



Course Introduction

Precalculus is a year-long course with 5 units per semester. Each unit consists of 5-8 lessons that correspond with the textbook. Students will begin each lesson in Canvas, then proceed to additional reading and independent practice in the textbook and finish the lesson by completing the homework assignment in My Math Lab (MML). Each Unit culminates with a Unit Review, Tip of the Day, Oral Review and Unit Test.

Course Description

Precalculus is designed to prepare the serious student of mathematics for Calculus. Topics covered include a review of basic algebraic concepts; analysis of functions and techniques for graphing polynomial, rational, radical, algebraic, exponential, logarithmic, and trigonometric functions; trigonometric identities; probability and statistics; the formulation of algebraic proofs; conics and polar coordinates; matrix theory; vectors; and an introduction to limits and derivatives. Students, as mathematical analysts, will develop logical thinking and imagination through the experience of mathematical patterns and will become familiar with the fundamentals of precalculus through the use of the textbook, mymathlab, online resources, a graphing calculator, and other technological resources. In addition, the course will prepare students for college-level mathematics and college-level entrance exams, such as the SAT Math Section, the ACT Math Section and the SAT Math Subject Tests. Throughout the course, students will explore mathematics as a fundamental aspect of God's creation, mathematical tools as necessary and useful in daily life, and mathematics used for the interpretation of scientific knowledge.

This is a yearlong course consisting of 10 units. Upon successful completion students will receive 1 credit towards high school graduation.

Course Overview

Semester 1

- Functions and Graphs
- Polynomial, Power, and Rational Functions
- Exponential, Logistic and Logarithmic Functions
- Trigonometric Functions
- Analytic Trigonometric

Semester 2

- Applications of Trigonometry
- Systems of Matrices
- Analytic Geometry
- Discrete Mathematics
- Introduction to Calculus and Statistics

Required Course Materials

Please access the list of course materials from the OC Online book ordering system and order your materials as soon as possible. Oftentimes, course materials are on back order and you may experience a delay in receiving them, causing students to fall behind in their online coursework. When ordering used or rented materials, be careful that online access codes are also current.

Methods of Instruction

Students will complete the following in each lesson:

- **Assigned Reading:**

After completing the online reading in Canvas, students will read assigned pages in the text book.

- **Independent Practice Assignment:**

Students will complete practice problems from the text book by writing each problem, neatly showing all work and checking the answer in the back of the text book. Students will keep all assignments in a notebook and make note of any difficult concepts.

- **My Math Lab (MML) Homework Assignment:**

Once reading and independent practice are complete, students will login to MML and complete a homework assignment on the lesson. The assignments are computer adaptive, which means that if a question is answered incorrectly, the student may use a variety of resources to review the concept(s) and request an additional problem. If the additional problem is answered correctly, the student will receive full credit. Students may redo all missed concepts in order to earn 100% on homework assignments.

Each Unit culminates with a Unit Review, Tip of the Day, Oral Review and Unit Test.

Methods of Evaluation

- My Math Lab (MML) Homework Assignment
- Tip of the Day Discussion
- Oral Review Discussion
- Unit Test Assessment
- Final Exams

Students will demonstrate mastery through the following formative and summative assessments:

- 50% Assignments
- 10% Participation (Discussion Posts, Synchronous Sessions)
- 25% Final Exam
- 15% Unit Tests