

Accelerated Pre-Calculus Syllabus

Mrs. Dowling - Rm. 707
dowlingkel@lee.k12.ga.us
229-903-2260

Text: Advanced Mathematical Concepts (available in class only)

Course Description: This is the third course in a sequence of courses designed to provide students with a rigorous program of study in mathematics. It includes trigonometry, conic sections, modeling with matrices, the complex number system including modeling with vectors, and probability including compound events and expected values.

Prerequisite: Accelerated Analytic Geometry and Advanced Algebra

Instructional Philosophy: The Accelerated Pre-Calculus curriculum is both extensive and comprehensive. Time is a crucial commodity and it must be spent judiciously. Relevant concepts of previous math course topics will be reviewed and extended, but not re-taught.

Course:

Upon completion of the course, students will be able to:

Unit 1:

- Translate between the geometric description and the equation of the conic section

Unit 2:

- Build new functions from existing functions
- Extend the domain of trig functions using the unit circle
- Model periodic phenomena with trig functions

Unit 3:

- Apply trigonometry to general triangles

Unit 4:

- Prove and Apply trig identities.

Unit 5:

- Perform operations on matrices and use matrices to solve problems
- Solve systems of equations

Unit 6:

- Perform arithmetic operations with complex numbers
- Represent complex numbers and their operations on the complex plane
- Represent and model with vector quantities
- Perform operations on vectors

Unit 7:

- Use the rules of probability to compute probabilities of compound events in a uniform probability model
- Calculate expected values and use them to solve problems
- Use probability to evaluate outcomes of decisions

Course assessment:

Nine Weeks Grade = 60% (Tests and Major Projects) + 40% (Quizzes, Class activities, and Homework)

1st Semester Grade = (1st 9 weeks + 2nd 9 weeks) ÷ 2 x 80% + Semester Exam x 20%

2nd Semester Grade = (4th 9 weeks + 5th 9 weeks) ÷ 2 x 80% + Semester Exam x 20%

Students will receive a grading rubric for any projects assigned. A minimum of 3 tests or equivalent level tasks will be given per nine weeks.

Supplies:

- 1 inch, 3-ring binder (This binder should contain all of the following materials at all times.)
- Notebook paper and pencils
- TI-84+ Graphing Calculator
- Project supplies - These will be announced as needed.

Extra Help:

1. Extra help is available before school and during lunch. See me if special arrangements need to be made.

Make-up Work:

1. All make-up work is to be completed within one week of returning to school. If the absence is excused, credit will be given; no credit is given for an unexcused absence, unless cleared through an administrator.
2. Make-up tests and quizzes are given before school or during lunch. Please see me if special arrangements need to be made.

Parent-Teacher Communication:

Any parent or guardian wishing to speak with me may call the school at **903-2260** to leave a message or schedule a conference, or may e-mail me. My e-mail address is **dowlingkel@lee.k12.ga.us**