



ORIGINAL COURSE IMPLEMENTATION DATE: September 2004
 REVISED COURSE IMPLEMENTATION DATE: January 2019
 COURSE TO BE REVIEWED: (six years after UEC approval) May 2024
 Course outline form version: 09/15/14

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

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

Course Code and Number: MATH 084		Number of Credits: 3 Course credit policy (105)																	
Course Full Title: Introductory Algebra and Trigonometry																			
Course Short Title (if title exceeds 30 characters): Intro Algebra and Trigonometry																			
Faculty: Faculty of Access and Continuing Education		Department (or program if no department): Upgrading and University Preparation																	
Calendar Description: Provides skills in algebraic manipulations to satisfy MATH 085 prerequisites. Note: This course can be used as a math credit for the UUP Advanced Level certificate, the Provincial Adult Dogwood, or as preparation for some vocational, career, and technical programs.																			
Prerequisites (or NONE):		One of the following: (MATH 072 or MATH 076), (Foundations of Mathematics and Pre-calculus 10 with at least a C), (Principles of Mathematics 11, Applications of Mathematics 11, Foundations of Mathematics 11, or Pre-calculus 11 with at least a C-), or UUP department permission (assessment may be required).																	
Corequisites (if applicable, or NONE):		NONE																	
Pre/corequisites (if applicable, or NONE):		NONE																	
Equivalent Courses (cannot be taken for additional credit) Former course code/number: N/A Cross-listed with: N/A Equivalent course(s): N/A <i>Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.</i>		Transfer Credit Transfer credit already exists: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Transfer credit requested (OREg to submit to BCCAT): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (if yes, fill in transfer credit form) Resubmit revised outline for articulation: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No To find out how this course transfers, see bctransferguide.ca .																	
Total Hours: 90 Typical structure of instructional hours: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr><td>Lecture hours</td><td style="text-align: center;">60</td></tr> <tr><td>Seminars/tutorials/workshops</td><td></td></tr> <tr><td>Laboratory hours</td><td></td></tr> <tr><td>Field experience hours</td><td></td></tr> <tr><td>Experiential (practicum, internship, etc.)</td><td></td></tr> <tr><td>Online learning activities</td><td></td></tr> <tr><td>Other contact hours: Individual and group work</td><td style="text-align: center;">30</td></tr> <tr><td style="text-align: right;">Total</td><td style="text-align: center;">90</td></tr> </table>		Lecture hours	60	Seminars/tutorials/workshops		Laboratory hours		Field experience hours		Experiential (practicum, internship, etc.)		Online learning activities		Other contact hours: Individual and group work	30	Total	90	Special Topics Will the course be offered with different topics? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, different lettered courses may be taken for credit: <input type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit <i>Note: The specific topic will be recorded when offered.</i>	
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Other contact hours: Individual and group work	30																		
Total	90																		
		Maximum enrolment (for information only): 24																	
		Expected frequency of course offerings (every semester, annually, every other year, etc.): 2 sections per semester																	
Department / Program Head or Director: Greg St. Hilaire		Date approved: February 28, 2018																	
Faculty Council approval		Date approved: March 2, 2018																	
Campus-Wide Consultation (CWC)		Date of posting: April 13, 2018																	
Dean/Associate VP: Dr. Sue Brigden		Date approved: March 2, 2018																	
Undergraduate Education Committee (UEC) approval		Date of meeting: May 18, 2018																	

Learning Outcomes

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

1. Perform operations on rational numbers.
2. Solve problems involving calculating volumes and surface areas of spheres, right cones, cylinders, prisms and pyramids.
3. Solve first-degree equations, in one variable, including those involving parentheses; solve formulas for a given variable and solve practical problems that involve using a first-degree equation.
4. Solve first-degree inequalities in one variable.
5. Describe and represent linear relations using words, ordered pairs, tables of values, graphs, and equations.
6. Determine slope and x and y intercepts given a linear equation or its graph.
7. Use the Cartesian coordinate system to graph linear equations including the forms $x = a$ and $y = b$.
8. Explain slopes in terms of rates of change, including slopes of parallel and perpendicular lines.
9. Determine the characteristics of the graphs of linear relations given in various forms (slope-intercept, general, or slope-point).
10. Determine the equation of a linear relation given its graph, its slope and a point on the line, or two points on the line.
11. Represent a linear function using function notation.
12. Interpret and explain the relationships among data, graphs, and situations.
13. Determine if a given relation is a function.
14. Determine the domain and range of graphs of functions.
15. Simplify expressions involving powers with integral exponents, including scientific notation.
16. Use polynomial terminology when appropriate.
17. Simplify, evaluate, and perform operations on polynomials.
18. Factor polynomials using various strategies, including the greatest common factor (GCF), special factoring, and factoring trinomials with leading coefficient equal to 1 as well as different than 1.
19. Solve quadratic equations using the Law of Zero Products.
20. Evaluate rational expressions and determine input values for which the rational expression is undefined.
21. Simplify and perform operations on rational expressions.
22. Solve a system of first degree equations in two variables by graphing, substitution, and elimination methods.
23. Use a system of equations to solve practical problems.
24. Solve practical problems involving inequalities in two variables, including graphing the solution set in a system of coordinates.
25. Use rational exponents to represent radicals of various degrees.
26. Graph basic radical functions.
27. Simplify, evaluate, and perform basic operations on radical expressions including variable radical expressions.
28. Solve radical equations restricted to one radical.
29. Solve problems involving right triangles using the sine, cosine, or tangent ratios; the Pythagorean Theorem; special triangles; and the angle sum property of triangles.

After completion of MATH 084, students will meet the outcomes described in the Advanced Level – Developmental Mathematics in the 2016 – 2017 Adult Basic Education Articulation Guide available at:

https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/abe_guide.pdf (accessed from the 2017 – 2018 guide, November 2017)

Prior Learning Assessment and Recognition (PLAR)

Yes No, PLAR cannot be awarded for this course because

Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)

Lecture with problem practice sessions; Guided individual and group work

Grading system: Letter Grades: Credit/No Credit: Labs to be scheduled independent of lecture hours: Yes No

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

Typical Text(s) and Resource Materials (if more space is required, download Supplemental Texts and Resource Materials form)

Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1. A Tussy, R Gustafson	Introductory Algebra & Trigonometry – Custom Edition	<input checked="" type="checkbox"/>	Nelson Education	2014
2.		<input type="checkbox"/>		
3.		<input type="checkbox"/>		
4.		<input type="checkbox"/>		
5.		<input type="checkbox"/>		

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

Scientific calculator

Typical Evaluation Methods and Weighting

Final exam:	30%	Assignments:	20%	Midterm exam:	30%	Practicum:	%
Quizzes/tests:	20%	Lab work:	%	Field experience:	%	Shop work:	%
Other:	%	Other:	%	Other:	%	Total:	100%

Details (if necessary):**Typical Course Content and Topics**

1. Real Numbers
2. Geometry
3. Algebraic expressions, equations, and inequalities
4. Graphs, Linear Relations and Functions
5. Exponents and Polynomials
6. Factoring and Quadratic Equations
7. Rational Expressions
8. Systems of Equations
9. Roots and Radicals
10. Trigonometry