



PreCalculus Grand Haven High School



Course Number: E50

Grade Level: Freshmen, Sophomores, Juniors, Seniors

Credits : 1credit

Prerequisite Courses : Successful completion of Honors Algebra II

Course Description

Precalculus is the preparation for calculus. The study of the topics, concepts, and procedures of Precalculus deepens students' understanding of algebra and extends their ability to apply algebra concepts and procedures at higher conceptual levels, as a tool, and in the study of other subjects. The theory and applications of trigonometry and functions are developed in depth. New mathematical tools, such as vectors, matrices, and polar coordinates, are introduced, with an eye toward modeling and solving real-world problems. Precalculus is a recommended college preparatory class for students who wish to extend their mathematical skills and processes.

Course Objectives

Precalculus explores the topics of functions including polynomial functions, rational functions, exponential functions, logarithmic functions, and trigonometric functions. This course also deals with linear systems and matrices, sequences and series; probability, analytical geometry, a formal and intuitive approach to the study of limits; an introductory study of derivatives and their graphical applications; and an informal introduction to integration and its application to areas and volumes. Ability to communicate about reasoning mathematically and evaluate the mathematical reasoning of others will be stressed. A strong emphasis is placed on preparing the student for calculus. A graphing calculator is strongly recommended.

Student Expectations

- * Students are expected to be active participants in their education, including completion of all assigned work, and best effort on quizzes and tests.
- * Students are expected to obtain a graphing calculator for this course, see teacher for suggested model. A notebook specific to math is also encouraged.

Building Behavioral Expectations

TEAM GH ... One Team, One Family, One Grand Haven. Be Kind. Always.

It is our expectation that ALL GHHS students, staff and parents will ... always give their best **EFFORT** in everything that they do, work hard to be **INCLUSIVE** of each other, show **RESPONSIBILITY** in class, the hallways, cafeteria and at events, and **WORK TOGETHER** at all times!

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Communication

* Students are expected to regularly monitor their progress through the Parent Internet Viewer and teacher blog sites. Parents and students are encouraged to contact teachers through email or phone with any questions or concerns.

* The Math Lab is available before and after school, and during all lunches for additional help

Grading Policy

Assessment for grades will occur in the following categories:

- Tests 60%
- Quizzes 25%
- Assignments 15%

The school's standard grading scale will be used to determine letter grades.

Scope and Sequence

First Semester

- Chapter 1: Functions and Their Graphs
- Chapter 2: Polynomial and Rational Functions
- Chapter 3: Exponential and Logarithmic Functions
- Chapter 4: Trigonometric Functions
- Chapter 5: Analytic Trigonometry
- Chapter 6: Additional Topics in Trigonometry

Second Semester:

- Chapter 7: Linear Systems and Matrices
- Chapter 8: Sequence, Series, and Probability
- Chapter 9: Topics in Analytic Geometry
- Chapter 11: Limits and an Introduction to Calculus
- Review Applications: Real-World Project

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