

MATH 112 Topics in Pre-Calculus Mathematics

Course objectives:

The main objective of the course is to prepare students for the study of calculus. For students who do not subsequently study calculus, the material provides good preparation for all courses that use algebra and trigonometry.

Usual course content:

- Functions and their graphs including the use of technology.
- Equations and inequalities
- Polynomials and rational functions.
- Exponential and logarithmic functions.
- Trigonometric functions and inverse trigonometric functions.
- Trigonometric equations and identities.
- Triangle trigonometry including the laws of sines and cosines.
- Complex numbers and their trigonometric representation, and the use of the trigonometric form to find the n th roots of complex numbers.
- Explorations of various mathematical models using graphing technology.

Technology:

Graphing calculators and optionally spreadsheet software (Excel) are used throughout the course to explore the properties of functions and to solve realistic problems.

Students who may benefit:

This course is designed for the student who intends to take calculus. However, any student who anticipates a need for algebra or trigonometry and who had some exposure to trigonometry can benefit from this course.

Follow up courses:

Math120 Calculus 1, or Math 119 Applied Calculus may follow Math 112.