



ORIGINAL COURSE IMPLEMENTATION DATE: January 2012
 REVISED COURSE IMPLEMENTATION DATE: January 2023
 COURSE TO BE REVIEWED (six years after UEC approval): June 2028
 Course outline form version: 06/18/2021

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: MATH 085		Number of Credits: 3 Course credit policy (105)													
Course Full Title: Intermediate Algebra and Trigonometry Course Short Title: Interim. Algebra & Trigonometry															
Faculty: Faculty of Education, Community, and Human Development		Department: Upgrading and University Preparation													
Calendar Description: Review of basic algebraic and trigonometric concepts. Study of linear, absolute value, polynomial, rational, radical, and quadratic expressions, equations, and functions. Use of function notation and graphs. Use of the laws of sines and cosines to solve practical problems.															
Prerequisites (or NONE):		One of the following: MATH 084, (Foundations of Mathematics and Pre-calculus 10 with a B or better), (one of Principles of Mathematics 11, Applications of Mathematics 11, Foundations of Mathematics 11, or Pre-calculus 11 with a C or better), (one of Foundations of Mathematics 12 or Pre-Calculus 12 with a C- or better), or UUP department permission (assessment is required).													
Corequisites (if applicable, or NONE):		NONE													
Pre/corequisites (if applicable, or NONE):		NONE													
Antirequisite Courses (<i>Cannot be taken for additional credit.</i>) Former course code/number: NONE Cross-listed with: NONE Equivalent course(s): NONE <i>(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)</i>		Course Details Special Topics course: No <i>(If yes, the course will be offered under different letter designations representing different topics.)</i> Directed Study course: No Grading System: Letter Grades Delivery Mode: May be offered in multiple delivery modes Expected frequency: Every semester Maximum enrolment (for information only): 24													
Typical Structure of Instructional Hours <table border="1"> <tr> <td>Lecture/seminar</td> <td>60</td> </tr> <tr> <td>Tutorials/workshops</td> <td>30</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Total hours</td> <td>90</td> </tr> </table>		Lecture/seminar	60	Tutorials/workshops	30							Total hours	90	Prior Learning Assessment and Recognition (PLAR) PLAR is available for this course.	
Lecture/seminar	60														
Tutorials/workshops	30														
Total hours	90														
Labs to be scheduled independent of lecture hours: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		Transfer Credit (See bctransferguide.ca .) Transfer credit already exists: No Submit outline for (re)articulation: No <i>(If yes, fill in transfer credit form.)</i>													
Department approval		Date of meeting: November 2021													
Faculty Council approval		Date of meeting: December 3, 2021													
Undergraduate Education Committee (UEC) approval		Date of meeting: June 17, 2022													

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Simplify, evaluate, and perform operations on algebraic expressions.
2. Factor polynomials using an appropriate strategy or a combination of techniques: common factors, grouping, trial/error, difference of squares, difference and sum of cubes, or perfect square trinomials.
3. Solve linear, absolute value, quadratic, polynomial, rational, and radical equations, systems of linear equations, and solve formulas for a given variable.
4. Graph linear, quadratic, absolute value, rational, and radical functions, and describe applicable characteristics of these functions such as domain, range, slope, vertex, maximum or minimum values.
5. Use function notation and perform operations on functions, including composition of functions.
6. Solve and graph inequalities and systems of inequalities and state the solutions using set-builder and/or interval notation.
7. Solve application problems, including problems that can be modelled by a quadratic function, and trigonometry problems involving right-angle and oblique triangles.
8. Analyze arithmetic and geometric sequences and series to solve problems.

After completion of MATH 085, students will meet the outcomes identified for Advanced Level – Algebraic Mathematics in the 2021-2022 Adult Basic Education Articulation Guide available at <https://www.bctransferguide.ca/search/abe>.

Recommended Evaluation Methods and Weighting (*Evaluation should align to learning outcomes.*)

Final exam:	30%	Quizzes/tests:	50%	Assignments:	20%
	%		%		%

Details:

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Texts and Resource Materials (*Include online resources and Indigenous knowledge sources. [Open Educational Resources](#) (OER) should be included whenever possible. If more space is required, use the [Supplemental Texts and Resource Materials form](#).)*)

Type	Author or description	Title and publication/access details	Year
1. Textbook	M. Lial, J. Hornsby	Intermediate Algebra & Trigonometry – custom edition; Pearson	2012
2. OER book	Anna Kuczynska	Intermediate Algebra and Trigonometry – BCcampus OpenEd	2020
3.			
4.			
5.			

Required Additional Supplies and Materials (*Software, hardware, tools, specialized clothing, etc.*)

Scientific calculator

Course Content and Topics

Module topics include:

1. Review of intermediate algebra skills
2. Graphs and properties of various functions
3. Systems of equations and inequalities including quadratic
4. Quadratic equations and functions
5. Polynomial equations and functions
6. Rational expressions and equations
7. Radical expressions and equations
8. Trigonometry
9. Sequences