

TITLE: ALGEBRA II & TRIGONOMETRY
COURSE NUMBER: MAT 300
GRADE LEVEL: 10-12
LENGTH OF COURSE: 36 WEEKS

MAJOR CONCEPTS:

Algebra II & Trigonometry is a core component of the mathematics curriculum required for graduation. The mathematics program at KKFS is designed to provide a strong foundation in mathematics to help students develop the content and problem solving skills needed for success in college, careers, and everyday life. The course will do a basic review of Algebra I with a focus on Linear Functions & Equations before the course expands into the advanced topics of Quadratic Functions, Polynomial Functions, Rational Exponents and Radical Functions, Exponential and Logarithmic Functions, Rational Functions, Data Analysis & Statistics, Probability, Sequence & Series, Conic Sections, and Trigonometry. Upon successful completion of the course students may move on to AP Statistics, Pre-Calculus or AP Calc AB* (*with teacher recommendation).

EVALUATION TECHNIQUES:

Assessments:

- *Quizzes* are given as frequently as every week to every other week.
- *Tests* are given at the completion of each chapter.
- *Midterm/Final Test* is given at the completion of the 2nd and 4th quarter respectively. They are worth 15% of the overall quarter grade.
- *Projects* are given periodically throughout the year and will count as an assessment.

Participation: 5 points will be given weekly for participation.

Students lose these points if they:

- Speak out of turn or are disrupting the learning experience
- Are tardy or have an unexcused absence
- Sleep in class or are not actively learning

Class Work: Class work is to be completed in class. This includes class notes, ‘do now’ and any activity that is to be done in class. This also includes upkeep and maintenance of an organized Binder. Class work is collected when appropriate and will count towards your grade.

Homework: Homework will be assigned most days. Complete & accurate homework will be worth 5 pts. All assignments will be due at the beginning of the following class period. Late work will be accepted **only** in the case of an excused absence. All homework assignments are posted in the classroom.

GRADE SCALE:

1st & 3rd Quarter:

Participation	10%
Test/Quiz/Project	65 %
Homework	15 %
Class work	10 %

2nd & 4th Quarter:

Participation	5%
Test/Quiz/Project	55 %
Homework	15 %
Class work	10 %
Midterm*/ Final*	15 %

*Students who receive a 92.5% average or above on tests/quizzes/projects in quarters 1 and 2 do not have to take **the midterm**.

*Students who receive a 92.5% average or above on tests/quizzes/projects in quarters 3 and 4 do not have to take **the final**.

OBJECTIVES:

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

- Solve and Graph Linear Equations and Inequalities
- Graph and Solve Systems of Linear Equations & Inequalities
- Solve, Factor and Graph Quadratic Functions
- Simplify, Factor and Analyze Polynomial Expressions & Functions
- Calculate Combinations, Permutations and Probability
- Analyze Data and Compute Statistics
- Simplify, Solve & Graph Rational & Radical Expressions, Equations & Functions
- Simplify, Solve & Graph Logarithm and Exponential Expressions, Equations & Functions
- Explore & Graph Conic Sections
- Solve Trigonometric problems and analyze graphs

Overarching objective: To be able to problem solve by the use of mathematical modeling and applications representing visual solutions as symbols, numbers and graphs whilst effectively communicating with the requisite math vocabulary along with the aid of technology.