

Course Description

Grades 11-12 Pre-Calculus/Trigonometry

Philosophy Statement: We believe the laws of mathematics are not arbitrary creations of man, but an absolute creation of God (Colossians 1:16-17). While gaining mathematical knowledge and developing essential life skills, students will recognize that God is a God of order and infinite wisdom.

Course Objective: This is a mathematical problem-solving course. The precalculus involves but is not limited to functions (polynomial, rational, exponential and logarithmic), systems of equations and inequalities, and sequences and series. The trigonometry sections use both the right triangle and unit circle approach. Polar coordinates and vectors are also studied. Precalculus/Trigonometry solidifies advanced mathematics before it introduces calculus by way of limits and derivatives.

Textbooks: Precalculus, Mathematics for Calculus, Fifth Edition
Brooks/Cole 2009

Materials:

- Graphing Calculator

Time Allotment: 45 minutes per day, 5 days per week

Course Content:

- Trigonometric Functions
- Circular Functions
- Properties of Trigonometric Functions
- Quadrilaterals
- Inequalities in Geometry
- Similar Polygons
- Oblique Triangles
- Vectors in plane
- Complex Numbers
- Coordinate Geometry, Polynomials, Inequalities, Functions, Exponents and Logarithms
- Introduction to Calculus

Areas to be evaluated:

- Homework assignments
- Units Tests
- Semester Tests

Additional activities: None