DAWSON COLLEGE

Mathematics Department
Applied Mathematics (ELECTRONICS ENGINEERING TECHNOLOGY)
201-943-DW

IMPORTANT NOTICE: This is part 1 of a two part course outline. Part 2 of the outline will be distributed by individual instructors during the first week of classes.

OBJECTIVES:
This course is designed, in consultation with the Department of Electronics Engineering Technology, to raise the mathematical ability of students to the level required for study in Electronics Engineering Technology. The course consists of a review and expansion of some high school material, with special reference to electronics applications, and with the addition of complex numbers.

COURSE COMPETENCIES:
This course contributes to the partial achievement of the competency:
041R: To implement mathematical models related to electronics.

Elements of the Competency 041R:
1. Become familiar with the situation requiring the implementation of a model.
2. Select the model.
3. Apply the model to the situation.
4. Assess the results.
5. Present the results.

PREREQUISITE:
Registration in Electronics Engineering Technology (Secondary IV Mathematics)

PONDERATION:
3-2-3

COLLEGE EVALUATION POLICY:
The Institutional Student Evaluation Policy (ISEP) is designed to promote equitable and effective evaluation of student learning and is therefore crucial policy to read and understand. The policy describes the rights and obligations of students, faculty, departments, programs and the College administration with regard to evaluation in all your courses, including grade reviews and resolution of academic grievance. The ISEP is available on the Dawson website.

TERMWORK:
The term grade is based on a minimum of $4\frac{1}{2}$ hours of tests/quizzes. Details regarding the term work can be found in Part 2 of this course outline.

FINAL EXAMINATION:
The Final Examination will be a supervised, comprehensive examination held during the formal examination period. There will be NO EXEMPTIONS.

GRADING POLICY:
The final grade shall consist of:

50% TERMWORK
50% FINAL EXAM

STANDARD OF PERFORMANCE:
In order to pass this course the student must obtain a final grade of at least 60%.

TEXTBOOK:
Basic Technical Mathematics with Calculus - SI Version (9th Ed. or 8th Ed.) by Allyn J. Washington

CALCULATORS:
A calculator without text storage or graphing capabilities is allowed for the Final Examination.

FORMULA SHEETS:
No formula sheet will be permitted for quizzes, class tests however a formula sheet will be provided for the final examination.

DEPARTMENT WEBSITE:
For final examinations from previous years and other useful information consult the departmental website:
Go to `http://www.dawsoncollege.qc.ca`
→ go to PROGRAMS
→ go to DISCIPLINES
→ go to MATHEMATICS

MATH TUTORIAL ROOM:
Volunteer math teachers are available for help in room 7B.1. The schedule of available teachers is available on the door of the tutorial room and the math department website.

METHODOLOGY:
Lectures and problem solving sessions.

ATTENDANCE AND COURSE PARTICIPATION REQUIREMENTS:
Students should refer to the Institutional Student Evaluation Policy (ISEP section III-C) regarding attendance.

LITERACY STANDARDS:
Problem solving is an essential component of this course. Students will be expected to analyze problems stated in words, to present their solutions logically and coherently, and to display their answers in a form corresponding to the statement of the problem, including appropriate units of measurement. Marks will be deducted for work which is inadequate in these respects, even though the answers may be numerically correct.

STUDENTS' OBLIGATIONS:

a. Students have an obligation to arrive on time and remain in the classroom for the duration of scheduled classes and activities.
b. Students have an obligation to write tests and final examinations at the times scheduled by the teacher or the College. Students have an obligation to inform themselves of, and respect, College examination procedures.
c. Students have an obligation to show respectful behavior and appropriate classroom comportment. Should a student be disruptive and/or disrespectful, the teacher has the right to exclude the disruptive student from learning activities (classes) and may refer the case to the Director of Student Services under the Student Code of Conduct.
d. Electronic/communication devices (including cellphones, mp3 players, etc.) have the effect of disturbing the teacher and other students. All these devices must be turned off and put away. Students who do not observe these rules will be asked to leave the classroom.

Everyone has the right to a safe and non-violent environment. Students are obliged to conduct themselves as stated in the Student Code of Conduct and in the ISEP section on the roles and responsibilities of students. (ISEP section II-D)

ACADEMIC INTEGRITY:

Cheating in Examinations, Tests, and Quizzes:

Cheating includes any dishonest or deceptive practice relative to formal final examinations, in-class tests, or quizzes. Such cheating is discoverable during or after the exercise in the evaluation process by the instructor. Such cheating includes, but is not limited to:

a. copying or attempting to copy another's work.
b. obtaining or attempting to obtain unauthorized assistance of any kind.
c. providing or attempting to provide unauthorized assistance of any kind.
d. using or possessing any unauthorized material or instruments which can be used as information storage and retrieval devices.
e. taking an examination, test, or quiz for someone else.
f. having someone take an examination, test, or quiz in one's place.

Unauthorized Communication:

Unauthorized communication of any kind during an examination, test, or quiz is forbidden and subject to the same penalties as cheating.

Plagiarism on Assignments and the Comprehensive Assessment:

Plagiarism is the presentation or submission by a student of another person's assignments or Comprehensive Assessment as his or her own. Students who permit their work to be copied are considered to be as guilty as the plagiarizer.

Penalties:

Cheating and plagiarism are considered extremely serious academic offences. Action in response to an incident of cheating and plagiarism is within the authority of the teacher. Penalties may range from zero on a test, to failure of the course, to suspension or expulsion from the college.

According to ISEP, the teacher is required to report to the Sector Dean all cases of cheating and plagiarism affecting a student's grade (see ISEP section IV-C).

POLICY ON RELIGIOUS OBSERVANCE AND/OR INTENSIVE COURSE CONFLICTS:

If a student is attending an intensive course, the student must inform the teacher, within the first two weeks of class, of the specific dates of any anticipated absences. Students who intend to observe religious holidays or who take intensive courses must inform their teachers in writing as prescribed in the ISEP Policy on Religious Observance (ISEP Section III-D).
A form for this purpose is attached to this course outline.

Excerpt from *ISEP Section III-D*:
Students who wish to observe religious holidays must inform each of their teachers in writing within the first two weeks of each semester of their intent to observe the holiday so that alternative arrangements convenient to both the student and the teacher can be made at the earliest opportunity. The written notice must be given even when the exact date of the holiday will not be known until later. Students who make such arrangements will not be required to attend classes or take examinations on the designated days, nor be penalized for their absence.

It must be emphasized, however, that this College policy should not be interpreted to mean that a student can receive credit for work not performed. It is the student's responsibility to fulfill the requirements of the alternative arrangement.

RELIGIOUS OBSERVANCE/ INTENSIVE COURSES FORM

Students who intend to observe religious holidays or who take intensive courses must inform their teachers in writing as prescribed in the ISEP Policy on Religious Observance. (ISEP Section III-D)

The following form must be submitted within the first two weeks of classes.

Name: _____

Student Number: _____

Course: _____

Teacher: _____

Date of Absence:	Reason for Absence:
_____	_____
_____	_____
_____	_____
_____	_____

Course Content

TOPIC	**TEXTBOOK REFERENCE**	**APPROX. TIME**
REVIEW OF ALGEBRA, FUNCTIONS AND GRAPHS • Calculators • Algebra and Word Problems • Functions and Graphs • Simultaneous Equations • Rational Equations • Quadratic Equations	 • Appendix C • Chapter 1 • Chapter 3 • Chapter 5 • Chapter 6 • Chapter 7 §1, 3, 4	6 weeks
TRIGONOMETRY • Plane Trigonometry • Radians and Trigonometric Equations • Sinusoidal Waveforms	 • Chapter 4 • Chapter 8 • Chapter 18 §1, 2, 3, 5	3 weeks
LOGARITHMIC AND EXPONENTIAL FUNCTIONS • Logarithmic and Exponential Functions	 • Chapter 13 §1-6	3 weeks
COMPLEX NUMBERS • Complex Numbers	 • Chapter 12 §1-6	2 weeks