

ST. JOSEPH CATHOLIC SECONDARY SCHOOL
COURSE OUTLINE



Advanced Functions / MHF4U

Course Description: This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric functions; develop techniques for combining functions; broaden their understanding of rates of change; and develop facility in applying these concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended both for students taking the Calculus and Vectors course as a prerequisite for a university program and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs

Course Prerequisite MCR3U

Units of Study

Unit 1	Properties of Functions
Unit 2	Polynomial Functions

Catholic Graduate Expectations: The mind and its capacity for rational analysis are seen as gifts from the Creator to be used and enjoyed. The training of the intellect ensures that all knowledge can be scrutinized and the divine and the human more deeply understood. In this sense, knowledge is illuminated with the light of faith. In Catholic education, the commitment to maturity of mind and academic excellence is always in reference to God's revealed wisdom as to life's purpose and meaning.

Unit 3	Polynomial Equations
Unit 4	Rational Functions
Unit 5	Trigonometric Functions
Unit 6	Exponential Functions
Unit 7	Trigonometric Identities
Unit 8	Rate of Change (time permitting)

Evaluation

70%	30%
Knowledge/Understanding	Culminating Task and Exam
Thinking/Inquiry	
Communication	
Application	

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Course Resources Required:

Paper
Pencils/erasers
Scientific Calculator
Textbook (provided)

For a detailed course description of this course, please visit
<https://www.edu.gov.on.ca/eng/curriculum/secondary/subjects.htm>