Examination Challenge for Credit Application Form* with documentation that clearly supports the claim of mastery of a course's learning outcomes. All challenges must be completed by the end of week one of a particular term if the targeted course is scheduled for study in that term. Applications are assessed by a program's chair to determine whether or not an examination challenge is warranted, and if so, the format of assessment. A fee of \$75 accompanies each course challenge.

Arrangements with and recognition by other institutions

Lakehead University



Students completing the RCC [Electronics Engineering Technology Diploma](#) are able to pursue a degree in Electrical Engineering or Software Engineering in as little as 2 years at Lakehead University. Lakehead University offers three years' credit toward their 5 year Electrical Engineering or Software Engineering program for graduates of these diplomas. It is therefore possible for an [School of Engineering Technology and Computing](#) graduate to earn an engineering degree in less than 4 years (less time than is normally required to receive the degree itself).

Brock University



RCC students graduating from the Computer Networks Engineering Technology program who are interested in pursuing a bachelor of computer science can apply directly to the computer science department at Brock University. Graduates accepted by the department will be able to complete their B.Sc. degree in two academic years.

Memorial University



A Bachelor of Technology Degree can be achieved in just one year by the graduates of a [CTAB](#) accredited program. The fully certifiable [School of Engineering Technology and Computing](#) graduate technologist is automatically given three years' credit towards the four year Bachelor of Technology degree offered by the Memorial University of Newfoundland. This degree differs from the traditional engineering degree by placing a stronger emphasis on business and management skills. Since Memorial offers the program on-line and by distance education, [School of Engineering Technology and Computing](#) graduates can continue to work full-time while completing their degree, with the possibility of their employer subsidizing the degree.

Cape Breton University



CBU provides both Electronic Engineering Technology and Computer Engineering Technology graduates of [School of Engineering Technology and Computing](#) with a unique opportunity to earn a Bachelor of Technology degree with a specialization in microelectronics and wireless technologies, covering hardware and software development. This new degree program will also provide a minor in instrumentation. [School of Engineering Technology and Computing](#) students have to complete three semesters (one calendar year) at CBU.

Saginaw Valley State University



SVSU is a mid-size university of about 10,000 students located approximately one and a half hours east of Sarnia Ontario. They offer high level degree programs accredited in both Michigan and Ontario. [School of Engineering Technology and Computing](#) Electronics Engineering Technologist graduates can transfer to SVSU and complete their Electrical Engineering Degree in two and a half years.

Graduates of [School of Engineering Technology and Computing](#)'s Computer Engineering Technologist program, can transfer into their bachelor of science in Computer Information Systems and graduate in approximately 1.5 years (year-round study required).

Graduates of either Engineering Technologist stream at [School of Engineering Technology and Computing](#) are also offered advanced standing in their bachelor of science in Engineering Technology Management degree (approximately 1.5 years of year-round study). This is a unique degree offering graduates an understanding of modern industrial practices, leadership, management practices and advanced communication skills.

Through their exclusive Horizons Scholarship, Canadian students pay all fees in Canadian dollars. In most cases the total cost of one academic year at SVSU (including residence) is less than at an Ontario university.

Athabasca University



A B.Sc. degree in Computing and Information Systems is an option open to graduates of both the Electronics and Computer Networks Engineering Technology programs at [School of Engineering Technology and Computing](#). Graduates are given up to two years' credit towards a four year degree offered at Athabasca. This degree combines the hardware background of the [School of Engineering Technology and Computing](#) graduate with a strong software background leading to many excellent opportunities in the expanding IT sector. This degree is offered only on-line allowing graduates the flexibility to work full-time while completing their degree. (An option often paid for by the employer.)

University Canada West



[School of Engineering Technology and Computing](#)'s computer information systems diploma graduates can transfer to UCW in Victoria BC to complete their bachelor of commerce degree within 1.5 years as a resident student. [School of Engineering Technology and Computing](#) graduates have the option of completing the degree on-line in 2.5 years.

Masters Degree Options

Lakehead University



M.Sc. in Control Engineering or a M.Sc. in Electrical and Computer Engineering

[School of Engineering Technology and Computing](#)'s bachelor of technology graduates (electronics engineering technology) will be able to complete their Master's and have the option of applying for Ph.D. studies in two years after completing the Summer Transition Program. The program is also designed to meet PEO's academic requirements. Graduates with a GPA of 3.5 or greater qualify for admission to Lakehead University's M.Sc. in Control Engineering or a M.Sc. in Electrical and Computer Engineering (pending OCGS approval). The requirements of the Program are as outlined below.

- Summer Transition (July and August)
 - ENGI 3021 and ENGI 3016 (in July)
 - ENGI 3022 and ENGI 3015 (in August)
- Year I (September to August)

RCCIT Academic Calendar

- MATH 3012, ENGI 4053, ENGI 4258, ENGI 2451, ENGI 3336, MATH 3050 and three graduate courses.
- Year II (September to August)
 - PHYS 3211, one graduate course, Seminar, Research Thesis and graduation.

University Canada West



The On-Campus, Full-Time, One Year MBA

This program is for [School of Engineering Technology and Computing](#) bachelor of technology graduates who wish to complete their MBA on campus, within a year. All classes are held at the University Canada West Campus over a single year. You do not need to have had work experience to be eligible for admission to this program. As well as course work, you will complete a major Research Assignment that will investigate a business issue. If you have had business experience, you may undertake a Consulting Assignment instead of the Research Assignment.

Two Year MBA For Non-Business Graduates

This combination program will allow [School of Engineering Technology and Computing](#) bachelor of technology graduates to graduate with an MBA in two years. It combines short residencies with Internet course work. We will provide study materials about a month before the residency begins so that you are prepared. Your course work will be delivered online at eight-week intervals, and you will complete a year-long Consulting Assignment during your second year.

Ryerson University



M.Sc. Electrical Engineering

On an individual basis, [School of Engineering Technology and Computing Bachelor of Technology \(Electronics Engineering Technology\)](#) graduates can qualify for acceptance into Ryerson's Masters in Electrical Engineering program.

Re-instatement/Re-admission Policies and Procedures Policies and Procedures

Students who have been dismissed from the RCCIT for any reason must re-apply using the Application for Re-instatement Form which is available from student services.

Students who have withdrawn from their program of study and wish to resume their studies must apply for reinstatement using the Application for Re-instatement Form if one of the following conditions applies:

- They were not approved for a leave of absence
- Their CGPA is less than 2.0 on a 4.0 scale, or 1.7 on a 4.3 scale
- Their TGPA in their last term of study was less than 2.0 on a 4.0 scale, or 1.7 on a 4.3 scale

The Admissions Committee will review each application for re-instatement and make a decision about each one.

Students who have voluntarily withdrawn from an RCCIT program and who have been absent from class attendance for a period of 12 consecutive months are required to seek re-admission.

Academic Policies and Information

Academic Appeals and Complaints

The following academic decisions may be appealed:

- Grades
- Credit transfers for registered students
- Academic status

General complaints are covered under the Dispute Resolution section.

Academic Appeals Procedures

In all references to the academic appeal process and in any other academic concern where an appeal process is appropriate, the following procedures apply.

The student will initiate the appeal in writing. Appeals will be submitted to the Program Chair or a designate. The written appeal must contain:

- The student's name and student ID number
- The date the appeal was submitted
- The student's program and last class section
- The date of last attendance (for inactive students)
- The reason and nature of the appeal
- The specific relief or decision change that is sought by the appeal
- An explanation and documentation of any extenuating circumstances
- Additional details as required for appeals after academic dismissal (see below)
- The student's signature

When deadlines for submitting appeals are established by academic policy, it is the student's responsibility to meet these deadlines. Such deadlines usually relate to progression restrictions. Late appeals may result in a one-term interruption of studies. In cases where no deadlines are established, an academic appeal should be submitted within one week of the occurrence prompting the appeal.

The Program Chair or designate will take timely action on the appeal and will meet any time restrictions established by separate policy. Written documentation of the final appeal decision will become a part of the student's permanent file. The student submitting the appeal may be notified of the final decision in writing.

Conditions for future performance over and above any conditions specified in the policy may be established through an advising session. Such conditions must be recorded as a part of the appeal document that becomes a part of the student's permanent file.

If the chair does not approve the appeal, the student may request a review of that decision by the Dean of Academics. A written request to review an appeal decision must be submitted within two (2) class days of the rejection. The Dean of Academics will also document the decision for inclusion in the student's permanent file. The request for review, and the decisions and signatures of the chair and the dean may be a part of the same appeal submitted by the student. The Dean of Academics will inform the student and the chair in writing of the decision regarding the appeal's review.

Method of Course Delivery

Traditional Course Delivery

This section provides information on classroom based teaching with assignments and activities.

Timetables

Class schedules will be posted on the online campus at least two (2) weeks before the first day of the term. Each academic department will publish schedule parameters, including days of the week and start-and-end hours in which classes will be scheduled.

Policy on Conflict Scheduling

It is RCC Institute of Technology's policy not to issue student schedules that contain a conflict. A conflict is defined as two or more courses with overlapping scheduled hours of instruction (either classroom or lab/studio).

However, in some circumstances to meet student graduation or full-time registration requirements, the Program Chair may approve exceptions to this policy. These are the general guidelines that define the nature of these exceptions:

1. Only students in good academic standing are eligible for an exception to the policy on conflict scheduling.
2. No conflict will overlap with more than 33% of a scheduled course. That is, if the course is scheduled to meet for 3 hours/week, only 1 hour can be in conflict with the second course.
3. Both instructors of the courses in conflict must provide permission for the conflict. A signed Schedule Conflict Course Registration Form is required from each instructor.

Students are required to sign-off a statement of responsibility, noting that the scheduling conflict may impact mid-term exams, final examinations and other course requirements. It is the student's responsibility to fulfill all course requirements in both courses.

Syllabi

All students are to receive a course syllabus on the first scheduled class of the course. The syllabus will follow the course outline template adopted by the academic department. Syllabi are the property of the RCCIT. Students are encouraged to keep their course syllabi for possible use in obtaining advanced standing / transfer credit from another post-secondary institution.

Online Supplementary Materials

Course materials are to be posted on Webcampus following the online course template(s) adopted by the academic department.

Labs

Each studio and lab will post policies and procedures to ensure the integrity and security of the learning environment and to document access to the lab during scheduled and non-scheduled classes. These policies and procedures pertain to all students and faculty who use the facility.

Lab policies are listed in each school's handbook.

RCCIT Academic Calendar

Re-scheduled Classes

Each course curriculum is to be covered within the term. Re-scheduled classes due to instructor absences are to be scheduled by the instructor and the class at a mutually agreeable time. Re-scheduled notices will be posted in the usual classroom and on Webcampus.

Online Course Delivery

Some courses in degree programs may be offered through online delivery. In both their development and delivery, online courses follow best practices, consistent with the Post-secondary Education Quality Assessment Board (PEQAB) benchmarks and standards for delivery using the internet. Course learning objectives are the same whether the course is delivered in-class or online.

Specific policies are in place for students taking courses delivered online:

Orientation to Online Learning

All students who register for an online course are enrolled in the Online Learning Orientation course. This course is designed and maintained by the Information Technology and Instructional Design departments. The course helps students use the online resources effectively, and to guide users through set-up and configuration of their systems.

Technical Support

Technical support may be requested by a toll-free telephone line, email, or web-form. Requests for assistance received outside normal business hours may not be handled until the next business day.

RCCIT provides open access software to protect your computer and to use the *Turnitin*[®] program to check plagiarism in written assignments.

Essential Computer Hardware and Software

RCCIT expects students and faculty members to provide their own computer in order to participate fully in course activities. They should have access to a computer (PC or Apple) capable of accessing the Internet comfortably. A high speed (cable, phone line, or fibre optics) Internet connection is required; video and web-conferencing are being used increasingly in many courses. Email capability and a current version of Microsoft Internet Explorer or Mozilla Firefox are required. Both Internet Explorer and Firefox are available free of charge. Students should also have access to *Microsoft Word* and other tools to create, send and receive electronic documents. They should be familiar with sending and receiving email, attaching electronic files, and browsing web pages.

Additionally, faculty members need to become familiar with using the "track changes" feature of *Microsoft Word* in order to provide feedback to students on their written assignments.

Faculty members and students will be given access to a library account, Moodle support, and to open source software that will protect their electronic files and communications.

Faculty members are responsible for becoming familiar with the Moodle CMS, and must make every effort to keep up-to-date with the evolving technology used by the institute to deliver courses.

RCCIT Academic Calendar

It is the policy of RCCIT to post and to publish minimum system requirements in all pre-admissions and registration materials associated with online courses and online delivery of programs of study. Students registering in an online course must meet these minimum requirements.

Community (Online Courses)

Students enrolled in online courses are members of the academic community. Through Webcampus, they will have access to the same services and online communications forums used by students enrolled in on-campus courses. All of these same opportunities are available to students registered in online courses:

- Bookstore
- Campus News
- Library
- Student Services
- Student Finance

In addition, specific opportunities are provided for students enrolled in online courses to interact:

- Online classrooms and studios
- Student Lounge
- Campus Help
- Textbook Exchange

Grading

Grades are posted at the end of each term. Designators indicate academic action rather than grades and are not included when computing academic averages.

Letter Grade	Grade Point	% Equivalent
A+	4.3	90 – 100%
A	4.0	85 -89%
A-	3.7	80-84%
B+	3.3	77-79%
B	3.0	73-76%
B-	2.7	70-72%
C+	2.3	67-69%
C	2.0	63-66%
C-	1.7	60-62%
D+	1.3	57-59%
D	1.0	53-56%
D-	0.7	50-52%
F	0.0	0-49%

RCCIT Academic Calendar

That RCC Institute of Technology adopt the following standards for achievement and performance related to grade categories:

Calendar Definition	Specific Letter Grades and GPA and % Equivalencies	Standard Required to Achieve the Letter Grade
A Excellent or Outstanding: Strong evidence of original thinking; good organization; capacity to analyze and synthesize; superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base.	A+ (4.3) 90 – 100%	Outstanding. Evidence of expertise in all key performance areas. The A+ is reserved for those few pieces of work and those rare overall achievements that are truly outstanding and exceed expectations.
	A (4.0) 85 – 89%	Excellent. Evidence of at least mastery in all key performance areas and of expertise in most.
	A- (3.7) 80 – 84%	Superior. Evidence of at least mastery in all key performance areas and of expertise in some.
B Good: Evidence of grasp of subject matter; evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with literature	B+ (3.3) 77 – 79%	Very good. Evidence of mastery in all key performance areas.
	B (3.0) 73 – 76%	Good. Evidence of at least competence in all key performance areas and of mastery in most.
	B- (2.7) 70 – 72%	More than competent. Evidence of at least competence in all key performance areas and of mastery in some.
C Satisfactory: Student who is profiting from the university experience; some evidence that critical and analytic skills have been developed; basic understanding of the subject matter and ability to develop solutions to simple problems in the material.	C+ (2.3) 67 – 69%	Competent. Evidence of competence in all key performance areas.
	C (2.0) 63 - 66	Fairly Competent. Evidence of competence in most but not all key performance areas.
	C- (1.7) 60 – 62%	Basic competence. Evidence of competence in some key performance areas.
D Minimally acceptable: Some evidence of familiarity with the subject matter but evidence of only minimal critical and analytic ability.	D+ (1.3) 57 – 59%	Marginal Performance. Superficial ability but not competency in most key performance areas.
	D (1.0) 53 – 56%	Minimal performance. Superficial ability but not competency in many key performance areas and deficient performance in some key performance areas.
	D- (0.5) 50 – 52%	Deficient performance. Superficial ability in only a few key performance areas and deficient performance in many areas.
F Inadequate: Little evidence of even superficial understanding of subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.	F (0.0) 0 – 49%	Failure. Deficient performance in all key performance areas.

RCCIT Academic Calendar

Grade Point System

GPA's are computed by dividing total grade points earned by the number of credit hours for which grades A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, are awarded. For each course, grade points are calculated by multiplying course credit hours by grade index points corresponding to the grade earned.

The term GPA (TGPA) is a GPA for work completed in a given term only. A student's overall academic standing is stated in terms of a cumulative GPA (CGPA), which is based on all grades and credit hours earned to date. All GPA's are based solely on courses required for graduation from the program of enrollment.

In addition:

- If an RCCIT course is repeated, the highest grade earned is used for computing the CGPA and TGPA.
- Withdrawal from a course being repeated does not affect the CGPA.
- RCCIT courses may be taken for credit after external transfer credit has been granted, and the grade earned at RCCIT will be used for both the TGPA and CGPA.
- A course replacement may be granted for a course previously taken at RCCIT. Hours and grade index points previously earned for the course will be included in the TGPA and CGPA.
- In all cases TPGAs reflect actual performance.

Designators

In addition to grades, RCCIT uses the following designators:

Designator	Definition
W	Withdrawal (prior to official withdrawal deadline)
T	Transfer Credit
P	Proficiency Credit

Designator of W - Course Withdrawal: A student who remains enrolled in courses after the course drop deadline and wishes to withdraw from a course must apply to do so through student services. If a course withdrawal occurs by Wednesday of Week 8, the course remains on the transcript and is designated with a W. A course withdrawal after Week 8 results in a grade of F.

Designator of T - Transfer Credit: An applicant intending to transfer credit from another institution must request a credit evaluation prior to the first semester, and must provide an official transcript and calendar from the institution where the credit was earned. RCCIT may require additional material for a credit evaluation by an approved external evaluation service (if credits were earned at a foreign institution). Students seeking to earn credit at another institution for transfer to RCCIT must have approval to do so in advance from the Program Chair. (See Program Transfer Credit and Advanced Standing)

Designator of P - Proficiency Credit: Students seeking proficiency credit for a course may request to take a proficiency examination provided they have not previously enrolled in the course at RCCIT. (See "[Examination Challenge for Credit](#)") Transfer or proficiency credit that satisfies graduation requirements is considered when determining a student's academic level and progress; however, this credit is not computed in grade point averages (GPA's).

Grade Appeals

Students are encouraged to speak to the course instructor if they question a final grade. Should this informal procedure be unsatisfactory, a student may formally appeal a grade following established procedures and deadlines through student services.

RCCIT Academic Calendar

Standards of Academic Progress

Students must demonstrate satisfactory academic progress toward completing their program of study. To be in good academic standing, a student must maintain a CGPA of 2.0 or higher on the 4.0 scale or 1.7 CGPA on the 4.3 scale. Some programs may have additional requirements. To remain eligible for financial assistance students must maintain academic progress and pass a minimum of 60% of classes each term of a full course load, please refer to the [Scholarships and other Financial Assistance](#) section of the calendar.

A student may be dismissed if:

- a) a student's CGPA at the end of the first completed term of studies is below 1.00 on the 4.0 scale or 0.7 on the 4.3 scale
- b) the student was on probation for the previous term and has a CGPA below 2.00 on the 4.0 scale or 1.7 on the 4.3 scale at the end of the term.
- c) the student was on probation for two previous terms and has a TGPA below 2.00 on the 4.0 scale or 1.7 on the 4.3 scale at the end of the term.

Program specific standards of academic progress are listed in each school's handbook.

Right of Appeal

A student who has been dismissed for failing to meet the standards of academic progress will receive an automatic appeal. The student is encouraged to submit a written petition to the Program Chair within the specified timelines and to document mitigating circumstances that contributed to poor academic performance. The petition should also include a realistic plan for improvement.

If the appeal is approved, the student may continue in the program with reinstatement conditions as specified. Failure to meet the specified conditions results in a second dismissal, and further reinstatement is not normally approved. Denied petitions may be presented to the dean of academics as a second appeal.

Progress Reports

Faculty are to provide each student enrolled in her/his course with an up-to-date grade at the end of Weeks 3, 6 and 9. Students who are 'at-academic-risk' are so advised.

Program specific policies and intervention actions are listed in each school's handbook.

Academic Honours

RCCIT maintains and posts two lists of students who achieve academic distinction in the previous term:

- The President's List recognizes all students who have had an outstanding term of studies.
- The Honours List tracks all students who have maintained a high CGPA.

Each school lists the criteria to achieve these academic distinctions.

Program specific criteria for academic honour designations are listed in each school's handbook.

Residency Requirements

Graduation policy lists the minimum portion of the student's program that must be completed through actual coursework while in residence at RCCIT. This residence requirement may vary by program, but it is always at least 35% of the program

Policy on Credentials

A student may earn a credential only in the program in which they student is registered.

Student Records

During a student's enrolment, RCCIT maintains student records that include admission and attendance information, academic transactions, student finance records and other relevant data. This information is kept for at least three years after the student is no longer enrolled. Students may review their individual files after notifying the registrars in writing.

Permanent student records include admission information and official academic transcripts.

Detailed Program Information

Bachelor of Interior Design

Program Description

The Bachelor of Interior Design degree offered by the Academy of Design at RCC Institute of Technology produces interior design professionals with broad technical skills and personal scope. Graduates of this program develop expertise in the latest technical and digital media, public health standards, safety and welfare issues, and develop a deeper cultural and ecological awareness.

Students also gain an understanding of the business side of Interior Design. Graduates are equipped with well-developed visual literacy, collaborative team approaches, and creative problem-solving skills to prepare them for the next step in their career.

The curriculum is taught by a diverse faculty of industry-connected, working professionals who prepare students to become design leaders in the industry. Projects include the design of residences, hotels and restaurants, offices, and industrial spaces.

Bachelor of Interior Design Accreditation

The interior design program leading to a Bachelor of Interior Design is accredited by the Council for Interior Design Accreditation (CIDA), www.accredit-id.org, 206 Grandville Avenue, Suite 350, Grand Rapids, MI, 49503-4014.

The RCCIT Bachelor of Interior Design is currently listed with the Association of Registered Interior Designers of Ontario (ARIDO) as an ARIDO-recognized program.

Bachelor of Interior Design Admissions Requirements

Applicants from a variety of educational backgrounds will be considered for admission, including:

- High school graduates
- Graduates of degree programs in related or unrelated fields
- Graduates of Bachelor of Fine Arts or Architectural Design programs
- Graduates of interior design diploma (two year) or interior decorating diploma programs
- Graduates of three (3) year interior design diploma programs

Students entering the Bachelor of Interior Design degree program from high school are required to submit an Ontario Secondary School Diploma (OSSD) or equivalent with at least a 65% average in six (6) courses from the University or University/College stream, including:

- English, grade 12
- One grade 12 Science at the U and/or U/M level or equivalent
- One grade 12 Math at the U and/or U/M level or equivalent
- Three (3) other grade 12 subjects at the U and/or U/M level or equivalent
- High school transcripts

A mature student is an applicant who has not achieved the Ontario Secondary School Diploma (OSSD) or its equivalent and who is at least 21 years of age on or before the commencement of the program in

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which he/she intends to enrol. RCC's admissions policy for mature students creates pathways for applicants who can demonstrate abilities equivalent to those of Ontario high school graduates through the successful completion of courses at the postsecondary level or through proficiency assessments.

In addition to the above requirements, all applicants must submit:

- A \$75 application fee
- Resume and Statement of Interest
- A completed application form (can be completed online)

Admissions Requirements—Online Delivery

Applicants for online delivery of the Bachelor of Interior Design program must meet the degree admissions requirements.

Bachelor of Interior Design Program of Study

		Credits
Term 1		
ENGL101	Research & Composition	3
DIDS1003	Introduction to Interior Design Theory	3
DIDT1301	Introduction to Drafting	3
DIDS1005	Fundamentals of Space Planning	3
DIDV130	Digital Drawing & Colour Theory	3
	Total:	15
Term 2		
DIDS107	Design Studio: Residential	3
DIDT142	Manual & Digital Drawing Standards	3
DIDV134	Visual Communications - Rendering	3
DIDE151	Products & Materials - Foundation	3
GE170	Art History - Ancient	3
	Total:	15
Term 3		
DIDS115	Design Studio: Retail	3
DIDT145	CADD	3
DIDV135	Visual Communications - Perspectives	3
DIDE155	Building Systems - Lighting	3
ENGL230	Professional Writing	3
	Total:	15

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Term 4		
DIDS203	Design Studio: Restaurant	3
DIDT235	Construction Drawings	3
DIDV225	Visual Communications - Technique	3
DIDE261	Products & Materials: Residential	3
GE171	Art History - Modern	3
	Total:	15
Term 5		
DIDS206	Design Studio: Advanced Residential	3
DIDV3200	Digital Media	3
DIDE255	Building Systems - Structures	3
DIDE4401	Codes & Regulations 1	3
GES200	General Studies (Tier 2)	3
	Total:	15
Term 6		
DIDS210	Design Studio: Workspace	3
DIDV3222	Revit	3
DIDE270	Building Systems - Power/HVAC	3
DIDP250	Professional Practice	3
GES220	General Studies (Tier 2)	3
	Total:	15
Term 7		
DIDS310	Design Studio: Moving Spaces	3
DIDV230	Digital Rendering	3
DIDH312	Global Architecture & Design	3
GES230	General Studies (Tier 2)	3
GES235	General Studies (level 2)	3
	Total:	15

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Term 8		
DIDS315	Design Studio: Hospitality	3
DIDE350	Materials & Sustainability - Advanced	3
DIDE344	Applied Lighting	3
DIDH211	History of Furniture	3
GES240	General Studies (Tier 2)	3
	Total:	15
Term 9		
DIDS320	Design Studio: Collaborative	3
DIDE360	Restoration	3
DIDH320	Research Methods in Interior Design	3
DIDH310	Canadian Architecture & Design	3
GES245	General Studies (Tier 2)	3
	Total:	15
Term 10		
DIDS410	Thesis 1: Research & Programming	3
DIDE4402	Codes & Regulations 2	3
DIDH420	Philosophy of Design	3
DIDP453	Marketing Professional Services	3
GES400	General Studies (Tier 3)	3
	Total:	15
Term 11		
DIDS401	Senior Thesis 2: Concept and Design	3
DIDT430	Advanced Specifications	3
DIDP451	Project Coordination	3
DIDP450	Internship 1	3
GES410	General Studies (Tier 3)	3
	Total:	15

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Term 12		
DIDS402	Senior Thesis 3: Completion	3
DIDT431	Advanced Estimating & Budgeting	3
DIDT432	Documentation	3
DIDP452	Internship 2	3
GES450	Design & Society (Tier 3)	3
	Total:	15
	PROGRAM TOTAL:	180

Bachelor of Interior Design Delivery Options

Students in the Bachelor of Interior Design program may have the opportunity to register either in an in-class delivery of the course at the Steeles Campus or in an online delivery using asynchronous learning technologies.

The course learning outcomes are equivalent regardless of the delivery. See Academic Policies: [Course Delivery](#).

Individual Course Descriptions and Credit Values

DIDE151 Products & Materials – Foundation

This course examines materials and products in a global context by exposing students to sustainable characteristics through life-cycle analysis. Emphasis is on determining the criteria for evaluating material and product usage based upon their inherent qualities, construction and manufacturing from a variety of perspectives.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDE155 Building Systems - Lighting

In this course, students will expand their knowledge of the principles and applications of lighting design and apply them to specific, specialized environmental situations. Emphasis is placed on creative lighting concepts, light level calculations, and the incorporation of custom lighting solutions and source design. Students will also refine their skills in the development of architectural drawings related to lighting design.

CREDITS: 3

Pre-requisites: DIDT142

Co-Requisites: None

DIDE255 Building Systems - Structures

This course covers basic structural theory and the major structural systems for buildings and an overview of building components with a focus on structural impact for interior design practice. Emphasis is on the application of knowledge through drawings and modeling as they relate to the design studio projects.

CREDITS: 3

Pre-requisites: DIDT145

Co-Requisites: None

DIDE261 Products & Materials: Residential

In this course, students will critically examine material and product use in a residential context. Emphasis is on material and product features, application, and installation with a focus on sustainable practices. Working from the foundation to the final details, students will holistically explore how specific materials and products support their design intent.

CREDITS: 3

Pre-requisites: DIDE151

Co-Requisites: None

DIDE270 Building Systems: Power / HVAC

This course emphasizes the function of environmental support systems as they relate to interior design practice and life safety support systems. Students learn to apply the underlying technical requirements for building systems (mechanical, electrical, and fire detection/suppression) and how they impact interior design decisions and construction drawings. Students also obtain an introduction to fundamental lighting criteria and considerations.

CREDITS: 3

Pre-requisites: DIDT145

Co-Requisites: None

DIDE344 Applied Lighting

In this course, students will apply previously learned lighting design principles to a variety of specific and specialized lighting situations. Emphasis is on the integration of creative lighting solutions with technical criteria related to user needs, source specification and layout, and building systems coordination. Students develop advanced drawings, details, and specifications to illustrate lighting intent, installation and construction coordination with related disciplines.

CREDITS: 3

Pre-requisites: DIDE155

Co-Requisites: None

DIDE350 Materials & Sustainability - Advanced

In this course, students will further their study of sustainable design based on foundational premises established in previous courses. Emphasis is on the integration of advanced critical thinking approaches to environmentally responsible processes and systems through the study of active design strategies and systems thinking with the integration of rating systems for high performance buildings.

CREDITS: 3

Pre-requisites: DIDE261

Co-Requisites: None

DIDE360 Restoration

In this course, students are exposed to the methods and strategies of historic restoration as they relate to interior and exterior architecture. Emphasis is on developing awareness and understanding of the impact that the preservation of historic structures has within social, economic, and sustainability contexts.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDE4401 Codes & Regulations 1

In this course, students will study current building codes, regulations and standards as they relate to the practice of interior design. Emphasis is on understanding the intent and interpretation of code regulations and applying basic knowledge to interior projects.

CREDITS: 3

Pre-requisites: DIDS115

Co-Requisites: None

DIDE4402 Codes & Regulations 2

In this course, students will continue their study and application of current building codes, regulations and standards as they relate to the practice of interior design. Emphasis is on the advanced analysis, application and documentation of regulatory information to interior design projects.

CREDITS: 3

Pre-requisites: DIDE4401

Co-Requisites: DIDS410

DIDH211 History of Furniture

In this course, students will study furniture design and styles within the context of critical analysis and historic influence. Emphasis is on the appreciation of historical precedents to better understand furniture design, construction, production, and manufacturing.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDH310 Canadian Architecture & Design

In this course, students will explore examples of vernacular architecture and notable practices to inform their understanding of historic and contemporary precedents in the provinces. Emphasis is on the investigation of precedents through research, observation and case study analysis to focus on the relevance of Canadian contributions to the study and practice of architecture and design and society as a whole.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDH320 Research Methods in Interior Design

This course addresses the role of research design methods in interior design identifying the relationship between research and practice in the profession. Emphasis is on the choice and attributes of tools for research methodologies with a focus on critical analysis of evidence-based research data.

CREDITS: 3

Pre-requisites: DIDS310

Co-Requisites: None

DIDH312 Global Architecture & Design

In this course, students will investigate global architecture and design with a focus on understanding the interrelationships between the built environments and underlying social, cultural, economic, political, technical and environmental issues. Emphasis is on the investigation and understanding of architecture and design as a reflection of the values and events that form a society and the role that design has to influence change.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDH420 Philosophy of Design

In this course, students will be exposed to a variety of theoretical and philosophical constructs related to the study of architecture and design. Emphasis is on building awareness and understanding of the relevance of design, and social theories within the context of the built environment.

CREDITS: 3

Pre-requisites: DIDS1005

Co-Requisites: None

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DIDP250 Professional Practice

In this course, students are introduced to the scope and complexity of professional interior design practice in a global marketplace. Emphasis is on the development of project administration documents; business planning strategies; and marketing approaches within the context of legal and ethical obligations to the public.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDP450 Internship 1

In this course, the student performs a self-assessment of their skills and career goals, in preparation for an internship experience in a professional environment. Emphasis is on developing a personal marketing strategy that will result in a meaningful internship placement. Students will research their local professional community and identify potential learning environments that will expose the student to different career options.

CREDITS: 3

Pre-requisites: DIDH320

Co-Requisites: None

DIDP451 Project Coordination

In this course, students continue to advance their project administration and coordination knowledge. Emphasis is on the understanding of processes related to project administration within the context of the interior design profession. Students will investigate project scheduling, administration and coordination through analysis of purpose, applications, benefits and the role played by the interior designer.

CREDITS: 3

Pre-requisites: DIDP250

Co-Requisites: None

DIDP452 Internship 2

Building on the students experience gained within DIDP450 Internship 1, DIDP452 Internship 2 advances the students experience within their placement opportunities. The will student engage in experiential learning opportunities in a professional environment spending 180 hours in a monitored professional environment to further gain the necessary experience to transition from student to pre-professional. Emphasis is on diversified learning experiences and exposure to a variety of career options and individual pathways to careers available. The student will also gain alternate points of view and the value of lifelong learning and community experience.

CREDITS: 3

Pre-requisites: DIDP450

Co-Requisites: None

DIDP453 Marketing Professional Services

In this course, students investigate the marketing process as a means of understanding how to best present themselves as a design professional. Emphasis is on the refinement of a comprehensive pre-professional portfolio that illustrates their knowledge, skill, and individual vision as a precursor to degree completion.

CREDITS: 3

Pre-requisites: DIDP250

Co-Requisites: None

DIDS1003 Introduction to Interior Design Theory

This course introduces the fundamental concepts and terminology of design, and the analysis of space, form, and order, relating them to the study and practice of interior design. Emphasis is on analysis and criticism through the study of fundamental design principles, and acquainting students with the design process and critical interior design theories related to the interaction of people and interior architectural space.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDS1005 Fundamentals of Space Planning

This introductory course establishes design vocabulary and encourages critical exploration of interior environments within the forum of space planning. Students will learn the fundamental building blocks of space planning that apply to all design sectors: anthropometrics; ethnographic observations; site analysis; human factors; barrier-free and universal design considerations; design codes and standards. Programming methodology is examined as part of the designer's toolkit and a means of integrating user needs with desired spatial qualities.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDS107 Design Studio: Residential

In this course, the student will develop an understanding of the concepts of space utilization and organization as well as the specific criteria of individual spatial problems. Students develop a conceptual approach to a small-scale residential space. Emphasis is on the integration of human behavioral theory within 3 dimensional spatial contexts and space planning.

CREDITS: 3

Pre-requisites: DIDS1301, DIDS1005

Co-Requisites: None

DIDS115 Design Studio: Retail

In this course, the student will acquire knowledge of retail design considerations and apply these principles to a commercial project focusing on the display and merchandising of products in a global marketplace. Emphasis is on programming skills, space planning and circulation strategies, and the creation of an interior environment that successfully focuses on the display and merchandising of product within established codes and architectural limitations.

CREDITS: 3

Pre-requisites: DIDS107, DIDV134

Co-Requisites: None

DIDS203 Design Studio: Restaurant

In this course, the student will acquire knowledge of restaurant design considerations and apply these principles to a commercial project focusing on branding and dining as the entertainment experience. Emphasis is on programming skills, space planning and circulation strategies, and the creation of an interior environment that successfully focuses on the users' experience and brand identity within established codes and architectural limitations.

CREDITS: 3

Pre-requisites: DIDS115, DIDV134

Co-Requisites: None

DIDS206 Design Studio: Advanced Residential

In this course, students will continue to develop their conceptual abilities and apply this process to a large-scale residential project. They will analyze spatial needs in terms of behaviour, life style and function and develop a design that integrates those needs with a focus on personal and social issues, and theoretical constructs related to diverse concepts of home and living spaces.

CREDITS: 3

Pre-requisites: DIDS115, DIDV134

Co-Requisites: None

DIDS210 Design Studio: Workspace

In this course, students will work within the specific program requirement of a corporate office client to create an efficient, functional and comfortable work place. Emphasis is on programming and planning methodology for commercial spaces, consideration of architectural limitations that apply to the design solution, and developing an awareness of system furniture and office ergonomics.

CREDITS: 3

Pre-requisites: DIDS115, DIDV134

Co-Requisites: None

DIDS310 Design Studio: Moving Spaces

In this course, students will examine mobile, deployable and compact spaces with a focus on design solutions for highly specialized conditions. Emphasis is on the research, programmatic, and conceptual development of spaces that serve contemporary social issues for emergency shelter. Students apply integrated design-team strategies for innovative and sustainable design solutions.

CREDITS: 3

Pre-requisites: DIDS210

Co-Requisites: None

DIDS315 Design Studio: Hospitality

In this course, students will apply advanced design methodology using collaborative approaches to a hospitality project. Emphasis is on the integration of evidence-based design research and design criteria governing the planning, spatial articulation, and materials used in the renovation of an existing boutique hotel. Design development is informed by a comprehensive design concept and presentation media that illustrates advanced processes, and architectural definition.

CREDITS: 3

Pre-requisites: DIDS210

Co-Requisites: None

DIDS320 Design Studio: Collaborative

In this course, students participate in an interdisciplinary collaborative project as approved by the department chair. Emphasis is placed on the creative aspect of the chosen project, the ability of the team to provide a cohesive rationale for the project's exploration and desired outcome, and a program for their research that culminates in the final project results.

CREDITS: 3

Pre-requisites: DIDS210, DIDV230

Co-Requisites: None

DIDS410 Thesis 1: Research & Programming

Upon completion of all previous studios, students will begin the first of a three-course thesis sequence and begin the research and programming phase of their final thesis project. Using research methodologies, emphasis is on the analysis and critical review of supporting information from the social sciences. Design methodology is applied to a topic and project of personal and professional relevance, while addressing a social and/or environmental need. The resulting research and programming synthesis informs the conceptual and design development of the project in subsequent courses.

CREDITS: 3

Pre-requisites: All Studio courses, DIDH320

Co-Requisites: DIDE4402

DIDS401 Senior Thesis 2: Concept & Design

In this second of the thesis course series, students build on the foundation and successful completion of Senior Thesis 1: Programming. They will develop advanced conceptual frameworks to inform the direction of the design and presentation of their thesis project. Emphasis is on the generation of a comprehensive design concept that is integrated theoretically and spatially through the development of schematic diagrams and sketches, and refined using industry standard architectural and design drawings.

CREDITS: 3

Pre-requisites: DIDS410

Co-Requisites: DITD430

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DIDS402 Senior Thesis 3: Completion

In this final of the thesis course series, students develop the final presentation and construction documentation of their thesis project. Emphasis is on the documentation of the project as a whole using a planned methodology to illustrate all phases of the design process. The final project represents students' highest achievement, demonstrating the assimilation of knowledge and skill as a pre-professional designer.

CREDITS: 3

Pre-requisites: DIDS401

Co-Requisites: DIDT431 & DIDT432

DIDT1301 Introduction to Drafting

In this course, the student will develop basic skills in architectural drafting and use of equipment, as well as terminology. The student will also develop drawing and sketching skills required to illustrate ideas using architectural/design style graphic methods.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDT142 Manual & Digital Drawing Standards

In this course, the student will develop skills in preparing both manual and digital production drawings. Students will take their advanced manual technical skills into an introduction of CADD. The course will focus on introductory to intermediate level commands and techniques using the current industry-standard version of AutoCAD. Emphasis is on the transfer of drafting knowledge from previous courses into CADD based skills through a series of in-class problem solving exercises and through the production of architectural drawings.

CREDITS: 3

Pre-requisites: DIDT1301

Co-Requisites: None

DIDT145 CADD

In this course, students will continue to explore and utilize computer aided drawing technology. This course focuses on intermediate to advanced level commands, techniques, and protocols as well as productivity enhancing features with an emphasis on professional level utilization for two dimensional presentation and construction drawings.

CREDITS: 3

Pre-requisites: DIDT142

Co-Requisites: None

DIDT235 Construction Drawings

In this course, the student will develop knowledge and skills in the areas of architectural construction drawings and details. Analytical skills and processes provide a foundation for the application of knowledge from previous courses to technical architectural drawings using industry standards and tools. Emphasis is placed on the illustration of appropriate materials, assemblies and components for a set of interior detailed construction drawings.

CREDITS: 3

Pre-requisites: DIDT145

Co-Requisites: None

DIDT430 Advanced Specifications

In this course, students will develop advanced knowledge and skill in the writing of specifications for an interior design project. Emphasis is on understanding the issues involved in specifying, identifying appropriate documentation formats, and practical application of that knowledge in their thesis project.

CREDITS: 3

Pre-requisites: DIDS410

Co-Requisites: DIDS401

DIDT431 Advanced Estimating & Budgeting

In this course, students investigate the issues and process involved in the preparation of a cost estimate budget for an interior design project. Emphasis is on development of a comprehensive cost estimate package relating to the focus of their thesis design project.

CREDITS: 3

Pre-requisites: DIDS401

Co-Requisites: DIDS402, DIDT432

DIDT432 Documentation

In this course, students will examine commercial building construction and detailing with a focus on integration of building systems with interior construction. Emphasis is on the completion of details, interior construction, and finish drawings for their thesis design project.

CREDITS: 3

Pre-requisites: DIDS401, DIDT235

Co-Requisites: DIDS402 & DIDT431

DIDV130 Digital Drawing & Colour Theory

This course introduces basic computer applications for digital drawing and colour theory. Students will develop essential skills in the use of digital software applications while incorporating colour principles, theory, and systems as it applies to design composition, human perception and environmental psychology.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

DIDV134 Visual Communications – Rendering

In this course, students are introduced to basic rendering techniques using a variety of media. Emphasis is on the integration of color rendering to two dimensional plans and elevations and basic perspectives to illustrate materiality and spatial character. Students will also demonstrate the construction of basic one and two-point perspectives, developing the basic vocabulary of visual communication.

CREDITS: 3

Pre-requisites: DIDV1301, DIDV130

Co-Requisites: None

DIDV135 Visual Communications – Perspectives

In this course, students will expand and refine their skills in perspective drawing and rendering techniques. Emphasis is on the progression of sketching skills, architectural diagramming, and the detailed construction of perspective drawings with an emphasis on complex three dimensional spaces. Students will integrate illustrative techniques to represent scale, proportion, and advanced light modeling to portray the qualities of the built environment. The course builds upon previous knowledge in presentation composition to support design studio projects.

CREDITS: 3

Pre-requisites: DIDV134

Co-Requisites: None

DIDV225 Visual Communications – Technique

This course builds on the drawing and rendering techniques developed previously through an investigation of advanced techniques, mixed media, and graphics software. Emphasis is on the use of appropriate media to support project type and illustrative intent. Students will refine their presentation skills through the use of advanced mixed media approaches to effectively convey design concept integration throughout project design.

CREDITS: 3

Pre-requisites: DIDV135

Co-Requisites: None

DIDV230 Digital Rendering

In this course, the student will develop skills in preparing 3D digital production models and renderings. The student will learn to use a variety of professional level computer rendering software programs to enhance their ability to produce realistic illustrations of 3 dimensional models. Emphasis is on the production of detailed images that accurately represent materiality and spatial quality through realistic lighting and environmental influences. Students will also learn to use computer modelling and rendering as a tool to investigate and evaluate design solutions as part of the design process.

CREDITS: 3

Pre-requisites: DIDV3222

Co-Requisites: None

DIDV3200 Digital Media

In this course, students will expand their presentation skills using digital software applications and apply those skills to the refinement of their presentation skills. Emphasis is on advanced image manipulation and refinement for page layout and presentation of their work to best represent their individual abilities and vision as designers. Students will explore and develop their own personal presentation strengths by furthering their visual presentation skills, demonstrating when and where to appropriately apply them.

CREDITS: 3

Pre-requisites: DIDV130, DIDV225

Co-Requisites: None

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DIDV3222 Revit

In this course, students are introduced to the principles and uses of Building Information Modeling (BIM) software as utilized in the profession. Emphasis is on the use of modeling commands and protocols resulting in professional-level deliverables including presentation drawings and construction documents.

CREDITS: 3

Pre-requisites: DIDT235

Co-Requisites: None

GENERAL STUDIES PROGRAM

Three-Tier Course Architecture for the General Studies Program

Tier I: Communications, Research and Thinking Courses

Tier I courses emphasize foundational skills and competencies. They are offered early in the students' program and provide the basis upon which more advanced learning is built. They include analytical, research, critical thinking, and communication skills and competencies.

Tier II: Arts and Social Sciences Courses

Tier II courses are breadth of knowledge courses in subject-specific areas of Arts and Social Sciences. They are designed to encourage students to analyse concepts, build analyses and arguments, and to undertake research particular to established academic disciplines.

Tier III: Integrated Studies Courses

Tier III courses are inherently interdisciplinary and require students to integrate skills, competencies, and knowledge acquired in Tiers I and II and to apply these to new areas of understanding. Students extend abstractions to make connections both within the subject area and beyond it, learning to transfer generalized principles and ideas from a specific instance to real-world issues, synthesizing and evaluating knowledge.

GENERAL STUDIES COURSES

ECON211 Microeconomics

This course teaches the theory and concepts of microeconomics within the context of market decisions. It examines the concepts of supply and demand; pricing and elasticity; consumer behaviour and its impact on economic decisions; market structures that form the basis for various levels of competition; different types of markets, including labour and factor markets; and the role of government as it relates to microeconomic policy. It synthesizes theoretical concepts and examples of everyday events.

Tier 2 Course

CREDITS: 3

Pre-requisites: One Tier 1 course

Co-Requisites: None

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ENGL101 Research & Composition

This course builds on the conventions and techniques of composition through critical reading and writing related to the student's program of study. Students apply principles of logic, strategic thinking, and synthesis to prepare sound arguments supported by relevant, well documented research. The culminating activity is a persuasive and analytical paper referencing contemporary issues in technology where individual style and unique thinking are demonstrated.

Tier 1 Course

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

ENGL230 Professional Writing

This course extends composition and research principles to writing in a career context. Students apply principles of economy and clarity to create business documents that are informative and persuasive. While the course focuses on all business correspondence, the capstone of this course is a formal research proposal or investigative report. Studies include electronic communication and oral reporting.

Tier 1 Course

CREDITS: 3

Pre-requisites: ENGL101

Co-Requisites: None

ENGL250 The Workplace in Fiction

This course explores the workplace through its expression in the imaginative fiction of literature, film, and essays. Students will study poems, plays, short stories, films, and essays with themes or storylines that emanate from the workplace. Students will read, view, interpret, and analyze fiction relating to the workplace in order to understand the connections between occupation and personal identity and the connections between social and personal significance. Students will note and discuss trends in society that are illustrated by business and workplace attitudes and portrayed in creative fiction.

Tier 2 Course

CREDITS: 3

Pre-requisites: One Tier 1 course

Co-Requisites: None

GE170 Art History - Ancient

This course introduces students to the art and architecture of ancient societies from around the world, spanning pre-history to the fall of the Roman Empire. Using a broad, interdisciplinary approach, various art works are examined as emanations of a universal human condition and as unique expressions of culturally-specific worldviews. After exploring various definitions of 'art' and an overview of the earliest emergence of art and artistic traits in human history, focus then turns toward the complexities of the ancient mind and ancient civilizations. Through the art and architecture of each historical period, students learn the symbolic 'language' through which ancient societies transmitted their most profound ideas. Greater fluency in this ancient symbolic language allows students to understand the differences between sacred, traditional theological and profane art and the concepts that define their original purposes.

Tier 1 Course

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

GE171 Art History – Modern

The road to understanding modern and contemporary art begins with a study of the evolution of the modern mind. Students will begin by analyzing the transition from a medieval worldview through the emergence of a scientific outlook. The Renaissance and the resurgence of ancient Classical learning are examined for its influence on artistic and architectural styles and for both its adoption and challenge to theological doctrines. Finally, the art of the nineteenth and twentieth century is explored as both a culmination and 'end' to the narrative of art history and also as a growing modern desire to return to a deeper and more ancient spirituality in art.

Tier 1 Course

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

GEOG210 Human Geography

Human geography examines how people, communities, and cultures interact within physical geographic space. It looks at how the spatial environment affects key categories of human activities. The course includes an overview of the location, flow, and uses of the earth's principle resources, both natural and human. It emphasizes how the physical characteristics of the earth's surface affect political, social, cultural, demographic, and economic dynamics throughout the world, and explores the potential effects of ecological threats.

Tier 2 Course

CREDITS: 3

Pre-requisites: One Tier 1 course

Co-Requisites: None

GES450 Design & Society

Design thinking is a creative problem solving method used in a wide variety of disciplines. This course gives students a broad conceptual understanding of the theories and philosophies that form the foundation of the design thinking process, building towards a practical application of the methods.

Tier 3 Course

CREDITS: 3

Pre-requisites: Two Tier 2 courses

Co-Requisites: None

HUMN422 Topics in Technology and Society

In this interdisciplinary, integrative course, the relationship between technology and society is investigated through readings, reflection, assignments, class discussion, and a formal research essay. The course identifies conditions that have promoted technological development and assesses its social, political, environmental, psychological, and economic effects. Issues of power and control and consideration of the effects of technologies on the human condition are primary themes. Written discussions, assignments, and the writing of a formal research essay draw together students' prior learning in other general education courses.

Tier 3 Course

CREDITS: 3

Pre-requisites: Two Tier 2 courses

Co-Requisites: None

HUMN430 Topics in Power and Society

In this interdisciplinary, integrative course, power, its meaning and its exercise between human beings and groups is investigated through readings, reflection, assignments, class discussion, and a formal research essay. The course describes a variety of taxonomies by which power can be defined and understood. Students look to the socially-based sources of power as well as the reasons individuals and groups acquiesce to power. Power is shown as a defining characteristic in all human activities by drawing on a wide array of social science and humanities scholarly material.

Tier 3 Course

CREDITS: 3

Pre-requisites: Two Tier 2 courses

Co-Requisites: None

PHIL300 Philosophical Thought and Leisure

This course uses philosophy and philosophical thinking and applies it to an examination of leisure. Students will learn to adopt a philosophical approach, examining and reflecting upon the role of leisure today in what makes the *good life*. The relationship between philosophy, the *good life*, and leisure act as a framework for examining key philosophical issues, such as ethics, education, religion, aesthetics and art, health, politics, and consumerism.

Tier 2 Course

CREDITS: 3

Pre-requisites: One Tier 1 course

Co-Requisites: None

POL310 Democratic Government

This course examines the institutions and processes found in democratic government, with an emphasis on Canada. It studies the nature of politics and the expression of political interests and beliefs through mechanisms of citizen, various civil society groups, and political party actions. It looks at the institutional expressions of constitutions, legislatures, the judiciary, and public policy making by administration, measuring these against the ideals and spirit of democratic thought.

Tier 2 Course

CREDITS: 3

Pre-requisites: One Tier 1 course

Co-Requisites: None

PSYC325 Psychology

This course provides a foundation for the understanding, prediction and direction of behaviour. Organized within a framework encompassing foundations, general topics, and applications, the course provides an understanding of how psychological principles and concepts relate to professional and personal life. Using psychology to specifically improve the quality of our lives, students examine the various schools of psychology in their application to research methods, learning, memory, sensation and perception, personality, human development, stress, and psychological disorders. In a collaborative and dynamic learning environment, students complete cases studies, conduct basic research, and evaluate findings.

Tier 2 Course

CREDITS: 3

Pre-requisites: One Tier 1 course

Co-Requisites: None

RCCIT Academic Calendar

SOCI300 Sociology and Culture

This course explores some of the major issues affecting society and culture. Intended for students at the middle level of the program, the goal is to provide a foundation of knowledge that serves as a base for critical exploration of the broader discipline of sociology. The topics explored include: research, culture, socialization, social structure and class, stratification, institutions, and urbanization as they affect Canadian society.

Tier 2 Course

CREDITS: 3

Pre-requisites: One Tier 1 course

Co-Requisites: None

RCCIT Academic Calendar

Graduation Requirements

The requirement for graduation is completion of all courses in the chosen program with a 2.0 CGPA in the 4.0 scale or 1.7 CGPA in the 4.3 scale, or better. Electives if required, and any course with grades W or F must be retaken in order to graduate.

A student is eligible for a degree after successfully completing all graduation requirements. These requirements include the completion of a minimum of 180 credits.

To remain in good academic standing a student must maintain a 2.0 CGPA in the 4.0 scale or 1.7 CGPA in the 4.3 scale, or better

A minimum of 63 credits must be achieved through coursework at RCC Institute of Technology

Bachelor of Technology, Electronics Engineering Technology*

Program Description

Global competition and the unparalleled speed at which new products are developed have greatly increased the need for highly productive and adaptive engineering technologists. Electronics specialists are at the heart of many of today's rapidly evolving technologies, applying their expertise in diverse areas such as power generation, telecommunications, wireless, computer networking, the internet, transportation, entertainment, medicine and space exploration.

To meet this need, the Faculty of Engineering Technology and Computing's Electronics Engineering Technology programs (degree and diploma) blend theoretical concepts with practical lab work, resulting in graduates who are well grounded in current technology and in electronics principles and applications. Degree graduates further develop their critical thinking, research and communications skills. These competencies, along with additional technical courses and higher-level practicum, prepare Engineering Technology and Computing degree graduates to begin productive and exciting careers.

Graduates use their technical and practical proficiency to implement and extend current technology, and may develop prototype products, optimize designs or manage system operations. These electronics professionals take a hands-on approach to applying engineering methods and principles, and are typically called on to perform test engineering and evaluation activities, as well as to provide manufacturing support and quality assurance. They often guide concepts developed by senior electronics engineers through the stages needed to become actual products or services.

With a strong emphasis on practical, "hands-on" skills, Engineering Technology and Computing degree/diploma graduates have been the first choice for technology focused corporations for over 75 years.

Degree Consent

In 2004, RCC Institute of Technology received Ministerial Consent to offer two degree programs— Bachelor of Technology (Electronics Engineering Technology) and Bachelor of Technology (Computer Information Technology). These consents were awarded after rigorous reviews conducted by the Postsecondary Education Quality Assessment Board (PEQAB) and according to the *Postsecondary Education Choice and Excellence Act, 2000*. Details are available at the PEQAB website at www.peqab.ca. As of 2013, the Bachelor of Technology (Computer Information Systems) program is renamed as Bachelor of Business Information Systems.

*RCC degree programs are offered under the written consent of the Minister of Training, Colleges and Universities for the period from 14/01/2013 to 14/01/2018. Prospective students are responsible for satisfying themselves that the programs and the degrees will be appropriate to their needs (e.g. acceptable to potential employers, professional licensing bodies, or other educational institution). RCC Institute of Technology is approved by and operates in the province of Ontario. Yorkville University is approved by and operates in the province of New Brunswick.

RCCIT Academic Calendar

Bachelor of Technology (Electronics Engineering Technology) Admissions Requirements

Admission requirements for students entering the Electronics Engineering Diploma program out of high school are as follows:

- High School Diploma with an average of at least 65% in six courses from the U/M level or equivalent including;
- Senior Math (grade 12) Calculus is recommended
- Senior English (grade 12)
- Senior Physics (grade 12) or the RCC physics bridging course

Other

Post-admission, students are asked to demonstrate proficiency in basic college-level skills by writing diagnostic assessments in math and language usage. The results of these assessments will be used to counsel students about remedial tutoring and in some cases students may be required to enroll in remedial courses.

Mature Students

A mature student is an applicant who has not achieved the Ontario Secondary School Diploma (OSSD) or its equivalent and who is at least 21 years of age on or before the commencement of the program in which he/she intends to enrol. RCCIT's admissions policy for mature students creates pathways for applicants who can demonstrate abilities equivalent to those of Ontario high school graduates through the successful completion of courses at the postsecondary level or through proficiency assessments.

Bachelor of Technology, Electronics Engineering Technology Program of Study

		Credits
Term1		
CMP101	Computer Applications for Business	2
EAC116	Electronic Circuit Analysis 1	8
ENGL101	Research and Composition	3
MATH132	Applied Mathematics	3
		Total: 16
Term2		
EAC126	Electronic Circuit Analysis 2	8
MATH171	Applied Mathematics 2	4
SPCH236	Presentation Skills	3
		Total: 15
Term3		
DIG211	Digital Circuits I	5
EAC231	Electronic Circuits and Devices	8
MATH216	Probability and Statistics	3
		Total: 16
Term4		
COMM221	Analog Communications	3
CPROG210	Introduction to Computer Programming Using C++	3
DIG251	Digital Circuits II	5
MATH251	Applied Calculus	3
ENGL230	Professional Writing	3
		Total: 17
Term5		
COMM251	Digital Communications	4
CPROG220	Intermediate C++ Programming	3
DIG261	Digital Systems	5
PHYS231	Physics	4
		Total: 16
Term6		
COMM351	Data Communications	3
DIG311	Introduction to Microcontrollers	4
NET321	Introduction to Networking	4
SPR321	Applied Signal Processing I	4
		Total: 15

RCCIT Academic Calendar

Term7		
CTL320	Control Systems I	3
DIG371	Peripheral Devices of Microcontrollers	4
MATH341	Applied Calculus 2	3
GES320	General Studies	3
SPR331	Applied Signal Processing II	4
	Total:	17
Term8		
COMM391	Transmission Lines and Antennas	4
CTL340	Control Systems II	3
DIG381	Embedded Processors Applications	4
GES360	General Studies	3
MATH451	Mathematical Analysis	3
	Total:	17
Term9		
COMM421	High Frequency Communication Techniques	4
DIG431	Embedded Wireless Systems	4
GES400	General Studies	3
PROJ411	Project Management I	2
SPR411	Applied Signal Processing III	4
	Total:	17
Term10		
CARD430	Career Development	2
COMM431	Microwave Communication Systems	4
CTL430	Industrial Control Systems I	3
DIG441	Advance Topics in Embedded Systems	4
PROJ421	Project Management II	1
SPRO411	Senior Project I	2
	Total:	16
Term11		
CTL440	Industrial Control Systems II	3
HUMN421	Technology, Society & Culture	3
LAW411	Law & Ethics	3
SPRO421	Senior Project II	3
TECHR410	Technical Review	0
	Total:	12
PROGRAM TOTAL:		174

Individual Course Descriptions and Credit Values

CARD430 Career Development

COURSE DESCRIPTION Career-planning strategies and resources are explored to prepare students for a successful job search and to develop effective methods for career advancement. Activities include critical self-evaluation, goal setting, company research, personal marketing plans, resume and cover letter preparation, and interviewing practice. A career development portfolio is assembled highlighting achievements, career goals, and professional development strategies.

CREDITS: 2

Pre-requisites: None

Co-Requisites: None

CMP101 Computer Applications for Business

COURSE DESCRIPTION Using personal computers and Windows operating systems, this course provides students with basic concepts underlying common office application software and then emphasizes practical experience with those software packages such as web browsers, word processors, spreadsheets, presentation managers and graphics packages. Software covered includes Microsoft Internet Explorer, Word, Excel, PowerPoint and Visio.

CREDITS: 2

Pre-requisites: None

Co-Requisites: None

COMM221 Analog Communications

COURSE DESCRIPTION This is the first course in the communications sequence. Topics include: the theory and applications of modulation and demodulation, the design and operation of modulators, oscillators, and mixers. This is followed by the introduction of the concept of heterodyning. Amplitude modulation (AM) process, the automatic gain control system (AGC), and the AM transmitter and receiver circuits are detailed. Fourier analysis application and the analysis of noise communication systems are introduced.

CREDITS: 3

Pre-requisites: EAC231, MATH171

Co-Requisites: None

COMM251 Digital Communications

COURSE DESCRIPTION This course builds on what was learned in the first course in the communication sequence. It introduces the design and analysis of single-side band (SSB) modulator circuits, crystal filters, and frequency multiplexers. Frequency modulation (FM) is introduced. FM transmitter and receiver circuits are analyzed, and FM and AM operations are compared. Digital modulation such as: Pulse Amplitude Modulation (PAM) and Pulse Code Modulation (PCM) are the introduced. Telephone systems including cell phones are discussed.

CREDITS: 4

Pre-requisites: COMM221, MATH251

Co-Requisites: None

COMM351 Data Communications

COURSE DESCRIPTION This course introduces applications related to the digital communication (transmission and reception of data). Topics covered include: digital encoding (Unipolar, polar and bipolar) and digital modulation and demodulation techniques: ASK (Amplitude Shift Keying), PSK (Phase Shift Keying), FSK (Frequency Shift Keying) and QAM (Quadrature Amplitude Modulation), hardware of PSTN (public switched telephone network), Serial interfaces and buses, modems, and the UART (universal asynchronous receiver transmitter). Communication protocols, error detection and correction, data compression and encryption, packet switched networks, ISDN (integrated services digital network), xDSL (all types of digital subscriber line), frame relay, ATM (asynchronous transfer mode) technologies, and SONET (synchronous optical network) are also discussed. The services and hardware of the Internet are introduced as well.

CREDITS: 3

Pre-requisites: COMM251

Co-Requisites: None

COMM391 Transmission Lines and Antennas

COURSE DESCRIPTION This course discusses the media of communications. Topics include: analysis of both transmission lines and fiber optics systems. Time-domain reflectometry (TDR) and its applications in transmission line and optical fibers are introduced. Then, the analysis of antennas is detailed including radiation patterns and polarization of various types of antenna.

CREDITS: 4

Pre-requisites: COMM351, PHYS231, MATH341

Co-Requisites: None

COMM421 High Frequency Communication Techniques

COURSE DESCRIPTION This course introduces RF (radio-frequency) circuit design and analysis. High frequency impedance matching techniques are detailed including the use of transformers, transmission line stubs, quarter wavelength transformers (QWT), Maxwell's equations, Z- and S- parameters are introduced.

CREDITS: 4

Pre-requisites: COMM391

Co-Requisites: None

COMM431 Microwave Communication Systems

COURSE DESCRIPTION This course covers microwave communications systems using waveguide. It analyzes electromagnetic propagation inside a waveguide. Microwave oscillators, amplifiers, antennas are analyzed. Radar systems, MIMO (multiple input multiple out put) and satellite communications are introduced.

CREDITS: 4

Pre-requisites: COMM421

Co-Requisites: None

CPROG210 Introduction to Computer Programming Using C++

COURSE DESCRIPTION This course is aimed at a wide range of Engineering Technology students. The course teaches the essence of C++ programming while building a strong foundation of computer science fundamentals. A variety of mathematical and engineering related programming projects allows students to apply what they learned to real-world problems. Steps of programming process from source code to a finished product, as well as structured designs are emphasized. Topics include algorithm design, data types, variables, math operators, strings, screen I/O, control structures, functions, arrays, and pointers.

CREDITS: 3

Pre-requisites: CMP101

Co-Requisites: None

CPROG220 Intermediate C++ Programming

COURSE DESCRIPTION This course expands upon the fundamentals covered in CPROG210. It covers object oriented programming concepts using C++. Topics include: program specification, design of abstract data types and classes, inheritance and compositions, virtual functions, overloading and templates, and encapsulation. Fundamentals of microcontroller programming using C language are also discussed.

CREDITS: 3

Pre-requisites: CPROG210

Co-Requisites: None

CTL320 Control Systems I

COURSE DESCRIPTION This course introduces fundamentals of control systems. It starts with the analysis of the basic building blocks of control systems. The analysis of systems using block diagrams is then introduced followed by a discussion of controllers, sensors, motors, actuators, and other components and their applications in control systems.

CREDITS: 3

Pre-requisites: SPR321

Co-Requisites: None

CTL340 Control Systems II

COURSE DESCRIPTION This course builds on what was introduced in CTL320. Transfer functions are revisited along with the concept of controllers. Stability analysis techniques are detailed. The design and analysis of PID controllers are detailed. Motor characteristics and performance are analyzed. Implementation considerations along with case studies are introduced.

CREDITS: 3

Pre-requisites: CTL320

Co-Requisites: None

CTL430 Industrial Control Systems I

COURSE DESCRIPTION This course builds on the concepts discussed in CTL340. It introduces numerous concepts and applications related to industrial process control, robotics, and automation. Topics include robotics fundamentals, and controller design aimed at improving the response of systems and minimizing the effect of external factors on industrial processes. Motor control in industrial systems is presented and motor selection criteria are detailed. Computer integrated manufacturing (CIM) is also introduced.

CREDITS: 3

Pre-requisites: CTL340, SPR321

Co-Requisites: None

CTL440 Industrial Control Systems II

COURSE DESCRIPTION This is the second course on industrial control systems; it builds on what was discussed in CTL430. It introduces industrial process modeling and simulation and associated controller design methods. Dynamic properties of multi-degree of freedom systems, including robotics applications, are examined and their control strategies are analyzed. Programmable logic controllers (PLCs) and their industrial applications are introduced.

CREDITS: 3

Pre-requisites: CTL430, PHYS231, MATH341

Co-Requisites: None

DIG211 Digital Circuits I

COURSE DESCRIPTION This course introduces the fundamentals of digital circuit analysis and design. Topics covered include; number systems and codes, the characteristics of basic and derived logic gates along with the operational characteristics of various logic families. Boolean algebra applications in the analysis and design of combinational logic circuits are detailed. Hardware description language, HDL, and programmable logic devices, PLDs, are introduced. The characteristics and operation of encoders/decoders, multiplexers and demultiplexers, and arithmetic circuits are introduced along with their applications.

CREDITS: 5

Pre-requisites: EAC126

Co-Requisites: None

DIG251 Digital Circuits II

COURSE DESCRIPTION This is the second course in the digital sequence. It builds on the combinational logic circuits discussed in DIG210 by the introduction of hardware description language (HDL) and programmable logic devices (PLDs). It addresses IC technologies (Bipolar and MOS), their DC, AC and interfacing characteristics. Sequential circuits are then introduced. Logic state and timing analysis of latches and flip-flops is covered. The design and analysis of counters and shift registers is detailed using state machine, discrete ICs, and PLDs.

CREDITS: 5

Pre-requisites: DIG211

Co-Requisites: None

DIG261 Digital Systems

COURSE DESCRIPTION This course begins with a treatment of multivibrators (e.g. 555 Timer) as timing devices and their applications in digital systems. It progresses to introductory concepts of Digital Signal Processors (DSP devices). It details the fundamentals of digital to analog converters (DACs) and analog to digital converters (ADCs). Memory devices (SRAM, DRAM, and ROM – including Flash) are discussed. The course concludes with introductory concepts of microcontrollers: Architecture (including memory organization), addressing modes, programmers' model, and high and low level languages.

CREDITS: 5

Pre-requisites: DIG251

Co-Requisites: None

DIG311 Introduction to Microcontrollers

COURSE DESCRIPTION This course provides a review of microcontroller systems fundamentals and their programming techniques. Assembling (or Compiling), linking, running, and basic troubleshooting procedures are addressed. It details architecture, system components, interrupt structure, serial and parallel input/output (I/O) interfacing, and memory system expansion. Several I/O port applications are implemented.

CREDITS: 4

Pre-requisites: DIG261

Co-Requisites: None

DIG371 Peripheral Devices of Microcontrollers

COURSE DESCRIPTION This course focuses on the design, analysis, controlling, and troubleshooting input/output (I/O) devices that are interfaced or embedded with microcontroller based system. Topics covered include: analog to digital converters (ADCs), pulse width modulation (PWM), input capture (IC), serial peripheral interface (SPI), controller area network (CAN), universal serial bus (USB) and Joint Test Action Group (JTAG) protocol.

CREDITS: 4

Pre-requisites: DIG311

Co-Requisites: None

DIG381 Embedded Processors Applications

COURSE DESCRIPTION This course introduces the hardware of the embedded processors and its operation system principle, in addition to their programming techniques. Topics covered include: registers, stack, floating point unit, interrupt architecture, memory map, memory management, bridge, fixed priority and dynamic scheduling, and interfacing application.

CREDITS: 4

Pre-requisites: DIG311, CPROG220

Co-Requisites: None

DIG431 Embedded Wireless Systems

COURSE DESCRIPTION The main objective for this course is analyzing, designing, programming and using the embedded wireless system. It includes detailed analysis of high frequency integrated circuit devices, electromagnetic wave radiation and detection, embedded surface mount antenna design and implementation, spread spectrum, and wireless protocols. Applications such as cell phone, IEEE802.11 protocol, and Zigbee protocol are introduced.

CREDITS: 4

Pre-requisites: COMM391, CPROG210, MATH451, DIG381

Co-Requisites: None

DIG441 Advance Topics in Embedded Systems

COURSE DESCRIPTION This course introduces various topics in embedded systems. Topics would vary from term to term. At present the course addresses Embedded Intelligent Systems. Current topics include: the principles of recognition, estimation, detection and optimization methods. The course also covers programming methods to embed the algorithms into processors.

CREDITS: 4

Pre-requisites: DIG381, MATH451, SPR411

Co-Requisites: None

EAC116 Electronic Circuit Analysis 1

COURSE DESCRIPTION In this course the atomic structure is introduced and applied to concepts such as charge carriers, current flow, electromotive forces and the expending of energy. Characteristics of circuit elements such as resistance, inductance and capacitance are introduced. Applying circuit theory to analyze DC circuits is detailed. Analysis of RC series and parallel circuits are discussed along with the design of simple resistive and RC circuits. Also discussed are the relationship between magnetism and inductance, sinusoidal AC generation, AC terminology, phasor diagrams and their applications, capacitive and inductive reactance as related to frequency, phase relationship between voltage, current, and impedance, analysis of series and parallel inductor, capacitor, and resistor combinations, characteristics of various passive filters including series and parallel. Relating theoretical analysis to laboratory measurements and troubleshooting circuits are emphasized. Basic and advanced soldering techniques are introduced. Electrical safety regulations are discussed

CREDITS: 8

Pre-requisites: None

Co-Requisites: MATH132

EAC126 Electronic Circuit Analysis 2

COURSE DESCRIPTION This course builds on the topics learned in EAC115. Topics include: combinations of series and parallel RLC circuits, combinations of series and parallel resonance circuits and the fundamentals of transformer operation. Design and troubleshooting of various AC circuits, including passive filter circuits, are also discussed. This course also introduces the theory and application of semiconductor devices; topics include: the characteristics of semiconductors and the operation and applications of diodes including special purpose diodes such as Zener, light-emitting, Schottky, varactor and tunnel diodes. Finally, power supply design is detailed.

CREDITS: 8

Pre-requisites: EAC116.

Co-Requisites: None

EAC231 Electronic Circuits and Devices

COURSE DESCRIPTION This course builds on topics introduced in EAC125. Topics include: the bipolar junction transistor, BJT, the analysis and design of bipolar junction transistor (BJT) single and multistage amplifiers, class A, B, and C operations, and the frequency response of amplifiers. The analysis and design of field effect transistor (FET) circuits are detailed including JFET and MOSFET. Further, the analysis and design of circuits built around operational amplifiers are discussed along with some application examples.

CREDITS: 8

Pre-requisites: EAC126

Co-Requisites: None

ENGL101 Research and Composition

COURSE DESCRIPTION This course builds on the conventions and techniques of composition through critical reading and writing related to the student's program of study. Students apply principles of logic, strategic thinking, and synthesis to prepare sound arguments supported by relevant, well-documented research. The culminating activity is a persuasive and analytical paper referencing contemporary issues in technology where individual style and unique thinking are demonstrated.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

ENGL230 Professional Writing

COURSE DESCRIPTION This course extends composition and research principles to writing in a career context. Students apply principles of economy and clarity to create business documents that are informative and persuasive. While the course focuses on all business correspondence, the capstone of this course is a formal research proposal or investigative report. Studies include electronic communication and oral reporting.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

HUMN421 Technology Society & Culture

COURSE DESCRIPTION In this capstone course, the relationship between society and technology is investigated through readings, reflection, research, and report writing. The course identifies conditions that have promoted technological development and assesses the social, political, environmental, cultural, and economic effects of current technology. Ethical issues are emphasized. Class discussions and students' reports (oral and written) draw together students' prior learning in technical and general education courses.

CREDITS: 3

Pre-requisites: ENGL130

Co-Requisites: None

LAW411 Law & Ethics

COURSE DESCRIPTION This course will introduce students to the fundamental legal principles applicable to businesses in Canada. Students will gain an understanding of the Canadian Legal System, Dispute Resolution, Contract Law, Business Torts, Property Law, Employment Law, Intellectual Property Law, as well as the key distinctions between Civil and Criminal Law. Students will apply legal theory in a practical manner through case scenarios and case analyses. Students will also examine ethical issues in law. Ethics will be integrated throughout the course by discussing ethics frequently and by providing an ethical perspective in each case analysis. The Code of Ethics of professional organizations such as OACETT and PEO will be discussed.

CREDITS: 3

Pre-requisites: None

Co-Requisites: None

MATH132 Applied Mathematics

COURSE DESCRIPTION This course introduces basic mathematical topics. It proceeds from the elementary math needed for basic electronics applications such as circuit analysis to more specialized applications in electronics technology. Course topics include: basic algebraic operations, definition and properties of trigonometric functions, and complex numbers and their applications.

CREDITS: 3

Pre-requisites: None

Co-Requisites: EAC116

MATH171 Applied Mathematics 2

COURSE DESCRIPTION This course has two parts. The first part is a continuation of the topics of MATH132; these include: powers and roots of complex numbers, applications of complex numbers in AC circuit analysis, trigonometric identities, exponential and logarithmic functions, solving systems of linear equations, and determinants. The second part introduces the applications of differential calculus in the solution of engineering problems with emphasis on circuits. Topics of the second part include: limits, rates of change, rules of differentiation of algebraic and transcendental composite functions, finding maxima and minima of functions and applications of derivatives in electrical circuit analysis.

CREDITS: 4

Pre-requisites: MATH132

Co-Requisites: None

MATH216 Probability and Statistics

COURSE DESCRIPTION This course introduces the fundamentals of the probability theory, statistical methods, and their applications in engineering technology. Topics covered include: descriptive statistics, correlation and regression analysis, probability concepts, and probability distributions. Also included is the application of statistical methods in decision-making and quality control

CREDITS: 3

Pre-requisites: MATH132

Co-Requisites: None

RCCIT Academic Calendar

MATH251 Applied Calculus

COURSE DESCRIPTION This course introduces integral calculus. Topics include: anti-derivative and indefinite integrals, rules of integration, definite integrals, substitution method of integration, and integration by parts. Applications of integration in electronics are also discussed.

CREDITS: 3

Pre-requisites: MATH171

Co-Requisites: None

MATH341 Applied Calculus 2

COURSE DESCRIPTION This course builds on topics introduced in MATH250 to introduce mathematical concepts and techniques for more advanced applications in electronics. Topics include: Laplace transform and Fourier analysis of periodic waveforms. The applications of both Laplace transform and Fourier analysis in electronics are also discussed.

CREDITS: 3

Pre-requisites: MATH251

Co-Requisites: None

MATH451 Mathematical Analysis

COURSE DESCRIPTION This course builds on the basic knowledge of calculus to introduce various methods of integration including: algebraic substitution, partial fraction methods, and trigonometric Integrals. The course also introduces the solutions of linear and nonlinear differential equations. MacLauren and Taylor series and their applications in electronics and physics are also introduced.

CREDITS: 3

Pre-requisites: MATH341

Co-Requisites: None

NET321 Introduction to Networking

COURSE DESCRIPTION The purpose of this course is to provide students with an understanding of the characteristics of communications media and the principles of networking. Topics covered include: OSI (open systems interconnect) reference model, frame relay, LAN (local area network) equipment, internetworking technologies, wireless network topologies, TCP/IP (transmission control protocol/Internet protocol) protocol suite, IP routing fundamentals and WAN (wide area network) technologies. Students are expected to be able to recommend, configure and upgrade scalable networking equipment to meet the needs of small to medium corporations.

CREDITS: 4

Pre-requisites: DIG251

Co-Requisites: None

PHYS231 Physics

COURSE DESCRIPTION This course covers several important topics in physics while emphasizing their applications in technology. Topics include vectors, laws of motion, work, energy, power, momentum, rotation, and simple machines. Also covered are fundamental concepts of electricity and magnetism and their applications, principles of optics and related applications, properties of fluids, basic thermodynamics, and selected topics in modern physics.

CREDITS: 4

Pre-requisites: MATH251

Co-Requisites: None

PROJ411 Project Management I

COURSE DESCRIPTION This course emphasizes basic principles of project management and its associated tools, laying the foundation for students to complete a senior project. Topics covered include project planning, feasibility analysis, scheduling, and progress monitoring using tools such as PERT (program evaluation and review technique) charts, critical path method (CPM), Gantt charts, CBA (cost benefit analysis) methods, project expediting, and project management software. The course also addresses current industry issues such as ISO certification, TQM (total quality management), and risk management.

CREDITS: 2

Pre-requisites: None

Co-Requisites: None

PROJ421 Project Management II

COURSE DESCRIPTION This course introduces the principles and the techniques involved in the design and the prototyping of electronic printed circuit boards (PCBs). Topics include: introduction of suitable design tools, drawing schematics, labeling, libraries, board layout, design considerations, and PCB prototyping. Every student is required to design and produce working electronic circuit boards. The course provides a prelude to the construction of the student's technical project.

CREDITS: 1

Pre-requisites: None

Co-Requisites: SPRO411

SPCH236 Presentation Skills

COURSE DESCRIPTION Building upon skills acquired in ENGL131, this course teaches elements of effective public speaking. Areas of study include audience analysis, organization, language, delivery and nonverbal communication. Practical application is provided through a series of individual and group presentations in a variety of rhetorical modes.

CREDITS: 3

Pre-requisites: ENGL101

Co-Requisites: None

SPR321 Applied Signal Processing I

COURSE DESCRIPTION This course introduces the fundamental concepts of analog signal processing. It starts with a review of operational amplifiers (Op Amps) and first-order filter circuits. Analog signals and their representation in time-, frequency-, and s-domain are discussed. Transfer functions, step response, frequency response, pole-zero maps and stability analysis of analog systems are detailed. The analysis and design of second-order systems are introduced. The use of MATLAB in the analysis and design of analog systems is emphasized.

CREDITS: 4

Pre-requisites: MATH251, EAC231

Co-Requisites: None

SPR331 Applied Signal Processing II

COURSE DESCRIPTION This is the second course in the sequence of signal processing. It introduces digital systems and signals. The course starts with a review of some of the fundamental concepts of signal processing. Comparisons between digital and analog systems are presented. Possible applications of digital signal processing are introduced. The z-transform and its applications, discrete transfer functions, pole-zero maps in the z-domain and their applications are discussed. The types and characteristics of digital filters are outlined. The use of MATLAB in the analysis and design of digital systems is emphasized.

CREDITS: 4

Pre-requisites: SPR321

Co-Requisites: None

SPR411 Applied Signal Processing III

COURSE DESCRIPTION This is the third course in the sequence of signal processing. It starts with review of fundamental concepts of digital signal processing along with the applications of MATLAB. The analysis of finite impulse response (FIR) filters and infinite impulse response (IIR) filters is detailed along with various design techniques of both filter types. Multi-rate digital signal processing and adaptive digital filters are introduced along with their applications. Hardware selection issues are then discussed. Finally, neural networks and their applications are introduced.

CREDITS: 4

Pre-requisites: SPR331

Co-Requisites: None

SPRO411 Senior Project I

COURSE DESCRIPTION This is the first course in a sequence of two courses devoted to the development and implementation of the senior project. In this course, students focus on step-by-step design and implementation of their individual and team project. This includes designing, testing, troubleshooting, and prototyping different stages of the final product. Students are required to write a report describing and analyzing all of the stages of their projects. The main objective is for students to develop their own senior project and to practice working in teams.

CREDITS: 2

Pre-requisites: PROJ411, SPR411, COMM421, DIG431

Co-Requisites: PROJ421

SPRO421 Senior Project II

COURSE DESCRIPTION This is the second course of the sequence devoted to the development of senior projects. It again involves design, implementation, testing, and formal demonstration of solutions realized using hardware or software or both. The ultimate objective is for students to demonstrate what they can do on their own. Students work in teams of two or three with each student contributing significantly to all stages of the project. Students design, evaluate and present a prototype of the projects to their project supervisors and to the public. They also write an individual technical report based on their project.

CREDITS: 3

Pre-requisites: SPRO411, CPROG221, PROJ421

Co-Requisites: None

RCCIT Academic Calendar

TECHR410 Technical Review

COURSE DESCRIPTION This course will enable students to present themselves in an enhanced professional manner. It will introduce students to time-tested presentation tools which elicit positive responses from others.

CREDITS: 0

Pre-requisites: None

Co-Requisites: None

Graduation Requirements

Students are eligible for a four-year bachelor's degree after successfully completing all graduation requirements. The program is composed of coursework typically distributed over eleven semesters. The minimum credit requirement for graduation is 174.

To remain in good academic standing a student must maintain a 2.0 CGPA in the 4.0 scale or 1.7 CGPA in the 4.3 scale, or better.

The graduation requirement is a 2.0 CGPA in the 4.0 scale or 1.7 CGPA in the 4.3 scale, or better, with a minimum grade of C for the Senior Project courses SPRO411 and SPRO421.

A minimum of 61 credits must be achieved through coursework at RCC Institute of Technology

Electronics Engineering Technology Diploma Program

Program Description

Electronics specialists are at the heart of many of today's rapidly evolving technologies, applying their expertise in diverse areas such as semiconductor chip manufacturing, telecommunications, wireless, computer networking, the Internet, transportation, entertainment, medicine and space exploration. Global competition and the unparalleled speed at which new products are developed have greatly increased the need for highly productive and adaptive engineering technologists.

To meet this need, the Faculty of Engineering Technology and Computing's Electronics Engineering Technology program (degree and diploma) blend theoretical concepts with practical lab work, resulting in graduates who are well grounded in current technology and in electronics principles and applications. Degree graduates further develop their critical thinking, research and communications skills. These competencies, along with additional technical courses and higher-level practicum, prepare RCCIT electronics degree/diploma graduates to begin productive and exciting careers.

Responsibilities of Electronics Engineering Technologists

Graduates use their technical and practical proficiency to implement and extend current technology, and may develop prototype products, optimize designs or manage system operations. These electronics professionals take a hands-on approach to applying engineering methods and principles, and are typically called on to perform test engineering and evaluation activities, as well as to provide manufacturing support and quality assurance. Graduates of the diploma program often guide concepts developed by senior electronics engineers from the design to the creation of actual products or services.

Accreditation

[Faculty of Engineering Technology and Computing](#)'s Electronics Engineering Technology programs are fully accredited by both the [Canadian Technology Accreditation Board \(CTAB\)](#) and the [Ontario Association of Certified Engineering Technicians and Technologists \(OACETT\)](#).

These bodies evaluate applied science and engineering technology programs at educational agencies for the purpose of identifying whether they meet the profession's approved standards and criteria. Accreditation and the ability to join [OACETT](#) and receive the exclusive, protected title of Certified Engineering Technologist (CET) will have a profound impact on your career opportunities and advancement opportunities in the technology sector.

[OACETT](#) and [CTAB](#) credentials are recognized across Canada and internationally, making it easy to transfer to another jurisdiction. After completing an accredited program at [Faculty of Engineering Technology and Computing](#), credentials will be accepted in the United States the U.K., all countries in the European Union and many other partner countries.

RCCIT Academic Calendar

Electronics Engineering Technology Diploma Admissions Requirements

Admission requirements for students entering the Electronics Engineering Diploma program out of high school are as follows:

High School Diploma

Senior Math (grade 12) Calculus is recommended, at least a 60% average

Senior English (grade 11 or 12)

Senior Physics (grade 11 or 12) or the RCC physics bridging course

Other

Post-admission, students are asked to demonstrate proficiency in basic college-level skills by writing diagnostic assessments in math and language usage. The results of these assessments will be used to counsel students about remedial tutoring and in some cases students may be required to enroll in remedial courses.

Mature Students

A mature student is an applicant who has not achieved the Ontario Secondary School Diploma (OSSD) or its equivalent and who is at least 21 years of age on or before the commencement of the program in which he/she intends to enrol. RCC's admissions policy for mature students creates pathways for applicants who can demonstrate abilities equivalent to those of Ontario high school graduates through the successful completion of courses at the postsecondary level or through proficiency assessments.

Electronics Engineering Technology Diploma Program of Study

		Contact Hours
Term1		
CMP101	Computer Applications for Business	3
EAC116	Electronic Circuit Analysis 1	13
ENGL101	Research and Composition	4
MATH132	Applied Mathematics	5
	Total:	25
Term2		
EAC126	Electronic Circuit Analysis 2	13
MATH171	Applied Mathematics 2	6
SPCH236	Presentation Skills	4
	Total:	23
Term3		
DIG211	Digital Circuits I	8
EAC231	Electronic Circuits and Devices	13
MATH216	Probability and Statistics	4
	Total:	25

RCCIT Academic Calendar

Term4		
COMM221	Analog Communications	5
CPROG210	Introduction to Computer Programming Using C++	4
DIG251	Digital Circuits II	8
MATH251	Applied Calculus	4
ENGL230	Professional Writing	4
	Total:	25
Term5		
COMM251	Digital Communications	6
CPROG220	Intermediate C++ Programming	4
DIG261	Digital Systems	8
PHYS231	Physics	7
	Total:	25
Term6		
ASP310	Analog Signal Processing	5
COMM351	Data Communications	5
DIG311	Introduction to Microcontrollers	6
NET321	Introduction to Networking	7
PROJ411	Project Management I	3
	Total:	26
Term7		
COMM370	Telecommunications Technology I	5
CTL320	Control Systems I	4
DIG320	Microcontrollers and Related topics	5
DSP320	Introduction to Signal Processing	4
MATH341	Applied Calculus 2	4
PROJ421	Project Management II	2
SPRO310	Senior Project I	3
	Total:	27
Term8		
CARD430	Career Development	3
COMM380	Telecommunications Technology II	6
CTL340	Control Systems II	4
LAW411	Law & Ethics	4
MATH451	Mathematical Analysis	4
SPRO320	Senior Project II	5
TECHR410	Technical Review	1
	Total:	27
PROGRAM TOTAL:		203

RCCIT Academic Calendar

Electronics Engineering Technology Diploma Graduation Requirements

A student is eligible for a technology diploma after successfully completing all graduation requirements. These requirements include the completion of a minimum of 203 contact hours.

To remain in good academic standing a student must maintain a 2.0 CGPA in the 4.0 scale or 1.7 CGPA in the 4.3 scale, or better.

The graduation requirement for this program is a 2.0 CGPA in the 4.0 scale or 1.7 CGPA in the 4.3 scale, or better.

Electronics Engineering Technology Course Descriptions

ASP310 Analog Signal Processing

COURSE DESCRIPTION This course introduces the fundamental concepts of analog signal processing. Operation amplifiers applications and basic filters are reviewed. Concepts and applications of time-, frequency-, and s-domain analysis are introduced. Transfer functions, step response, frequency response, pole-zero maps and stability analysis of analog systems are discussed, and then second-order systems are introduced.

CONTACT HOURS: 5

Pre-requisites: EAC231

Co-Requisites: None

CARD430 Career Development

COURSE DESCRIPTION Career-planning strategies and resources are explored to prepare students for a successful job search and to develop effective methods for career advancement. Activities include critical self-evaluation, goal setting, company research, personal marketing plans, resume and cover letter preparation, and interviewing practice. A career development portfolio is assembled highlighting achievements, career goals, and professional development strategies.

CONTACT HOURS: 3

Pre-requisites: None

Co-Requisites: None

CMP101 Computer Applications for Business

COURSE DESCRIPTION Using personal computers and Windows operating systems, this course provides students with basic concepts underlying common office application software and then emphasizes practical experience with those software packages such as web browsers, word processors, spreadsheets, presentation managers and graphics packages. Software covered includes Microsoft Internet Explorer, Word, Excel, PowerPoint and Visio.

CONTACT HOURS: 3

Pre-requisites: None

Co-Requisites: None

COMM221 Analog Communications

COURSE DESCRIPTION This is the first course in the communications sequence. Topics include: the theory and applications of modulation and demodulation, the design and operation of modulators, oscillators, and mixers. This is followed by the introduction of the concept of heterodyning. Amplitude modulation (AM) process, the automatic gain control system (AGC), and the AM transmitter and receiver circuits are detailed. Fourier analysis application and the analysis of noise communication systems are introduced.

CONTACT HOURS: 5

Pre-requisites: EAC231, MATH171

Co-Requisites: None

COMM251 Digital Communications

COURSE DESCRIPTION This course builds on what was learned in the first course in the communication sequence. It introduces the design and analysis of single-side band (SSB) modulator circuits, crystal filters, and frequency multiplexers. Frequency modulation (FM) is introduced. FM transmitter and receiver circuits are analyzed, and FM and AM operations are compared. Digital modulation such as: Pulse Amplitude Modulation (PAM) and Pulse Code Modulation (PCM) are the introduced. Telephone systems including cell phones are discussed.

CONTACT HOURS: 6

Pre-requisites: COMM221, MATH251

Co-Requisites: None

COMM351 Data Communications

COURSE DESCRIPTION This course introduces applications related to the digital communication (transmission and reception of data). Topics covered include: digital encoding (Unipolar, polar and bipolar) and digital modulation and demodulation techniques: ASK (Amplitude Shift Keying), PSK (Phase Shift Keying), FSK (Frequency Shift Keying) and QAM (Quadrature Amplitude Modulation), hardware of PSTN (public switched telephone network), Serial interfaces and buses, modems, and the UART (universal asynchronous receiver transmitter). Communication protocols, error detection and correction, data compression and encryption, packet switched networks, ISDN (integrated services digital network), xDSL (all types of digital subscriber line), frame relay, ATM (asynchronous transfer mode) technologies, and SONET (synchronous optical network) are also discussed. The services and hardware of the Internet are introduced as well.

CONTACT HOURS: 5

Pre-requisites: COMM251

Co-Requisites: None

COMM370 Telecommunications Technology I

COURSE DESCRIPTION This course introduces of transmission lines and their applications, antenna analysis and design, optical fiber and fiber optics systems. It also introduces time-domain reflectometry (TDR) and its applications in the analysis of the operations of in transmission lines and optical fibers.

CONTACT HOURS: 5

Pre-requisites: COMM221

Co-Requisites: None

COMM380 Telecommunications Technology II

COURSE DESCRIPTION This course focuses on microwave communications using waveguides. It discusses the electromagnetic wave propagation inside waveguides, different modes of propagation, and waveguide components and systems. Microwave oscillators, amplifiers, and antennas are discussed. Radar systems and satellite communications are introduced.

CONTACT HOURS: 6

Pre-requisites: COMM370

Co-Requisites: None

CPROG210 Introduction to Computer Programming Using C++

COURSE DESCRIPTION This course is aimed at a wide range of Engineering Technology students. The course teaches the essence of C++ programming while building a strong foundation of computer science fundamentals. A variety of mathematical and engineering related programming projects allows students to apply what they learned to real-world problems. Steps of programming process from source code to a finished product, as well as structured designs are emphasized. Topics include algorithm design, data types, variables, math operators, strings, screen I/O, control structures, functions, arrays, and pointers.

CONTACT HOURS: 4

Pre-requisites: CMP101

Co-Requisites: None

CPROG220 Intermediate C++ Programming

COURSE DESCRIPTION This course expands upon the fundamentals covered in CPROG210. It covers object oriented programming concepts using C++. Topics include: program specification, design of abstract data types and classes, inheritance and compositions, virtual functions, overloading and templates, and encapsulation. Fundamentals of microcontroller programming using C language are also discussed.

CONTACT HOURS: 4

Pre-requisites: CPROG210

Co-Requisites: None

CTL320 Control Systems I

COURSE DESCRIPTION This course introduces fundamentals of control systems. It starts with the analysis of the basic building blocks of control systems. The analysis of systems using block diagrams is then introduced followed by a discussion of controllers, sensors, motors, actuators, and other components and their applications in control systems.

CONTACT HOURS: 4

Pre-requisites: ASP310

Co-Requisites: None

CTL340 Control Systems II

COURSE DESCRIPTION This course builds on what was introduced in CTL320. Transfer functions are revisited along with the concept of controllers. Stability analysis techniques are detailed. The design and analysis of PID controllers are detailed. Motor characteristics and performance are analyzed. Implementation considerations along with case studies are introduced.

CONTACT HOURS: 4

Pre-requisites: CTL320

Co-Requisites: None

DIG211 Digital Circuits I

COURSE DESCRIPTION This course introduces the fundamentals of digital circuit analysis and design. Topics covered include; number systems and codes, the characteristics of basic and derived logic gates along with the operational characteristics of various logic families. Boolean algebra applications in the analysis and design of combinational logic circuits are detailed. Hardware description language, HDL, and programmable logic devices, PLDs, are introduced. The characteristics and operation of encoders/decoders, multiplexers and demultiplexers, and arithmetic circuits are introduced along with their applications.

CONTACT HOURS: 8

Pre-requisites: EAC126

Co-Requisites: None

DIG251 Digital Circuits II

CONTACT HOURS: 8

COURSE DESCRIPTION This is the second course in the digital sequence. It builds on the combinational logic circuits discussed in DIG210 by the introduction of hardware description language (HDL) and programmable logic devices (PLDs). It addresses IC technologies (Bipolar and MOS), their DC, AC and interfacing characteristics. Sequential circuits are then introduced. Logic state and timing analysis of latches and flip-flops is covered. The design and analysis of counters and shift registers is detailed using state machine, discrete ICs, and PLDs.

CONTACT HOURS: 8

Pre-requisites: DIG211

Co-Requisites: None

DIG261 Digital Systems

COURSE DESCRIPTION This course begins with a treatment of multivibrators (e.g. 555 Timer) as timing devices and their applications in digital systems. It progresses to introductory concepts of Digital Signal Processors (DSP devices). It details the fundamentals of digital to analog converters (DACs) and analog to digital converters (ADCs). Memory devices (SRAM, DRAM, and ROM – including Flash) are discussed. The course concludes with introductory concepts of microcontrollers: Architecture (including memory organization), addressing modes, programmers' model, and high and low level languages.

CONTACT HOURS: 8

Pre-requisites: DIG251

Co-Requisites: None

DIG311 Introduction to Microcontrollers

COURSE DESCRIPTION This course provides a review of microcontroller systems fundamentals and their programming techniques. Assembling (or Compiling), linking, running, and basic troubleshooting procedures are addressed. It details architecture, system components, interrupt structure, serial and parallel input/output (I/O) interfacing, and memory system expansion. Several I/O port applications are implemented.

CONTACT HOURS: 6

Pre-requisites: DIG261

Co-Requisites: None

DIG320 Microcontrollers and Related topics

COURSE DESCRIPTION This course introduces RISC (reduced instruction set computer) devices and their applications. Topics covered include the architecture, memory organization, interrupts, timers, and input/output interface. Programming and applications design using microcontrollers are emphasized. Also introduced are programmable logic controllers (PLCs) and their applications.

CONTACT HOURS: 5

Pre-requisites: DIG311

Co-Requisites: None

DSP320 Introduction to Signal Processing

COURSE DESCRIPTION This course introduces digital systems and their analysis. Fundamental concepts of signal processing are reviewed. Digital systems are introduced along with comparisons with analog systems. Some applications of digital signal processing are discussed. Discrete transfer functions, pole-zero maps in the z-domain and their applications are discussed. The types, characteristics, and applications of digital filters are outlined.

CONTACT HOURS: 4

Pre-requisites: DIG311

Co-Requisites: None

EAC116 Electronic Circuit Analysis 1

COURSE DESCRIPTION In this course the atomic structure is introduced and applied to concepts such as charge carriers, current flow, electromotive forces and the expending of energy. Characteristics of circuit elements such as resistance, inductance and capacitance are introduced. Applying circuit theory to analyze DC circuits is detailed. Analysis of RC series and parallel circuits are discussed along with the design of simple resistive and RC circuits. Also discussed are the relationship between magnetism and inductance, sinusoidal AC generation, AC terminology, phasor diagrams and their applications, capacitive and inductive reactance as related to frequency, phase relationship between voltage, current, and impedance, analysis of series and parallel inductor, capacitor, and resistor combinations, characteristics of various passive filters including series and parallel. Relating theoretical analysis to laboratory measurements and troubleshooting circuits are emphasized. Basic and advanced soldering techniques are introduced. Electrical safety regulations are discussed

CONTACT HOURS: 13

Pre-requisites: None

Co-Requisites: MATH132

EAC126 Electronic Circuit Analysis 2

COURSE DESCRIPTION This course builds on the topics learned in EAC116. Topics include: combinations of series and parallel RLC circuits, combinations of series and parallel resonance circuits and the fundamentals of transformer operation. Design and troubleshooting of various AC circuits, including passive filter circuits, are also discussed. This course also introduces the theory and application of semiconductor devices; topics include: the characteristics of semiconductors and the operation and applications of diodes including special purpose diodes such as Zener, light-emitting, Schottky, varactor and tunnel diodes. Finally, power supply design is detailed.

CONTACT HOURS: 13

Pre-requisites: EAC116.

Co-Requisites: None

EAC231 Electronic Circuits and Devices

COURSE DESCRIPTION This course builds on topics introduced in EAC126. Topics include: the bipolar junction transistor, BJT, the analysis and design of bipolar junction transistor (BJT) single and multistage amplifiers, class A, B, and C operations, and the frequency response of amplifiers. The analysis and design of field effect transistor (FET) circuits are detailed including JFET and MOSFET. Further, the analysis and design of circuits built around operational amplifiers are discussed along with some application examples.

CONTACT HOURS: 13

Pre-requisites: EAC126

Co-Requisites: None

ENGL101 Research and Composition

COURSE DESCRIPTION This course builds on the conventions and techniques of composition through critical reading and writing related to the student's program of study. Students apply principles of logic, strategic thinking, and synthesis to prepare sound arguments supported by relevant, well-documented research. The culminating activity is a persuasive and analytical paper referencing contemporary issues in technology where individual style and unique thinking are demonstrated.

CONTACT HOURS: 4

Pre-requisites: None

Co-Requisites: None

ENGL230 Professional Writing

COURSE DESCRIPTION This course extends composition and research principles to writing in a career context. Students apply principles of economy and clarity to create business documents that are informative and persuasive. While the course focuses on all business correspondence, the capstone of this course is a formal research proposal or investigative report. Studies include electronic communication and oral reporting.

CONTACT HOURS: 4

Pre-requisites: None

Co-Requisites: None

LAW411 Law & Ethics

COURSE DESCRIPTION This course will introduce students to the fundamental legal principles applicable to businesses in Canada. Students will gain an understanding of the Canadian Legal System, Dispute Resolution, Contract Law, Business Torts, Property Law, Employment Law, Intellectual Property Law, as well as the key distinctions between Civil and Criminal Law. Students will apply legal theory in a practical manner through case scenarios and case analyses. Students will also examine ethical issues in law. Ethics will be integrated throughout the course by discussing ethics frequently and by providing an ethical perspective in each case analysis. The Code of Ethics of professional organizations such as OACETT and PEO will be discussed.

CONTACT HOURS: 4

Pre-requisites: None

Co-Requisites: None

MATH132 Applied Mathematics

COURSE DESCRIPTION This course introduces basic mathematical topics. It proceeds from the elementary math needed for basic electronics applications such as circuit analysis to more specialized applications in electronics technology. Course topics include: basic algebraic operations, definition and properties of trigonometric functions, and complex numbers and their applications.

CONTACT HOURS: 5

Pre-requisites: None

Co-Requisites: EAC116

MATH171 Applied Mathematics 2

COURSE DESCRIPTION This course has two parts. The first part is a continuation of the topics of MATH132; these include: powers and roots of complex numbers, applications of complex numbers in AC circuit analysis, trigonometric identities, exponential and logarithmic functions, solving systems of linear equations, and determinants. The second part introduces the applications of differential calculus in the solution of engineering problems with emphasis on circuits. Topics of the second part include: limits, rates of change, rules of differentiation of algebraic and transcendental composite functions, finding maxima and minima of functions and applications of derivatives in electrical circuit analysis.

CONTACT HOURS: 6

Pre-requisites: MATH132

Co-Requisites: None

MATH216 Probability and Statistics

COURSE DESCRIPTION This course introduces the fundamentals of the probability theory, statistical methods, and their applications in engineering technology. Topics covered include: descriptive statistics, correlation and regression analysis, probability concepts, and probability distributions. Also included is the application of statistical methods in decision-making and quality control

CONTACT HOURS: 4

Pre-requisites: MATH132

Co-Requisites: None

MATH251 Applied Calculus

COURSE DESCRIPTION This course introduces integral calculus. Topics include: anti-derivative and indefinite integrals, rules of integration, definite integrals, substitution method of integration, and integration by parts. Applications of integration in electronics are also discussed.

CONTACT HOURS: 4

Pre-requisites: MATH171

Co-Requisites: None

MATH341 Applied Calculus 2

COURSE DESCRIPTION This course introduces integral calculus. Topics include: anti-derivative and indefinite integrals, rules of integration, definite integrals, substitution method of integration, and integration by parts. Applications of integration in electronics are also discussed.

CONTACT HOURS: 4

Pre-requisites: MATH251

Co-Requisites: None

MATH451 Mathematical Analysis

COURSE DESCRIPTION This course builds on the basic knowledge of calculus to introduce various methods of integration including: algebraic substitution, partial fraction methods, and trigonometric Integrals. The course also introduces the solutions of linear and nonlinear differential equations. MacLauren and Taylor series and their applications in electronics and physics are also introduced.

CONTACT HOURS: 4

Pre-requisites: MATH341

Co-Requisites: None

NET321 Introduction to Networking

COURSE DESCRIPTION The purpose of this course is to provide students with an understanding of the characteristics of communications media and the principles of networking. Topics covered include: OSI (open systems interconnect) reference model, frame relay, LAN (local area network) equipment, internetworking technologies, wireless network topologies, TCP/IP (transmission control protocol/Internet protocol) protocol suite, IP routing fundamentals and WAN (wide area network) technologies. Students are expected to be able to recommend, configure and upgrade scalable networking equipment to meet the needs of small to medium corporations.

CONTACT HOURS: 7

Pre-requisites: DIG251

Co-Requisites: None

PHYS231 Physics

COURSE DESCRIPTION This course covers several important topics in physics while emphasizing their applications in technology. Topics include vectors, laws of motion, work, energy, power, momentum, rotation, and simple machines. Also covered are fundamental concepts of electricity and magnetism and their applications, principles of optics and related applications, properties of fluids, basic thermodynamics, and selected topics in modern physics.

CONTACT HOURS: 7

Pre-requisites: MATH251

Co-Requisites: None

PROJ411 Project Management I

COURSE DESCRIPTION This course emphasizes basic principles of project management and its associated tools, laying the foundation for students to complete a senior project. Topics covered include project planning, feasibility analysis, scheduling, and progress monitoring using tools such as PERT (program evaluation and review technique) charts, critical path method (CPM), Gantt charts, CBA (cost benefit analysis) methods, project expediting, and project management software. The course also addresses current industry issues such as ISO certification, TQM (total quality management), and risk management.

CONTACT HOURS: 3

Pre-requisites: None

Co-Requisites: None

PROJ421 Project Management II

COURSE DESCRIPTION This course introduces the principles and the techniques involved in the design and the prototyping of electronic printed circuit boards (PCBs). Topics include: introduction of suitable design tools, drawing schematics, labeling, libraries, board layout, design considerations, and PCB prototyping. Every student is required to design and produce working electronic circuit boards. The course provides a prelude to the construction of the student's technical project.

CONTACT HOURS: 2

Pre-requisites: None

Co-Requisites: None

SPCH236 Presentation Skills

COURSE DESCRIPTION Building upon skills acquired in ENGL131, this course teaches elements of effective public speaking. Areas of study include audience analysis, organization, language, delivery and nonverbal communication. Practical application is provided through a series of individual and group presentations in a variety of rhetorical modes.

CONTACT HOURS: 4

Pre-requisites: ENGL101

Co-Requisites: None

SPRO310 Senior Project I

COURSE DESCRIPTION This is the first course in a sequence of two courses devoted to technical projects. In this course, students focus on step-by-step design and implementation of individual and team projects. This includes calculations, testing, troubleshooting, and prototyping of the various stages of the final product, in addition to the analysis of the work done. Students learn and practice developing projects and working in teams.

CONTACT HOURS: 3

Pre-requisites: COMM351, ASP310, DIG311

Co-Requisites: None

SPRO320 Senior Project II

COURSE DESCRIPTION This is the second course of the sequence devoted to the development of senior projects. It again involves design, implementation, testing, and formal demonstration of solutions realized using hardware or software or both. The ultimate objective is for students to demonstrate what they can do on their own. Students work in teams of two or three with each student contributing significantly to all stages of the project. Students design, evaluate and present a prototype of the projects to their project supervisors and to the public. They also write an individual technical report based on their project.

CONTACT HOURS: 5

Pre-requisites: SPRO310

Co-Requisites: None

TECHR410 Technical Review

COURSE DESCRIPTION This course will enable students to present themselves in an enhanced professional manner. It will introduce students to time-tested presentation tools which elicit positive responses from others.

CONTACT HOURS: 1

Pre-requisites: None

Co-Requisites: None

Electronics Engineering Technician

Program Description

With new skills developing at an unparalleled speed, highly adaptive Electronics Engineering Technicians have many exciting and productive career opportunities available to them in a variety of diverse fields.

The technician diploma emphasizes lab work, allowing students to test and apply new knowledge right away and develop the skills that are of immediate value in the workforce. In only one year of study, this program is a fast track for graduates seeking employment as technicians in a variety of areas

Electronics Engineering Technician Admissions Requirements

In order to enroll in the Electronics Engineering Technician diploma, OSSD (grade 12) or equivalent is required, or Mature Student Status (18 years of age or older); successful completion of mature student test supplied by Admissions.

If a student has already taken and passed a postsecondary course that covers the same material, they can apply for a credit transfer. The student will need an official transcript and the course outline from the postsecondary institution.

Electronics Engineering Technician Program of Study

		Contact Hours
Term1		
BUS115	Introduction to Technical and Business Writing	2
CMP110	Computer Applications for Technicians	2
EAC105	Electric Circuits	15
MATH115	Mathematics for Technicians	6
PHYS110	Basic Physics	3
Total:		28
Term2		
BUS135	Writing for Success in Business	2
DIG125	Introduction to Digital Circuits	5
EAC135	Electronic Devices and Circuits	13
EDM120	Technical Drawings	2
MATH125	Mathematical Techniques	6
Total:		28

Term3		
COMM215	Electronic Communications I	9
DIG225	Applications of Digital Circuits	10
EAC215	Advanced Electronic Circuits	7
EDM220	Electronics Schematics and PCBs	2
Total:		28

RCCIT Academic Calendar

Term4		
BUS240	Technical Presentations	2
COMM260	Electronic Communications II	4
CTL220	Introduction to Control Systems for Technicians	5
DIG265	Digital Systems and Microcontrollers	8
EDM240	Projects	2
NET215	Introduction To Computer Networks	4
PROG220	Computer Programming for Technicians	3
	Total:	28
PROGRAM TOTAL:		112

Electronics Engineering Technician Graduation Requirements

A student is eligible for a technician diploma after successfully completing all graduation requirements. These requirements include the completion of a minimum of 112 contact hours

To remain in good academic standing a student must maintain a 2.0 CGPA in the 4.0 scale or 1.7 CGPA in the 4.3 scale, or better.

The graduation requirement for this program is a CGPA of 1.7 or better.

Electronics Engineering Technician Course Descriptions

BUS115 Introduction to Technical and Business Writing

CONTACT HOURS: 2

COURSE DESCRIPTION This course introduces students to various aspects of writings needed in a work environment. Topics include: writing business correspondence, and technical and lab reports.

BUS135 Writing for Success in Business

CONTACT HOURS: 2

COURSE DESCRIPTION This course develops students' principles of logic, strategic thinking, and synthesis to prepare sound arguments supported by relevant, well-documented research. Topics include: research methodology, writing process, and research papers.

BUS240 Technical Presentations

CONTACT HOURS: 2

COURSE DESCRIPTION This course teaches students elements of effective presentations for technical and business situations.

CMP110 Computer Applications for Technicians

CONTACT HOURS: 2

COURSE DESCRIPTION Using personal computers and Windows operating systems, this course provides students with basic concepts of, and exposure to, common office application software such as word processors, spreadsheets, and presentation managers. Software covered includes Microsoft's Word, Excel, and PowerPoint. Also covered is screen capture software such as the open source Greenshot.

COMM215 Electronic Communications I

CONTACT HOURS: 9

COURSE DESCRIPTION This course starts by reviewing relevant topics from math and electronic circuits. This is followed by introducing the concepts and applications of amplitude modulation (AM) and frequency modulation (FM). The applications of transmission lines, antennas, and optical fiber are then introduced. The course emphasizes the concepts and applications rather than the details of mathematical analysis.

COMM260 Electronic Communications II

CONTACT HOURS: 4

COURSE DESCRIPTION This course introduces digital communication systems and telephone systems. Digital modulation techniques and digital transmission systems are introduced along with application examples. The telephone systems are explained. The discussion includes telephone instruments and signals, the public telephone network, and the cell telephone system.

CTL220 Introduction to Control Systems for Technicians

CONTACT HOURS: 5

COURSE DESCRIPTION In this course students are introduced to basic concepts of control systems and its practical applications; minimum mathematical formulation is used. Topics covered include: classification of control systems, the use of block diagram in the analysis of systems, and the fundamentals of feedback systems. Control systems components such as sensors and motors are discussed. The course addresses various examples of Control Systems including: speed, temperature, liquid-level, and position control systems in addition to practical servomechanism. Programmable controllers are introduced as well. (5 contact hours / 4 credit hours)

DIG125 Introduction to Digital Circuits

CONTACT HOURS: 5

COURSE DESCRIPTION The fundamentals of digital circuits and their applications are introduced in this course. Topics covered include; number systems and codes, the characteristics of basic and derived logic gates. Boolean algebra applications in the analysis and design of combinational logic circuits are detailed. Applications such as arithmetic circuits are introduced.

DIG225 Applications of Digital Circuits

CONTACT HOURS: 10

COURSE DESCRIPTION The course starts with an overview of combinational logic circuits and the introduction of PLD (Programmable Logic Devices) implementation. It progresses with the study of other examples combinational logic; namely: decoders, encoders, multiplexers and demultiplexers. Integrated circuit technologies related to logic families are introduced with emphasis on the interpretation of datasheet parameters. The basic building blocks of sequential circuits (latches and flip-flops) are then explored. Counters and shift registers and their applications are discussed.

DIG265 Digital Systems and Microcontrollers

CONTACT HOURS: 8

COURSE DESCRIPTION This course starts with the application of the 555 IC chip as a timing device for applications in digital systems. The course then addresses the fundamentals of digital to analog converters (DACs), analog to digital converters (ADCs) and memory devices including SRAM, DRAM, and ROM. The course concludes with introductory concepts of microcontrollers: Architecture (including memory organization), addressing modes, programmers' model, and high and low level languages).

EAC105 Electric Circuits

CONTACT HOURS: 15

COURSE DESCRIPTION This course introduces the characteristics of electric circuit elements such as resistance, inductance and capacitance. The application of various circuit theories to analyze DC circuits is detailed. AC circuits and their analysis are then discussed including series and parallel inductor, capacitor, and resistor combinations, characteristics of various passive filters including series and parallel. Relating theoretical analysis to laboratory measurements and troubleshooting circuits are emphasized. Basic and advanced soldering techniques are introduced. Electrical safety regulations are discussed

EAC135 Electronic Devices and Circuits

CONTACT HOURS: 13

COURSE DESCRIPTION This course introduces some important semiconductor devices and their applications. It starts with a simplified theory of semiconductors to enable the understanding of the characteristics and operation of devices such as diodes and transistors. Diodes and transistors are then introduced along with applications built around them. This is followed by the introduction of the field effect transistors and its circuits. Operational amplifiers are then introduced along with some examples.

EAC215 Advanced Electronic Circuits

CONTACT HOURS: 7

COURSE DESCRIPTION Operational amplifiers (Op Amps) and their applications are introduced in this course. The course starts with defining the fundamental concepts and operating parameters of Op Amps. This is followed by explanation of basic circuit applications. Special purpose circuits built around Op Amps, active filters and oscillator circuits are the discussed.

EDM120 Technical Drawings

CONTACT HOURS: 2

COURSE DESCRIPTION This course introduces students to the fundamentals of technical drawings. Topics include drawing views, projections, scale, dimensioning, lettering, line styles, cutting planes and drawing sizes. Types of drawings include: assembly drawings and wiring diagrams. Suitable software is used to implement all drawings.

EDM220 Electronics Schematics and PCBs

CONTACT HOURS: 2

COURSE DESCRIPTION This course introduces students to the fundamentals of schematics and their associated printed circuit boards (PCBs). Topics include schematic symbols, interpreting schematics, multi-page schematics, auxiliary notes, component data sheets, and PCB prototyping.

EDM240 Projects

CONTACT HOURS: 2

COURSE DESCRIPTION This course helps students to demonstrate what they can do on their own based on the accumulated knowledge and skills learned in several courses. Students will work in groups of two or three with each student contributing significantly to all stages of the project. Students also write an individual technical report based on their project.

MATH115 Mathematics for Technicians

CONTACT HOURS: 6

COURSE DESCRIPTION This course is the first of two courses designed to help students achieve the objectives of all technical courses in this program of study and attain the required skills expected in the work place. Course topics include: basic algebraic operations, solutions of algebraic equations, basic trigonometry and complex numbers and their applications in circuit analysis.

MATH125 Mathematical Techniques

CONTACT HOURS: 6

COURSE DESCRIPTION This course covers basic algebra topics such as exponential and logarithmic functions and introduces the applications of differential calculus in the solution of engineering problems with emphasis on circuits. Topics include: limits, rates of change, rules of differentiation and applications of derivatives in electrical circuit analysis.

NET215 Introduction To Computer Networks

CONTACT HOURS: 4

COURSE DESCRIPTION The purpose of this course is to provide students with an understanding of the characteristics of communications media and the principles of networking. Topics covered include: OSI (open systems interconnect) reference model, frame relay, LAN (local area network) equipment, internetworking technologies, wireless network topologies, TCP/IP (transmission control protocol/Internet protocol) protocol suite, IP routing fundamentals and WAN (wide area network) technologies. Students are expected to be able to recommend, configure and upgrade scalable networking equipment to meet the needs of small to medium corporations

PHYS110 Basic Physics

CONTACT HOURS: 3

COURSE DESCRIPTION This course provides students with a fundamental understanding of some physical concepts that are particularly important for technology applications. Topics addressed include: vectors, laws of motion, work, energy, power, momentum, rotation, and simple machines Also covered are the fundamental concepts of electricity and magnetism.

PROG220 Computer Programming for Technicians

CONTACT HOURS: 3

COURSE DESCRIPTION This course teaches the basic concepts and coding standards of the C++ programming language. Students are introduced to the fundamental elements of a programming language and the program development process through a C++ integrated development environment (IDE). The design of problem solving algorithms is an integral element of this course. Steps involved in the programming process from source code to a finished executable program, as well as structured designs are emphasized. Topics include algorithm design, program structure, data types, variables, math operators, strings, screen I/O, control structures, and functions.

General Studies in RCC Institute of Technology's Degree Programs

General Studies comprises a significant component of RCC's undergraduate professional degree programs. Its purpose is to give breadth to students' education, in keeping with accepted norms of a liberal education and the meaning of an undergraduate degree. The General Studies component complements the core professional nature of the degree programs by creating a broader social and human context for the degrees.

The General Studies program has a three-tiered hierarchical structure - foundational, subject-specific, and integrative – introducing students to increasingly complex and intellectually interdependent competencies. The intended outcome of General Studies courses is to give students the intellectual skills and mindset that allows them to realize the benefits of their core technical training as well-rounded citizens in a complex world.

Mission of General Studies

To develop skills and competencies that promote professional standing and social consciousness.

Objectives

- To enhance students' understanding and engagement with their world in a manner that makes them better self-reflective citizens and life-long learners.
- To enhance students' critical thinking, analytical reasoning, research, and inquiry skills;
- To develop information literacy, problem-solving abilities, ethical reasoning, and integrative learning.

General Studies Structure

Three-Tier Course Architecture for the General Studies Program

The general studies cluster of courses is presented at three levels from foundational to integrative. As students move through their programs of study, learning experiences become more complex and the skills and competencies addressed are more advanced.

Tier I: Communications, Research and Thinking Courses

Tier I courses emphasize foundational skills and competencies. They are offered early in the students' program and provide the basis upon which more advanced learning is built. They include analytical, research, critical thinking, and communication skills and competencies.

Tier II: Arts and Social Sciences Courses

Tier II courses are breadth of knowledge courses in subject-specific areas of Arts and Social Sciences. They are designed to encourage students to analyse concepts, build analyses and arguments, and to undertake research particular to established academic disciplines.

Tier III: Integrated Studies Courses

Tier III courses are inherently interdisciplinary and require students to integrate skills, competencies, and knowledge acquired in Tiers I and II and to apply these to new areas of understanding. Students extend abstractions to make connections both within the subject area and beyond it, learning to transfer generalized principles and ideas from a specific instance to real-world issues, synthesizing and evaluating knowledge.

RCCIT Academic Calendar

Student Progress through General Studies

As students move from foundational courses through breadth of knowledge courses to integration courses, RCC Institute of Technology provides a framework that thoughtfully and deliberately identifies the objectives and work requirements for each level and each course.

Guidelines for the structure and content of General Studies courses have been developed. These specifications provide guidance to faculty who are developing and delivering courses and address the development of learning objectives for each level and for each course, the quantity and type of course work to be expected of students, and the types of assessment and feedback to be provided to students.

Financial Policies and Information

Degree Students

Tuition and Compulsory Fees

Fees

An application fee of \$75 is required for all degree programs. This is a non-refundable fee.

A \$300 registration fee is required for all degree programs. This is a non-refundable deposit that is credited to the student's tuition account.

International Student Fee

An International Student fee is required on a per term basis equal to 25% of the term tuition fee.

Resource Fee

A resource fee is required on a per term basis.

Tuition

RCCIT collects term tuition in three (3) equal payments beginning on the first day of the term and on the first of each subsequent month. Each student will receive a total term fee and tuition breakdown at the time of registration. The current tuition and fee schedule is available on the RCCIT website at www.rccit.ca.

Fees

Course Cancellation/addition Fee

A \$75 fee is assessed for all course cancellations and/or course additions that occur after the registration deadline until the course start date. In the event a course change is required for academic reasons, the fee will not be applied.

Continuous Enrollment Deposit

A Continuous Enrollment Deposit of \$300, will be assessed to all students who elect to take a term off. This deposit will be credited to the students account as long as they return on schedule. If the student does not return on schedule they forfeit the deposit. This deposit will not be applicable to those students that are on an approved practicum deferral.

Reentry Deposit

A Reentry deposit of \$300 will be collected for all students who withdrew from their studies and are now returning to the program. This deposit will be credited to their final term of study. It will be a onetime only credit.

Late Payment Fee

A fee of \$35 will be applied to all NSF/Decline/Late Payments.

Transcript Fee

Transcripts will cost \$10 per copy. A \$25 fee will be charged if the student requests the transcript to be couriered.

RCCIT Academic Calendar

Replacement Diplomas

Replacement diplomas will cost \$50.

Program Cancellation Policy

Program Cancellations occur when a student informs the institution prior to the beginning of the program that they do not intend to begin the program, or when the institution discontinues the program prior to the beginning of the program, or when a student does not attend during the first 10 consecutive days of the program.

If the program cancellation occurs within 2 days of the student's registration in the program, or the program is cancelled by the institution, a full refund of all tuition fees paid towards the program will be provided. For all other program cancellations a refund of all tuition fees paid towards the program, less an administrative fee of up to \$500, will be provided.

Withdrawal and Refund Policy

Notification of Withdrawal

Student must notify the institution of program or course withdrawals in writing.

Course Withdrawal Policy

Course withdrawal fees are based on the number of days that the student is enrolled in each course, starting on day 1. Students are charged a pro-rata rate up to the date the institution is notified in writing. The deadline for course withdrawal refunds is the 60% point of the course. A withdraw admin fee will also be assessed.

Withdraw Admin Fee

A withdraw admin fee will be charged for each course withdrawal equal to 10% of the total course cost. Total Withdrawal Admin Fees will be limited to a maximum of \$500 in any one given term.

Credit Balances

Credit balances resulting from course cancellations, withdrawals, or other schedule changes will be applied to upcoming payments in the student's current or next term of study. Graduated or withdrawn students may request a credit balance be refunded, by sending a written request to the Bursar. A refund cheque will be issued within 30 days of receipt of the request. Financial Aid refunds will be issued based on the applicable provincial regulations.

Application Fee

The application fee will be refunded if RCCIT terminates the registration prior to the beginning of classes, or upon the enrollee's request if classes do not begin by the start date specified.

Tuition

If a student withdraws in the second half of the program (or in the second half of each one-year study term of a 6-semester program), the student is not entitled to a refund of tuition fees.

Diploma Students

Tuition and Compulsory Fees

Fees

Students must pay an enrolment fee which accompanies their enrolment agreement. The enrolment agreement is completed during an interview with an Admissions Advisor. Enrolment fees are credited to the student's tuition account.

Resource Fee

A resource fee is required on a per term basis.

Tuition

For students registered in a diploma program, RCC collects tuition in twelve (12) equal payments beginning on the first day of the study period and on the first of each subsequent month. Each student will receive a payment schedule at the time of registration.

Tuition Refunds

For tuition and refund purposes, the term of attendance is defined as the actual number of weeks a student has been enrolled. Student must notify the institution of all withdrawals in writing.

Withdrawal and Refund Policy

Fees

The enrolment fee will be refunded if RCC terminates the registration prior to the beginning of classes, or upon the enrollee's request if classes do not begin by the start date specified.

Tuition

Students who withdraw or are dismissed from RCC will receive a refund of any pre-paid tuition fees collected according to the Fee Return Policy as prescribed under s. 25 to 33 of O.Reg. 415/06 of the Private Career Colleges Act: If a student withdraws in the first half of the program (or in the first half of each one-year study term of a 6-semester program), the student will receive a full refund of pre-paid tuition less an administrative fee of up to \$500.

If a student withdraws in the second half of the program (or in the second half of each one-year study term of a 6-semester program), the student is not entitled to a refund of tuition fees.

Scholarships and other Financial Assistance

RCC assists students to develop plans for financing their education through a combination of self-help, family contributions, student loans, grants, and bursaries.

Student Finance provides information on eligibility criteria and assists eligible students in applying for Canada Student Loans and provincial financial aid. Student loans and bursaries are available to those who qualify and are assessed, administered and awarded by the respective provincial authorities. Available loans and bursaries vary by province.

More detailed information is available from a Student Finance Officer.

Satisfactory Scholastic Standard

Students are required to complete satisfactorily the academic requirements of their program of study to continue to be eligible for financial assistance. Inherent in this requirement is that a student will achieve passing grades, as defined by RCC, in the minimum required course load:

- **For OSAP purposes**, the minimum required course load in which a student must be enrolled is 100% of what the institution considers to be a full course load for a Diploma program.
For students with disabilities, the minimum required course load in which a student must be enrolled is at least 40% of what the institution considers to be a full course load.

Students are expected to progress through the program according to their enrolment agreement.

Frequent or multiple program switches, drops, withdrawals, and/or multiple repeats of a program, which are funded by OSAP may also be considered lack of progress and lack of academic direction on the part of the student. If a student does not make satisfactory academic progress, the following applies:

SCHOLASTIC SITUATION	CONSEQUENCE	REMEDY
Failure to achieve satisfactory scholastic standard during 1 period of study .	Student put on probation; remains eligible for OSAP in next period of study.	Must succeed in all following academic years to maintain continuous Canada-Ontario Integrated Student Loan and grant eligibility.
Failure to achieve satisfactory scholastic standard during 2 periods of study .	Student loses Canada-Ontario Integrated Student Loan and grant eligibility for a minimum of 12 months .	Must maintain Canada-Ontario Integrated Student Loan in good standing with lending institution during the 12-month period .
Failure to achieve satisfactory scholastic standard during 3 periods of study .	Student loses Canada-Ontario Integrated Student Loan and grant eligibility for a minimum of 36 months .	Must maintain Canada-Ontario Integrated Student Loan in good standing with lending institution during the 36-month period .
Failure to achieve satisfactory scholastic standard during 4 periods of study .	Student loses Canada-Ontario Integrated Student Loan and grant eligibility for a minimum of 60 months (5 years).	Must maintain Canada-Ontario Integrated Student Loan in good standing during the 60 month period .
Failure to achieve satisfactory scholastic standard during 5 periods of study .	Student loses eligibility for new Certificate of Eligibility and new loans.	Must repay all loans prior to obtaining new loans.

RCCIT Academic Calendar

In order to maintain his or her loans in good standing, a student must meet one of the following conditions:

- If continuing in full-time studies, the student must keep loans in interest free status by completing a Confirmation of Enrolment;
- If not continuing in full-time studies, the student must consolidate his or her loans and begin repayment.

The table above outlines the **minimum** consequences and remedies associated with different scholastic situations to be enforced by postsecondary institutions.

Postsecondary institutions may use their internal policy if it exceeds these minimum requirements.

Institutions using their own internal policy must ensure that the written notification to students (e.g., Academic Probation Notification letter) clearly articulates institution policy.

Students experiencing temporary illness or disability may be exempted from the satisfactory scholastic standard for that period of illness or disability. The student will have to provide a letter of explanation, transcripts, and other applicable documentation, as determined by the Financial Aid Administrator, for the Financial Aid Administrator's review.

Delivery of Goods and Services Policy

Students are required to purchase standard texts or special lesson manuals and lab/studio supplies as specified in the course syllabi.

Enrollment for a subsequent term will be denied to students who fail to fulfill their financial obligations. A student may be dismissed if payment is not made on the scheduled date. In addition, no diploma is released to a student with outstanding financial obligations to RCCIT. In all cases, a student remains responsible for tuition and other charges incurred.

Contract Period Policy

Students contract for the length of the program

Services

Campus Contact Information

RCC Institute of Technology – Steeles Campus

2000 Steeles Avenue West

Concord, ON L4K 4N1

Telephone 905-669-0544

1-800-268-9098

Fax 905-669-0551

Webcampus

Students and faculty members can obtain information and support through the Webcampus. Webcampus is an online environment that provides a single point of access to courses, student services, financial services, the bookstore and textbook exchange, career information exchange, library services, and other resources. The online campus is developed and maintained by RCCIT's IT personnel.

Library Services

The library contains technical and business journals, books, periodicals, audiovisuals, a variety of electronic and print-based reference resources, CD-ROM and internet access, as well as printers and photocopiers, to support classroom and lab learning. Reference and Interlibrary loan services are also available.

The library helps foster independent learning skills by offering information and assistance for both focused and general research. Electronic information retrieval systems that provide expanded access to current data are available. The library also provides an ideal environment for individual study.

Housing Services

The admissions department maintains a list of accommodations to assist students in locating suitable housing — generally shared apartments or rooms in private homes. RCCIT is also a member of the York University Housing Registry offering over 5,000 ads a year to out-of-town students. You may visit the site at <http://www.places4students.com/>

Financial and leasing arrangements are made between individual students and property owners, many of whom require prepayment of the first and last month's rent. Students who need help locating housing or who have problems related to their accommodations should contact Student services.

Students planning to relocate are urged to contact admissions and to visit the RCCIT to make housing arrangements well in advance of their intended move.

Housing lists are available on Webcampus.

Career Services

RCCIT maintains an active Career Support Centre whose sole objective is to support their graduates in their search for career related employment. Courses and workshops prepare graduating students about employment research, networking techniques, resume development and interviewing skills. Emphasis is

RCCIT Academic Calendar

placed on self-directed job search skills which will be useful to the graduates throughout their job search efforts.

RCCIT's Career Services has built strong relationships with industry professionals to help with their recruitment needs. We provide our graduates with valuable resources, labour market information, career event opportunities, job search and recruitment materials, and resources to various web links. We are proud that our shared efforts will be of such importance to the overall success of RCCIT, students, alumni and employers.

Tutorial Assistance / Student Support Centre

Tutorial assistance is available at no additional charge. Students are encouraged to consult first with faculty if they are having problems with course work and then, if necessary, with the appropriate Program Chair.

Student Activities

RCCIT offers a wide range of activities and organizations in which students can participate. Most activities are planned by student leaders. Clubs and activities reflect students' interests and may change periodically. Questions and suggestions concerning student activities can be addressed to the Student Support Centre.

Registrar's Office

Staff in the Registrar's Office assist students with progression through their programs. The Registrar's Office also processes requests for academic records such as transcripts, degrees and diplomas. The Registrar's Office staff are available weekdays, between 8:00 am and 4:00 pm (Eastern Standard Time). Requests for advice or support can be made at any time through email, web-form, or a toll-free telephone number. All requests received outside of business hours are addressed by the end of the next business day.

Personnel Roster

Senior Administration

President and CEO	Dr. Rick Davey
Vice President Academic	Dr. Ron McDonald
Vice President Finance	Gord Glazier
Vice President Marketing & Admissions	Walter Lee
Registrar	Karim Sukhiani
Dean of Academics	Angela Antohi-Kominek
Director, Compliance (PCCA)	Annie John
Institute Librarian	Judy Theoret
Chief Information Officer	Mike Haney
Director, Accounting	Joyce Lo
Director, Student Finance	Greg Nichol
Director, Enrollment Services	Simone James
Director, Career Services	Catherine Boni
Director, IT Steeles Campus	John Milks

RCCIT Academic Calendar

Faculty Members

Bachelor of Interior Design

Amy Bagshaw MFA	Sancho Bustamante B.Tech. - Architectural Science
Dan Bohlen M.Arch.	Golnaz Jalalpour MA (Industrial Design)
Sheri Crawford MA. ID, NCIDQ	Brentwood Jolley M.Arch.
Jusri Devries MA, MA (ID), MFA	Elham Kabir PhD (Engineering Science)
Simon Divincenzo M.Arch.	Erin Martyn MFA (ID)
Erin Melvin MA. ID, NCIDQ	Lauren Pilotte-Wielanga MA (Design Education), NCIDQ
Penelope Fobler-Cressy MA. ID, NCIDQ	Adam Rolan MA. ID, NCIDQ
Laura Fyles MDes., MDes., NCIDQ	Deborah Rutherford MA (Design Management), NCIDQ
Deanna Georgeson MFA	Paria Sajadpour M.Arch.
Michael Guido M.Arch.	Maha Salman PhD (Architecture)
Susan Jane Hall MA (ID), NCIDQ	Andrea Sosa Fonatine MID
Barbara Isherwood MA (Art)	Afsaneh Volmer DEA/M.Des.
Golara Jalalpour MA (Landscape Urbanism)	Brandy VonKaenel M.Arch., MUD, NCIDQ

Bachelor of Technology, Electronics Engineering and Technology

Minco He PhD (c)
Ahmad Ibrahim, PhD (Electrical Engineering), P.Eng.
Asad Maham, B.Sc., P.Eng.
Shri Ramsarran, MBA
Raj Sharma, M.Sc., MBA., P.Eng.

General Studies

Amy Bagshaw MFA
Peter Buker PhD (Political Studies)
Andrew Fuyarckuk PhD (Philosophy)
Alexandra Pett PhD (English)
Raj Sharma M.Sc., MBA., P.Eng.

Electronics Laboratory Staff

David Schlaak, Manager Electronics Lab