CURRICULUM GUIDE: OFFICIAL COURSE OUTLINE

Course Code	MATH 099	Course Title	Fundamentals of Trigonometry with Algebra
Credit Value	0	Department	Mathematics and Science

No. of weeks	14	Hrs. per week	Lecture	Tutorial	Laboratory	Total
			4	0	0	4

Course Description	This course is a bridging course to provide students with a limited background in high school mathematics an understanding of the concepts and facility in computations necessary to processed to MATH 100 (Pre-Calculus).
Prerequisite(s)	ENGL 088 (formerly EASL 089, ENGL 097)

Initial Articulation Targets	UBC	SFU	UVic	UNBC	TRU
	N/A	N/A	N/A	N/A	N/A
	For updated information on the transferability of this course, please consult the BC Transfer Guide, www.bctransferguide.ca				

Learning Outcomes	Upon successful completion of this course, the student will be able to: • Demonstrate an understanding of numeric properties and operations • Evaluate and simplify linear, quadratic, rational, and radical expressions • Solve equations involving linear, quadratic, rational, and radical expressions • Identify connections between the mathematics at this level and the real world • Solve real world problems using the mathematical concepts mentioned above • Solve system of two linear equations.
Content	**Core** topics – all of the following will be covered: • Arithmetic and Algebra Review (language of algebra including adding, subtraction, multiplying and dividing terms; integers; fractions; decimals; properties of real numbers) • Linear Equations and inequality (solving linear equations, formulas for specific variable and problem-solving strategy, linear inequalities) • Graphing Linear Equations and inequality (graph linear equations and inequalities in two variables; slope of a line, equation of a line) • Systems of Linear Equations (solving systems of linear equations and inequality with two variables, solve applications problem involving systems of equations and inequality) • Polynomials (add, subtract, multiply and divide polynomials, properties of exponents, scientific notation) • Factoring (factor trinomials, difference of squares and special product, general strategies, polynomial equations, problem solving)

- Rational Expressions (add, subtract, multiply, divide and simplify rational expressions, complex rational expressions, solve application problems)
- Simplifying Radical Expressions (simplifying radicals, operations on radicals, solving radical equations)
- Operations on Radicals (add, subtract, multiply and divide radical expressions, solve radical equations)
- Solving Quadratic Equations (using the square root property, completing the square, the Quadratic Formula)
- Applications and Graphs of Quadratics (graph quadratic functions using properties and transformation, solve application problems)
- Trigonometry (angles, primary trigonometric ratios, solving unknowns in a right-angled triangle)

Additional topics may also be covered, at the discretion of the instructor.

Methods of Instruction	Lecture, problem sessions, and assignments.
Required Textbook(s)	The following textbook(s) is/are required, or approved equivalent(s). Baratto, Stephan et al. Beginning Algebra. 9th Ed. Boston: McGraw-Hill, 2014. Maracek, Lynn and Andrea H. Mathis. Intermediate Algebra. 2nd Ed. OpenStax, 2022.
Required Equipment and Technology	Students are required to have a computer with internet access. The following resources are provided by the College: • Office 365 • Student email
Homework Hours	At minimum, students can expect one hour of homework for every hour of instructional time.

Evaluation	Component	% Value
	Assignments, in-class activities	10-30%
	Quizzes (weekly, biweekly, module, chapter)	10-30%
	Term Examination(s)	20-30%
	Final Examination	30-35%

Completion Requirements	The minimum grade to pass this course is C (60%). A minimum grade of C (60%) is required for this course to fulfil a prerequisite.

Course Designer(s)	Len Berggren, Ph.D., Department of Mathematics, Simon Fraser University	Consultant(s), if applicable	
Dean's Approval	Marv Westrom, Ph.D. Professor Emeritus, Faculty of Education, University of British Columbia	Dean's Approval Date	January 1, 2009
Curriculum Committee Approval Date	January 1, 2009	First Term Offered	Winter 2009

Last Review Date	March 1, 2023	Next Review Date	March 1, 2027
Revision History	May 1, 2010-MATH 099 discontinued and replaced by MATH 100. May 1, 2014 - All MATH and STAT courses will be 4 hours, commencing Fall 2014. SASC January 2018-MATH 099 put back into active placement and offering. February 15, 2020 – Minor updates by: Krishna Subedi, Ph.D., Alexander College in consultation with Telyn Chan-Kusalik, M.Sc. March 2023-Minor updates (e.g., textbooks) by Kelly Cheung, Krishna Subedi and Michael Monagan		