



**I. COURSE DESCRIPTION:**

This first level mathematics course for the pre-technology program begins with a review of fundamental concepts including arithmetic operations and concepts in measurement. This is followed by modeling linear, quadratic, and exponential relationships. Problems involving these relationships are then solved using formulas.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Review the performing of calculations involving whole numbers, fractions, decimals, and percents with and without a calculator.
2. Perform calculations using signed numbers and scientific notation with and without a calculator.
3. Apply order of operations rules and work with approximate numbers as required.
4. Use different units of measure.
5. Use basic algebraic concepts to solve problems involving linear equations.
6. Manipulate formulas and literal equations.
7. Graph linear, quadratic, and exponential relationships.
8. Use the laws of exponents to simplify expressions.
9. Understand the relationship between radicals and fractional exponents and be able to simplify radicals.

**III. TOPICS:****Approximate Time**

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|---|---------|
| 1. Review of Arithmetic                         | 4 hours |
| 2. Signed Numbers                               | 6 hours |
| 3. Units of Measurement and Approximate Numbers | 6 hours |
| 4. Introduction to Algebra                      | 7 hours |
| 5. Simple Equations                             | 6 hours |
| 6. Graphs                                       | 7 hours |
| 7. Exponents, Roots, and Radicals               | 6 hours |

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

1. Washington, A. J., Triola, M.F., Reda, E. E. (2008). Introduction to technical mathematics (5<sup>th</sup> ed.). Toronto: Pearson Addison Wesley
2. Calculator: (Recommended) SHARP Scientific Calculator EL-531.  
*The use of some kinds of calculators, cell phones, and other electronic devices may be restricted during tests.*

**V. EVALUATION PROCESS/GRADING SYSTEM:**

There will be five tests each worth 20% of the final grade.

The following semester grades will be assigned to students:

<b>Grade</b>	<b>Definition</b>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

**VI. SPECIAL NOTES:**

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. Students who engage in academic dishonesty will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

**VII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.