

Math

Class of 2006 needs 31 credits

Class of 2008 needs 29 credits

Class of 2007 needs 30 credits

Class of 2009 needs 28 credits

Each course earns $\frac{1}{2}$ credit

3 credits are required

Algebra 1 A/B - Geometry A/B - Algebra 2 - One Math Elective

1612

Algebra 1A

In this class the student will:

Describe and interpret data using various graphs, tables, and charts

Construct graphs

Use matrices to add, subtract and multiply integers

Graph data on a Coordinate plane

Understand and apply concepts of probability and ratios

Use Algebraic notations to write and simplify expressions

Recognize and describe functional relationships

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Career/Industry problems integrated throughout course

1613

Algebra 1 B – PR Algebra 1A

In this class the student will:

Solve linear equations and inequalities

Explore applications of slope and rate of change

Solve and graph inequalities in one variable and solve rational equations

Graph equations in two variables and derive equations from given data.

Identify and use slope of linear equations

Solve systems of equations using graphs, linear combination, and substitution

Use Pythagorean Theorem right triangle trigonometry and apply it in real life situations

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Career/Industry problems integrated throughout course

1618

Geometry A is the third class of the 2.5 required math credits. It will build upon the skills learned in Algebra 1 and explore many geometry concepts.

In Geometry 1 A, the student will:

- Develop special sense to draw geometric shapes
- Identify and analyze characteristics of shapes
- Identify and describe locations of shapes
- Describe the effects of transformations on shapes
- Apply and analyze measurements of angles and sides

Accreditation Target Goal Components:

Writing: Students will utilize Types 1 and 2 writing skills throughout the course.

Math: Students will improve their math skills on practice standardized tests.

Career Development: A variety of careers related to each topic will be explored.

1619 **Geometry 1 B** is the fourth class of the 2.5 required math credits. It will build upon the skills learned in Algebra 1 and explore many geometry concepts involving area and perimeter as well as data analysis.

In Geometry 1 B, the student will:

- Investigate congruence in polygons
- Investigate properties of quadrilaterals
- Apply measurements of area and volume
- Compute and apply data analysis concepts

Accreditation Target Goal Components:

Writing: Students will utilize Types 1 and 2 writing skills throughout the course.

Math: Students will improve their math skills on practice standardized tests.

Career Development: A variety of careers related to each topic will be explored.

1625 **Algebra 2 – PR Geometry 1 B**

Note: This course will end with a Pre – test to determine readiness for the MEAP and ACT. Those students not passing this test will be recommended to take the MEAP Math course.

In this class the student will:

- Factor polynomials and apply to equation solving and operations with algebraic fractions
- Multiplying and factoring of polynomials
- Graphing and solving of quadratic functions
- Simplifying rational and radical expressions
- Solving exponential and logarithmic functions.

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Career/Industry problems integrated throughout course

1630 **MEAP Math – PR Algebra 2**

In this class the student will:

Use materials designed to reinforce math concepts tested on the current MEAP and ACT

Solve and graph algebraic functions

Work with spatial sense, congruence, area, and volume

Analyze data

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Career/Industry problems integrated throughout course

1632 Algebra 3 – PR Algebra 2

In this class the student will:

- Demonstrate the ability to graphically represent, by use of graphing calculators, and how to solve algebraic functions
- Learn how to find and graph maximum and minimum points to be able to maximize area and volume and minimize cost
- Learn how to graph functions of two variables in a two-dimensional coordinate system and to read and analyze such graphs

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Certain fields that involve mathematics will be discussed as well as adequate math preparation for college

1638 Trigonometry – PR Algebra 3

In this class the student will:

- Convert between degree and radian measures, identify and apply the six trig functions and their graphs to real-world problems
- Compare rational approximations to exact values. Determine when they should be used
- Use the six trig ratios to solve right triangles, apply the Laws of Sine and Cosine to real-world problems
- Use the transits to find angles and length of objects out doors

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Numerous careers are highlighted in each chapter through the story problem applications

1648 Pre – Calculus A PR Algebra 3

In this class the student will:

- Identify the graphs and equations of circles, ellipses, and hyperbolas
- Solve problems involving advanced logarithmic functions
- Perform basic operations on vectors and convert vector equations into parametric equations
- Analyze and generalize mathematic patterns including sequences, series, and recursive pattern

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Daily application of real-world problems related to careers

1649 Pre – Calculus B PR Algebra 3 (Pre – Calc A preferred)

In this class the student will:

- Apply addition, multiplication and scalar operations on matrices to analyze transformations and networks
- Calculate combinations and permutations through probability and statistics
- Apply Pascal's triangle and the Binomial theorem
- Apply descriptive and inferential statistics including data distribution, variability, and confidence intervals

Accreditation Target Goal Components:

Writing: Students will utilize Type 1 and 2 writing skills on various topics related to the class.

Math: Focus of entire course

Career Development: Certain fields that involve mathematics will be discussed as well as adequate math preparation