



ALTERNATIVE EDUCATION

COURSE OUTLINE 2026-2027

Mathematics 30-1

MAT3791

5 Credit Course

Prerequisite	A course mark of 50% or higher in Mathematics 20-1
Required Materials & Resources	- Textbook: Precalculus 12 - Formula sheet - Alberta Education approved graphing calculator
Course Overview Math 30-1 consists of 6 units of study, as outlined below. The student's <u>school-based mark</u> is weighted as follows:	
Unit & Topics of Study	Weighting
Unit 1: Functions Demonstrate an understanding of inverses of relations; Demonstrate an understanding of factoring polynomials of degree greater than 2; Graph and analyze polynomial functions; Graph and analyze radical functions; Graph and analyze rational functions	33%
Unit 2: Trigonometry Demonstrate an understanding of angles in standard position, expressed in degrees and radians; Develop and apply the equation of the unit circle; Solve problems using the six ratios; Graph and analyze trigonometric functions; Solve algebraically and graphically trigonometric equations with domain; Prove trigonometric identities.	30%
Unit 3: Transformations Demonstrate an understanding of the effects of horizontal and vertical translations on the graphs of functions; Demonstrate an understanding of the effects of horizontal and vertical stretches on the graphs of functions; Apply translations and stretches to the graphs and equations of functions; Demonstrate an understanding of the effects of reflections on the graphs of functions.	14%
Unit 4: Logarithms Demonstrate an understanding of logarithms; Demonstrate an understanding of the product, quotient, and power laws; Graph and analyze logarithmic functions; Solve problems that involve exponential and logarithmic equations.	9%
Unit 5: Function Operations Demonstrate an understanding of operations on, and compositions of, functions.	3%
Unit 6: Permutations, Combinations and Binomial Theorem Solve problems using the fundamental counting principal; Solve permutation problems; Solve combination problems; Expand powers of a binomial in a variety of ways, including the binomial theorem.	11%
*Total	100%

Assessment	* The student's grade will be calculated based on the following (within each unit of study): <table border="1" data-bbox="328 88 1208 163"> <tr> <td>Coursework--Modules</td><td>20%</td></tr> <tr> <td>Quizzes, Unit Exams, Projects</td><td>80%</td></tr> </table> • <i>Final Grade:</i> ○ <i>70% School Awarded Mark + 30% Provincial Diploma Exam Mark.</i> • Alternative Education does not publish report cards. • Parents and students are encouraged to keep up to date on PowerSchool and contact their teacher if there are any issues.	Coursework--Modules	20%	Quizzes, Unit Exams, Projects	80%
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Important Note Regarding Assessment	A wide range of assessment information is used in the development of a student's final grade. In Edmonton Catholic Schools, individualized assessments provide specific information regarding student progress and overall performance in class. Assessment may vary from student to student, differentiating for various student needs. It should also be noted that not all assignments are used to determine the final grade, and that scale factors may have been used to determine the weight of individual assignments.				