

Mathematics

Higher math skills are essential for the job market that graduates will be facing. Furthermore, students should be given every chance at being successful in math. Therefore, the following requirements are in place:

- One Algebra credit will be given to 8th students who achieve a C- or better in their 8th grade Algebra course and their final exam
- College bound students should plan to take Algebra 1, Geometry, Algebra II, Pre-Calculus, and Calculus (for those pursuing math related careers)

MA200A/B/C/D/E Algebra 1

Grades: 9 - 12

Trimesters: 2 (or slow paced 3)

Prerequisites: A grade of 60% or better in Pre-Algebra or Integrated Math I or Teacher Recommendation

Credits: 1

Repeat: Yes – for math credit

This class is a study of number theory, the basic operations over the real number system, solving equations and inequalities, and working with polynomials. It will acquaint the student with the use of unknowns and how to solve problems with one or more variables. It will also include various introductory topics in geometry, statistics and probability. ****NHS****

Students not achieving at least a C- trimester average will be required to repeat the trimester to progress to the next trimester or course.

MA350A/B/C/D/E Geometry

Grades: 9 - 12

Trimesters: 2 (or slow paced 3)

Prerequisites: A grade of 60% or better in Algebra 1 or Teacher Recommendation

Credits: 1

Repeat: Yes – for math credit

This course acquaints students with aspects of geometry using problem solving direct proofs, and constructions as means. Concepts related to lines, angles, triangles and polygons will be covered first semester. Concepts pertaining to right triangles, circles, areas, volume, constructions and solid geometry are stressed second trimester. ****NHS****

MA400A/B/C/D/E Algebra 2

Grades: 9 - 12

Trimesters: 2 (or slow paced 3)

Prerequisites: A grade of 60% or better in Geometry or Teacher Recommendation

Credits: 1

Repeat: Yes – for math credit

Students study more about variables, equations and graphs, plus a variety of topics: Quadratic equations, polynomials, matrices, systems, statistics, logarithms, conic sections, manipulation of radical expressions, and trigonometry. ****NHS****

MA500A/B Pre-Calculus

Grades: 10 - 12

Trimesters: 2

Prerequisites: A grade of 70% or better in Algebra II or Teacher Recommendation

Credits: 1

Repeat for Credit: Yes – for math credit

Students study more of the fundamental concepts of algebra, along with trigonometry and analytic geometry. This course will foreshadow the important ideas of Calculus including complex numbers, unit circle, vectors, bearings, trigonometric identities, linear factorization, rational zeros and the use of technology to assist. ****NHS****

MA600A/B Calculus

Grades: 10 - 12

Trimesters: 2

Prerequisites: A grade of 70% or better in Pre-Calculus or Teacher Recommendation

Credits: 1

Repeat for Credit: Yes – for math credit

This course is designed as a follow-up to Pre-Calculus and will prepare the student for the next higher level of mathematics. Calculus is explored through the interpretations of graphs and tables as well as analytic methods. In this course, students will investigate graphical and data-based problems algebraically and with the use of technology. Students will also learn to analyze and model data, represent data graphically, interpret from graphs and fit curves. An extension of derivatives and integrals is presented along with parametric functions. After completing this course students will have a rich array of applications involving different curriculums. ****NHS****

MA550A/B Consumer Math

Grades: 12 only

Trimesters: 2

Prerequisites: Three math credits or two math credits with one taking concurrently with Consumer Math

Credits: 1
Repeat for Credit: No

Students will learn the basics of sound financing through the Dave Ramsey videos. Everything from insurance to investing, banking to career choices will be covered. Students will plan a budget for everyday life while learning the dangers of debt.

MA525A/B Statistics

Grades: 10 - 12

Trimesters: 2

Prerequisites: A grade of 60% or better in Algebra II or Teacher Recommendation

Credits: 1

Repeat for Credit: Yes – for math credit

The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Each student will explore descriptive statistics, probability, sampling distributions, statistical inference and regression. ****NHS****