

# Pre-AP Algebra II Course Syllabus

## 2016 - 2017

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### Introduction

This course encompasses and extends upon all of the concepts and skills included in Algebra I, as well as providing students with opportunities to abstract generalizations from complex situations and to transfer and apply knowledge to new situations. Students will use higher level thinking skills in algebraic proofs and derivation of certain equations, and will be challenged through complex and in-depth problems associated with a variety of supplemental topics.

### Course Overview

Algebra 2 has some amazing characteristics to it that will enable you to move on easily to higher level thinking as well as higher-level mathematics. In this class we will explore many different avenues of algebra by doing real world experiments, some using technology.

- This course is a college readiness course intended to prepare you for a comprehensive course in algebra and is required for a major in math, physics, chemistry, engineering, and computer science, and many other of the life sciences for college.
- Topics covered in Algebra 2 are:
  - First Semester: Equations & Inequalities, Linear Equations and Functions, Linear Systems and Matrices, Quadratic Functions and Factoring,
  - Second Semester: Polynomials and Polynomial Functions, Rational Exponents and Radical Functions, Exponential and Logarithmic Functions, Rational Functions, and Quadratic Relations and Conic Sections, Sequences and Series, and a brief introduction to the Unit Circle.

Algebra 2 is an extension of Algebra 1. Students will be expected to demonstrate mastery of the skills taught in their previous math courses. Students will be expected to attend tutorials if they are weak in any of these pre-requisite skills.

### General Methods of Assessment and Grade Calculation

Tests/Projects .....60%

Homework/Quizzes.....35%

Reading Grade..... 5%

Note: Quizzes are given for each unit and will count as 2 daily grades.

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### **Average Amounts of Homework**

Pre-AP Algebra 2 students should plan for at least one (1) hour of homework each day. You will be learning new topics that you have not covered in your previous courses. Independent practice is the best method to ensure that you will be prepared for the test. Homework will be assigned most every day and is normally graded for accuracy. Homework is normally due the next day.

### **Assessments / Major Grades**

Exams will be made up of a calculator portion and a non-calculator portion. Students are expected to manage their time to allow for completion of both parts in one class period. Extra time is not given on exams. Each exam will be made up of mostly free response questions.

A review will be given for the test as a guideline for suggested study topics. In addition to the review, students should review the material on quizzes and homework assignments. Students should expect higher level thinking questions on Pre-AP exams. Most tests include several application problems.

Students will be assigned a major project in addition to the written exam for some of the units in Algebra 2 Pre-AP. Students should expect that most of the work on the project will need to be completed outside of class.