DAWSON
COLLEGE

Mathematics Department
Applied Mathematics
(Electronics Engineering Technology)
201-943-DW

Ponderation: 3-2-3

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

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.

Text: *Basic Technical Mathematics with Calculus - SI Version (9th Ed.)*
by Allyn J. Washington

Methodology: Lectures and problem solving sessions.

Termwork: The term grade is based on a minimum of $4\frac{1}{2}$ hours of in-class tests/quizzes. Details regarding the term work can be found in the teacher specific supplement.

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%.

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 or 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.

Literacy Policy: 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.

Policy on Cheating and Plagiarism:

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:

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

Obligation of the Teacher:

Every instance of cheating or plagiarism leading to a resolution that impacts on a student's grade must be reported by the teacher, with explanation, in writing to the Chair of Mathematics and to the Dean of Pre-University Studies. A copy of this report must also be given to the student.

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.

Students' Obligations:

a. Students have an obligation to remain informed about what takes place in their regularly scheduled classes. Absence from class does not excuse students from this responsibility.
b. Students have an obligation to arrive on time and remain for the duration of scheduled classes and activities.
c. 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.
d. 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.
e. Cellular phones, pagers and musical listening devices have the effect of disturbing the teacher and other students. All these devices should be turned off. Students who do not observe these rules will be asked to leave the classroom.
f. Cell phones must also be put away. Text messaging is not allowed in class.

Religious Holidays:

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 is not 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.

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